Perception of Elementary School Students on Seating Arrangements in the Classroom for Learning Behavior

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Abstract: Seating arrangements strongly influence student learning behavior in the classroom. Proper seating arrangements can improve social interaction between students, facilitate discussion, and support learning effectiveness. This study used a qualitative approach with phenomenological methods to explore the perception of elementary school students related to various patterns of seating arrangements and how these patterns affect their learning behavior. The method used was an in-depth interview with 2 students who were 12 years old, to collect qualitative data on their experiences and preferences. The results of the interviews showed that students preferred traditional seating arrangements for subjects that require concentration, such as mathematics, while group seating arrangements were considered more enjoyable during discussion activities. Students also stated that group seating arrangements not only enhance social interaction but can also encourage collaboration, facilitate discussion, as well as allow students to ask questions and support each other in the learning behavior. The conclusion of this study voiced the need for flexible seating arrangements in the classroom to meet different learning needs, so as to improve the quality of social interaction and learning effectiveness of students

Keywords: Seating arrangements, student perception, learning behavior, social interaction

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A. INTRODUCTION

The learning process in the classroom is influenced by various factors that can determine the effectiveness and comfort of students in learning. One important factor that is often miss out is the seating arrangement. Seating arrangements not only impact students physical comfort, but also affect their psychological and social experiences in the classroom (Gao et al., 2022), which ultimately helped shape their learning behavior. Many studies have written about the impact of seating arrangements in the classroom such as academic achievement, cognitive ability, participation and student learning behavior. Student learning behavior refers to how they participate in the learning process, including their involvement in discussions, attention to lessons, as well as the way they interact with peers and teachers. Tobias et al., (2020) explains that when children sit individually at one desk, they become more logical, creative, and exhibit better classroom behavior. Similarly, Pichierri and Guido (2016) also found that seating arrangement in the classroom is a crucial factor that can have an important effect on student academic achievement. Conversely, improper seating arrangements can prevent teacher learning and instruction (Gómez Mármol et al., 2018; Närhi et al., 2017), as well as lowering the concentration of students.

In practice, there are various seating arrangement patterns commonly used in classrooms, such as traditional seating arrangements (straight-forward rows) generally implemented in public schools, and group or modular seating arrangements. Each pattern has its own advantages and disadvantages in supporting student learning behavior. Traditional seating arrangements are commonly found in public schools in Indonesia. This model has been used for a long period of time and is still applied today. This is in line with the statements of Nja, et al., (2023) which mentions that the old characteristics of ancient school buildings were characterized by the arrangement of tables in fixed and unchangeable rows. In fact, even in modern classrooms, this arrangement pattern is still often maintained, where student desks and chairs are arranged parallel in rows facing the blackboard and teacher's desk. In this arrangement, the teacher's desk is generally positioned close to the whiteboard, reflecting the position permanently for students and teachers (rich, N., & Burgess, B., 2007). This seating arrangement is a lot of choice for educators in the classroom, not only because it has been used for a long time and provides a sense of comfort in learning practices, but also because there are challenges in changing it. Changes in seating arrangements require adjustments in terms of teaching strategies, student interaction, and overall classroom layout. Although various alternative seating arrangement models have been introduced, many educators still maintain this traditional pattern as the main choice in the classroom.

Well-designed seating arrangements can support teamwork and communication between students, while irrelevant arrangements can actually hinder the achievement of important aspects in the learning process (Sipayung & Benarita, 2021). Factors such as the ability to clearly see and hear the teacher may vary depending on the seating position the student occupies. For example, students who sit close to the classroom door tend to be more susceptible to external distractions, such as outside noise or student traffic in and out of the classroom, which can reduce their concentration levels (Fernandes, et al., 2011). In contrast, students who sit near the teacher have greater access to direct guidance and attention from the teacher, which can increase their involvement in the learning process. In addition, peer influence is also an important aspect in seating arrangements. Interaction with peers can have a positive impact on learning, especially when placed in an environment that supports collaboration. Students who sit close to their peers have the opportunity to discuss (Fernandes, et al., 2011), Share understanding, and work together in completing tasks. However, peer influence can also have a negative impact if the interaction that occurs does not focus on learning activities (Joshi G. P, et al., 2019). Too much communication that is not relevant to learning can cause distraction, decrease learning effectiveness, and hinder the achievement of expected learning goals. An effective seating strategy must consider the balance between access to learning resources, student engagement, and productive social interaction in the classroom.

In the context of primary education, where students are still in a stage of cognitive and social development, appropriate seating arrangements can support more effective learning processes as well as increase social interaction among students. Understanding how they perceive and interact with different seating arrangements can provide valuable insights for educators and policymakers. By considering students perspectives, educators can design

classrooms that are more responsive to individual and group needs, thereby enhancing the overall learning experience.

