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Spatiality in a Virtual Classroom

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Abstract. The spread of the COVID 19 virus has had a significant impact on the world of education. Concerns about the spread of the virus among academicians have caused system changes in teaching and learning activities. Online learning is an option for schools to keep teaching and learning activities running. This study describes the teacher's spatiality in teaching activities in virtual classes using the google meet video conference service. To illustrate this experience, a descriptive analysis research method is used by analyzing the virtual space spatial framework. The virtual space framework used as the reference for this study is the allocentric frame of reference, the egocentric frame of reference and the intrinsic frame of reference. The results of this study explain that there is a framework that shapes spatiality in online learning spaces. The spatiality that is formed is due to the relationship between objects, namely, teachers, students, computer screens with video conference services, forming spatiality based on the teacher's imagination, experience and knowledge.

Keywords: virtual space, spatial, online teaching, spatial framework

1. Introduction

Humans in their lives recognize space as a physical and non-physical substance. The definition of space is explained by Aristotle (Suptandar) as a container for objects of activity, while the term spatial is derived from the word space which etymilogically means space. In his dissertation, (Darmawan) tries to conclude the notion of spatiality from various expert opinions. This study refers more to the spatial concept of interactive relationships between one entity and another. This interactive relationship can be in the form of a situation where an entity is "in" another entity, for example someone is in the dining room, or an interaction relationship between an entity that is in a situation of attachment or involvement, as for example someone is in an atmosphere, for example in a happy atmosphere, sad etc. From this explanation, Heidegger (Darmawan) states that spatiality is the relationship between dasein (to be there) and his world, in relation to spatiality, there is a 'disappearance of distance', the distance here does not mean physically approaching, but the distance of its existence in the human mind. . Through the basic understanding of spatiality above, this study describes the spatial existing when teaching in virtual classrooms. According to Hornby (Suryana) a class is a group of students who study together, or a location when a group of students is undergoing the learning process at the same place and time. The definition of this class is a reference in this study, because there are variables that are considered the same in the teaching process, namely, student groups, the learning process, the same place and time, regarding location, in this online class it means that it is located at the same google meet address shared by teacher. Google meet is a video conferencing service provided by Google (a multinational company from the United States that specializes in internet services and products). One of the google products is google meet video conference service. Through this service, online classes can take place. Meanwhile, the meaning of virtual in online KBBI is appearing or being present using computer software.

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Research on virtual classrooms has been conducted by several authors in various academic fields, both at home and abroad. However, this study can help explain the elements that make up virtual spaces in teaching and learning activities. Research on cyberspace has been done a lot, including: research entitled "Virtual Space and Reality Space" (Renaningtyas) which describes the relationship between humans and technology that produces virtual space, resulting in interruption of relationships with real ones. world. The presentation of this study provides input to the author regarding the impact of cyberspace on humans, but does not explain more specific activities such as in this study, namely teaching activities. The research entitled "Virtual Classroom Pedagogy" (Bower) describes pedagogical learning, an approach to developing virtual classroom competencies. This study, one of which describes how to develop student competencies, which results in the output of an activity in a virtual classroom, but does not explain the experience in virtual space as the authors discuss in this paper. The study entitled "Virtual Classroom: Teacher Skills to Promote Student Engagement" (Bigné et al.) Examines the educational literature on virtual classrooms, teachers and student behavior, thus forming a theoretical model of teaching techniques in virtual classrooms to develop students' abilities in academics. This study describes three categories that teachers can have in teaching virtual classrooms, including: engineering, compassion, and communication. This study helps the authors to evaluate the online teaching system in relation to this research. This category produces output in the form of activities in a virtual room that can become a teaching room experience. In a study entitled "The virtual classroom: A catalyst for institutional transformation" (Subramaniam and Kandasamy) states that virtual classrooms not only provide course materials for students, but also provide a living, contextual and interactive environment for them. This study provides input to the author that the interaction in the virtual classroom is an environment in which there is interaction, where in this study, the interaction between entities is a discussion that is described in the context of spatial. Another research related to this research is a study entitled "Students' experiences of learning in a virtual classroom (Gedera) which provides input to the author regarding student behavior tendencies in virtual classrooms, virtual classes facilitate mutual communication between participants where they can clarify problems. and provide instant feedback when they are engaged in activities, thereby increasing student motivation and learning. However, this research does not discuss the spatial or the space formed in virtual classrooms.

Based on the explanation above, this study describes the spatiality in virtual space. The definition of spatial, which is taken as a reference, is the relationship between the entities that make up the space of attachment or involvement with the concept of removing distance. The entities in this study include: teachers, students, computer screens, google meet. Based on the data above, the description of how the spatial nature of this online teaching process will be described using an allocentric, egocentric and intrinsic frame of reference.