Although various studies have been conducted to examine the impact of seating arrangements on learning, there are still few studies that highlight students own perceptions of the seating patterns they experience in the classroom. An understanding of how elementary school students perceive seating arrangements can provide insight for teachers and educators in creating classroom arrangement strategies that are more effective and appropriate to student needs. By involving elementary school students in this study, researchers gain a deeper insight into the perceptions and experiences faced by students in the classroom.

In addition, this study also aims to provide recommendations for schools in designing learning environments that are more flexible and adaptive to various student learning styles. By understanding how students respond to traditional and group seating arrangements, teachers can shape their teaching strategies to create a more comfortable learning experience for students. Therefore, the results of this study not only contribute to the development of theories in the field of education, but also can provide practical implications in the design of classrooms that better support the learning process.

B. METHOD

The research was carried out in February-March 2025, by applying qualitative methods, with a phenomenological approach. This approach allows the researcher, to understand in depth the subjective experience of a student. Through in-depth interviews, researchers explore how students interpret and respond to classroom seating arrangements. The theories used are Gestalt perception theory and Bimo Walgito, where Gestalt theory helps explain students perceptions of seating arrangements in the context of the overall learning environment, while Bimo Walgito theory provides insight into how individual factors and subjective experiences contribute to shaping students perceptions of the effectiveness of certain seating patterns. Purposive sampling is used to select informants by considering certain characteristics or criteria (Sugiyono, 2016) that are relevant to the purpose of the study. This study used two students who have been selected, each identified with the initials M and K. Student M, a 12-year-old elementary school male student and student K, a 12-year-old elementary school female student, have been the subjects of the study. In the context of research on the perception of elementary school students with a phenomenological approach, the selection of informants was carried out carefully to ensure that the participants had significant and relevant experience with the phenomenon under study. Both informants are students who are in grade 6 of elementary school and have had experience with traditional seating arrangements and group seating arrangements. Data processing and analysis was carried out through stages of:

1. Data reduction: this stage involves simplification, grouping, as well as elimination of irrelevant or unnecessary data. The main goal is to present the data in a more focused and meaningful form so as to facilitate the process of drawing conclusions.

2. Data presentation: once the data has been reduced, the next step is to systematically structure the information to make it easier to understand. Presentation of structured data helps researchers in recognizing patterns or trends that emerge from the results of research.

3. Vertivication : this process aims to ensure the reliability and validity of the data that has been collected. Analysis is done to find meaning in the data and identify relationships, similarities, or differences between data. This verification ensures that the resulting interpretation corresponds to the existing phenomenon.

4. Conclusion: the final stage of data analysis is to draw conclusions based on the results of the analysis. The conclusions drawn answer the research problems and are based on the results of interviews, as well as data analysis that has been done. In addition, this conclusion can provide new insights or a deeper understanding of the phenomenon under study.

C. RESULTS AND DISCUSSION

Perception is a psychological process that involves the reception, organization, and interpretation of information received through the senses so as to form an individual's understanding of the surrounding environment. In this context, learning behavior is reflected through the way students interact, concentrate, and choose the sitting position that they think best supports the learning process. The way students perceive seating arrangements in the classroom has a major impact on their learning behavior, because the perception of the learning environment affects comfort, concentration, and social interaction during the learning process. In this study, the discussion will focus on two main aspects of learning behavior of students, cognitive and affective. The cognitive aspect leads to how students process information and maintain concentration during the learning process, while the affective aspect is seen from the way students build social relationships and show a positive attitude when learning together. These two aspects become an important foundation in understanding students perceptions of their learning environment. In relation to seating arrangements, the perception of elementary school students was analyzed through the Gestalt perception theory and the perception theory of Bimo Walgito. Both of these theories are used to examine how students give meaning to their learning environment.

Gestalt theory in psychology explains that humans tend to see and organize experiences and what they see into a whole and meaningful pattern. Gestalt theory emphasizes on the importance of understanding, processing, and rearranging visual information is an important part in the learning process (Amanatiadis et al., 2018; Mungan, 2023). This theory is very influential, especially in the way individuals understand visual perception. Research findings on elementary school students perceptions of classroom seating arrangements can be attributed to Gestalt perception theory because it focuses on the way individuals interpret the environment as a whole through visual perception, rather than based on separate elements. In the context of the classroom, seating arrangements are part of the visual structure directly observed by students, and it affects how they perceive comfort, focus, and engagement in learning.

Gestalt perception theory emphasizes that individuals perceive the environment as a whole, not just as a collection of separate parts. In this context, students not only perceive their seats individually, but rather as part of the overall structure of the classroom that influences the way they interact, concentrate and engage in the learning process. Gestalt principles such as figure-ground, proximity and similarity are relevant in explaining how group seating arrangements create a perception of connectedness among students, which in turn elicits a sense of community and collaboration. While in the traditional seating arrangement, the perception formed is more individualistic, with a visual focus and attention focused on the teacher and the whiteboard as the main source of information.

Figure-ground is one of the principles in Gestalt theory which has the meaning that the figure is the object that is the center of attention (main focus), and the ground is the background where the object is located. Human perception tends to separate which is the main focus and which is the background to give meaning to what is seen. In this study, the seating arrangement and position of teachers in the classroom can act as a figure, while the classroom as a whole becomes the ground. For example, in the focus of attention of students. 1) students who sit in front of or close to the teacher tend to make the teacher and the blackboard as figures, which means they are more easily focused on the information conveyed. Meanwhile, students who sit farther away or face the other way in a group setting may perceive peers as figures, which affects their interaction and attention during learning. 2) in seating preferences, traditional seating arrangements are in demand by students for subjects requiring concentration. The traditional seating arrangement provides a clearer and more focused visual condition, where the teacher and the blackboard become the dominant figure or center of attention without much interference from the background (ground). 3) in distraction and attention visually. In a group seating arrangement, the ground can become more "*crowded*" due to the abundance of visual stimuli such as nearby friends, movement, and sounds. This can distract or disrupt the main focus (figure) of the student. This is why some students find it difficult to concentrate in these situations, although they also feel that the atmosphere is pleasant and collaborative.

Proximity is a principle that states that objects that are located close together tend to be perceived as a single whole. We tend to consider objects that are physically close together as part of a group (Cole, 2015). In this case, group seating arrangements bring students closer physically, thus encouraging interaction and collaboration. The closer they are, the better the interaction takes place, which positively influences their learning behavior. Similarity is a principle that states that objects that are similar in shape, color, size, or pattern will be perceived as part of the same group. The brain tends to group elements that look similar. This can be utilized in the arrangement of the table to help draw the attention of the audience in the direction we want (Cole, 2015). Tables and chairs arranged uniformly in rows give the impression of regularity and similarity of the roles of students. This principle can be applied to consider the seating arrangement on what the learning focus is.

Bimo Walgito perception theory also supports the analysis of the results of this study. According to Bimo Walgito (2010) perception is understood as the process experienced by individuals in organizing and interpreting stimuli received by the senses, resulting in a

whole meaning and becoming an integrated unity within the individual. In this context, sitting position, interaction with friends, and focus on the teacher or whiteboard are stimuli that students process through their learning experiences, resulting in the perception that certain seating arrangements are more appropriate for certain types of learning. These perceptions are formed individually and fused, showing the way students interpret and respond to the learning environment around them.

1. **Seating Arrangement and Characteristics of Subjects**

The results of interviews in this study showed that the selection of seating arrangement patterns by students is strongly influenced by the type of subjects being studied. Students (M) said that the traditional seating arrangement, facing the teacher and the blackboard, can better support them to focus. He also feels easy to hear the explanation of the material and see the visual clearly, when in the front row of the class where closer to the teacher, so motivated to stay focused.

> M : "*Yes, it ends up focusing only on the teacher and the front of the classroom (the whiteboard). Sitting in the front makes it easier to hear and understand the lesson more clearly. In contrast, sitting at the back reduces visibility.*"

Students (M and K) had a similar love for maths, and they submitted that traditional seating arrangements were considered more suitable for subjects requiring high concentration, such as maths. In this setting, students can more easily focus attention on the teacher and the blackboard without being distracted by excessive social interaction. In contrast, group seating arrangements are considered less appropriate to use in mathematics, because it allows distraction due to interaction between students in groups that can reduce the level of concentration of individuals during the learning process.

> M: "*Sitting like this (in traditional seating) is more suitable for subjects like mathematics that require concentration. Since we sit in pairs, it helps us focus better.*"
> K: "*During math lessons with group seating arrangements, it feels overwhelming. Sometimes, there are friends who haven't understood the material and start asking questions, even though I haven't finished my tasks yet. So, it becomes quite stressful.*"

Meanwhile students (M and K) stated that group seating arrangements were preferred for subjects such as *IPAS* (Natural and Social Sciences), *Bahasa Indonesia*, *PAI* (Islamic Religious Education), and *PP* (Pancasila Education). They consider that the subject requires interaction, discussion and collaboration between students, so that the seating arrangement, which allows for a circular position or facing each other, allows for more active interaction. However, if this is not managed properly, group seating arrangements can also interfere with students ' concentration, especially when the cuddling between friends is not well controlled and does not focus on the topic of the lesson.

> M: "*Group seating is suitable for subjects like Civics (PPKN), Indonesian, and other subjects that often involve group activities.*"
> K: "*For subjects that require memorization, like IPAS and Civics, I prefer group seating. If I already memorized the material but still feel unsure, I can ask my groupmates to test me. For*

subjects like Indonesian, which usually involve a lot of written forms, group seating also feels more appropriate."