2. Method

Metode yang digunakan untuk mendeskripsikan penelitian ini adalah metode analisis deskriptif. Data yang ditampilkan berupa data kualitatif yang sebagian besar menggambarkan pengalaman kelas guru di kelas virtual. Data dikumpulkan dari pengalaman pribadi penulis sebagai guru di perguruan tinggi dan juga dari wawancara dengan kolega yang memiliki profesi yang sama, dalam kegiatan mengajar online menggunakan layanan google meet. Data tersebut diolah dengan menggunakan kerangka acuan spasial yang dikemukakan oleh Gallagher (Darmawan) yaitu : kerangka acuan alosentris, kerangka acuan egosentris dan kerangka acuan intrinsik..

3. Results and Discussion

The spatial terms of reference lead this study to create a virtual space framework in the online classroom teaching experience. This spatial frame of reference consists of three categories, namely the allocentric frame of reference, the egocentric frame of reference and the intrinsic frame of reference. explains that the allocentric frame is a spatial reference frame whose position is determined by certain sizes, parameters,

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coordinates (Darmawan). This framework is absolute. An egocentric frame of reference is a spatial frame of reference relative to the position of the observer. This frame of reference is a body-centered frame, in which the position of the body will determine the aspects of its spatial body. Meanwhile, the intrinsic frame of reference is a frame of reference that departs from personal references. This frame of reference departs from the sensing process of the body itself. This framework explains that it is possible for humans to feel awareness of body parts, which then only applies to bodies where they feel that they are nourishing the body from within. The perspective of this research in processing the spatial reference frame comes from the teacher's spatial ability which is formed from teaching experience, so that spatial boundaries are based on empirical boundaries. The following is an illustration of the direction and position of online teaching activities using video conferencing services as shown in Figure 1.

Figure 1. Illustrations of online teaching directions and positions
Source: https://id.depositphotos.com/408700408/stock-illustration-video-conference-illustration-people-group.html accessed in November 2020

3.1 Allocentric Spatial Framework

As explained above, the allocentric spatial frame is an objective framework with definite sizes, parameters, coordinates. Therefore, data analysis based on the objects related in this study is the google meet / zoom service on computer screens, teachers, and students. The relation scheme between objects is depicted through Figure 1. This scheme describes the position between relations where the learning object has spatial and experiential abilities. In compiling the allocentric spatial framework, the teacher can create a space based on his imagination by mapping the student's position on the screen as well as placing the student's position in one place based on the available information. For example, students inform their location during an online class, so that the teacher can simultaneously measure the location of the student in their imagination based on their knowledge and experience. So in an allocentric spatial framework, the parameters and coordinates that can form the spatial framework are formed by the teacher's imagination based on the spatial abilities and experiences that are informed by students.

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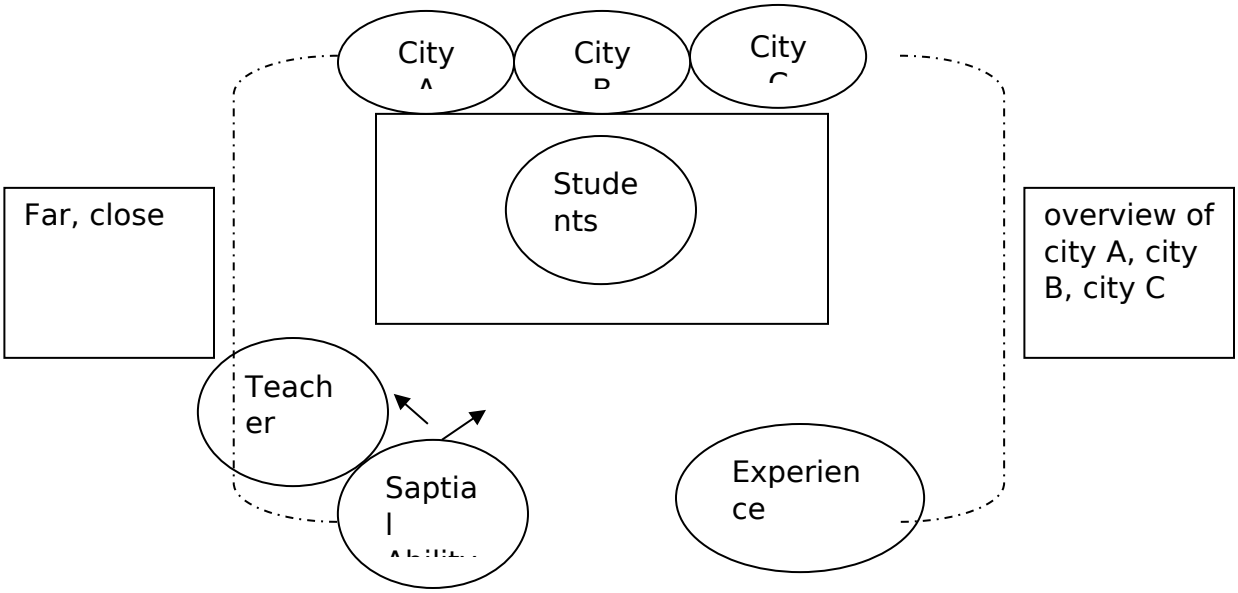

Figure 1. Online Teaching Allocentric Spatial Framework

3.2 Egocentric Spatial Framework

An egocentric spatial framework is the observer's relative framework. Position, size, and coordinates depend on the point of view where the teacher sees it. First, from the teacher's point of view with the monitor position. Student images are represented by video images on the monitor screen, so the position of the teacher on the monitor affects the egocentric spatial framework of the teacher here. If you look at anthropometric and ergonomic standards, egocentric spatial space will be formed from the teacher's working position when using the computer. As shown in Figure 2 the standard size and distance of the human sitting position while working (Panero). Whereas in Figure 3 shows the spatial space resulting from the teacher's position on the monitor.

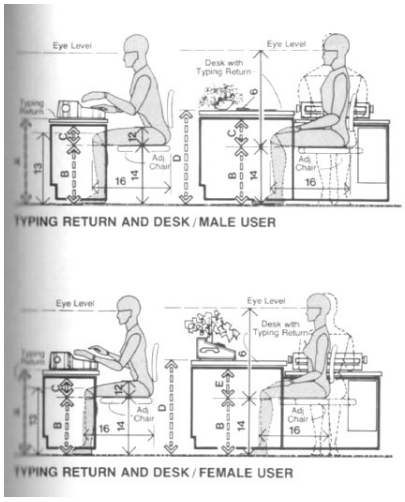

Figure 2. Standard size and working position on the workbench
Source: Panero (1979)

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Figure 3. An Egocentric Spatial Framework in Online Teaching
Source: Maharlika (2020)
Illustrations downloaded from https://www.sehatq.com

3.3 Intrinsic Spatial Framework

This framework refers to the sensing process of the body itself. In this case the writer uses the same spatial abilities and teacher experience as the allocentric spatial framework. This difference analysis focuses on the teaching experience in which the five senses recall memories while teaching in class to form spatial spaces when teaching online. This is based on the author's experience teaching online, where two-way interaction is needed to create a "classroom" that is the same as a real face-to-face classroom. In face-to-face teaching activities in a physical classroom, the teacher's five senses respond to all activities in class. Like eyes: seeing student movements, ears: hearing student responses when the teacher asks or responds to something, even when chatting in class, kissing: the teacher can feel the smell of the class, touching: the teacher can feel the texture of all objects in the classroom. These activities produce experiences that make the five senses in the body react when teaching in a virtual room just like when teaching in a real / physical classroom, as the scheme shown in Figure 4.

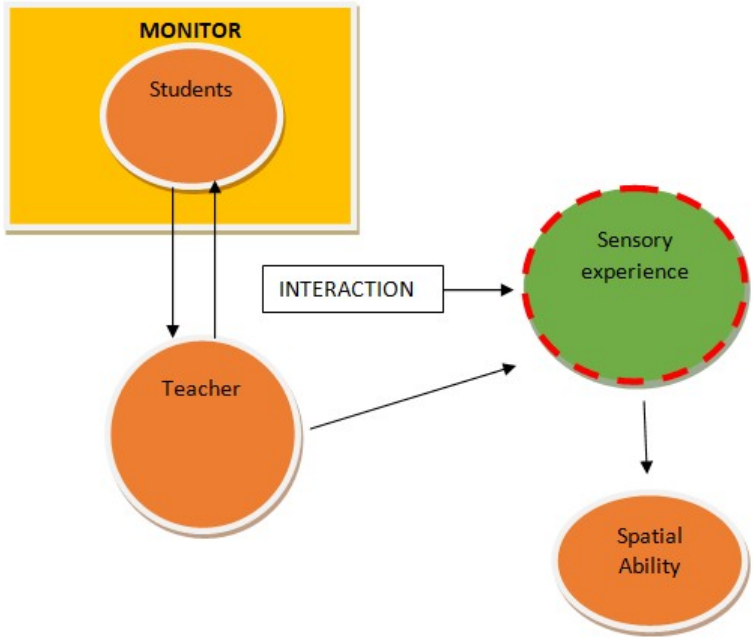

Figure 4. Intrinsic Spatial Framework in Online Teaching

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4. Conclusion

From the description above it can be concluded that spatiality in virtual space in learning activities is formed from object relations with non-physical boundaries. In this case, to form spatial, the teacher uses imagination based on spatial ability and experience to determine size and distance. The feasibility of the standard position of the activity can also be spatial, where the relations between objects have been determined by standards. In addition, spatiality is also formed due to sensory experiences experienced by the teacher where the teacher physically remembers the teaching experience in real / physical spaces when teaching face-to-face.

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