Therefore, seating arrangements should be adjusted to the learning objectives and characteristics of the material taught, in order to create a learning environment that supports the development of optimal student learning behavior.

2. Seating Arrangements to Support Student Interaction and Learning Focus

Based on interviews, there is a clear view of how seating arrangements affect students ability to focus and social interaction in the classroom. In a traditional seating arrangement, students sit in pairs in parallel facing the whiteboard and the teacher. This seating arrangement focuses students attention towards the front of the class, which is judged to favor focusing especially on material that requires logical understanding and direct instruction from the teacher. However, students (M) claimed to feel bored quickly with this pattern because the interaction is limited only to friends sitting next to.

M: *"Yes, I often feel bored. With traditional seating arrangements, I can only have discussions with the classmate sitting next to me."*

The space for discussion and exchange of opinions became very limited, allowing a decrease in social dynamics in the classroom. In contrast, in a group seating arrangement, students sit facing each other in a circular formation of 4 to 6 people. Students (M and K) said that the learning atmosphere in this position feels more pleasant and comfortable than the traditional seating arrangement.

M: *"Yes, it feels more comfortable sitting in a group of four; discussions become easier. In traditional seating, I can only talk to the classmate next to me."*

K: *"I personally prefer group seating because it feels more comfortable. There are more friends around, and the learning experience becomes more engaging and enjoyable."*

The focus of learning tends to be on interaction between friends, which allows discussion, asking questions, and cooperation in the learning process. Free interaction in group seating arrangements can build students enthusiasm for learning, due to the creation of a more dynamic and active social space in the classroom.

M: *"It's simply more exciting in a group setting; it feels more refreshing and energizing."*

K: *"In a group, we can support each other. If someone doesn't understand, they can be helped, or we can explain to friends who are still confused. When there are multiple tasks, each student can take on one question to solve."*

Group seating arrangements create positive interactions in building student learning behavior. In groups, students have a greater opportunity to be actively involved through discussion, asking questions, and working together to solve problems or understand the subject matter. The dynamics created in the group encourage the formation of mutual respect for opinions, increase the sense of responsibility for group tasks, and foster confidence when conveying ideas. This condition reflects the affective and social dimensions

of constructive learning behavior, where students not only learn individually, but also from interaction, support, and collaboration with friends within the group. Therefore, good interpersonal relationships between students have an important role to foster student learning motivation and can help improve their learning achievement (Ariani, 2017).

3. **Students Preferences in Determining Seating Arrangements**

Based on seating preferences, students (M and K) prefer group seating arrangements, as these arrangements allow them to interact more freely and actively with friends. They also expressed a preference for a sitting position that is directly facing the whiteboard, so they don't have to turn their body when paying attention to the explanation from the teacher in front.

M: *"A comfortable seating arrangement is the group style, positioned to face the front as usual, so there's no need to keep turning the body."*

K: *"Group seating arrangement feels more comfortable when facing the front, so we don't have to keep turning our bodies. Otherwise, it can cause body aches when we get home."*

These preferences indicate that although students prefer a sitting format that supports interaction, they still prioritize physical comfort and efficiency in taking lessons. Students prefer group seating arrangements because they feel comfortable surrounded by friends who support the learning process to be more interactive. Students also revealed that they prefer to sit by the window because the fresh air helps them feel more relaxed and refreshed, especially when the weather in the classroom is hot. The ability to look out of class once in a while is also thought to help refresh the mind.

M: *"Sitting near the window feels more comfortable because of the airflow. It provides a refreshing sensation, especially when the classroom becomes warm and causes sweating during lessons."*

K: *"I prefer to sit near the edge by the window, as it allows me to feel the sunlight and breeze. It also gives me the opportunity to glance outside and observe the activities happening beyond the classroom."*

Group seating arrangements are favored by students as they foster open interaction and contribute to a more engaging and enjoyable learning environment. In addition, the sitting position, which is directly facing the front of the class, is the main preference so that there is no need to turn over when looking at the blackboard. The seating location close to the window was also chosen because it provides additional comfort in the form of fresh air flow and refreshing views outside the classroom.

D. **CONCLUSIONS AND SUGGESTIONS**

Seating arrangements in the classroom have a close relationship with student learning behavior, both from cognitive and affective aspects. First, a seating arrangement adapted to the characteristics of the subjects can support more optimal learning behavior. For example, traditional settings are more supportive of individual focus and information processing on

subjects that are theoretical or intrusive, while group settings are more appropriate for lessons that require interaction, discussion, and cooperation.

Second, seating arrangements affect how students interact and maintain concentration during the learning process. Settings that allow students to sit close to friends or teachers can increase comfort and affective engagement. Third, students preference for seating arrangement and position shows how they adjust to the learning environment to support effective learning behavior, such as choosing a seat that makes it easier for them to pay attention to teacher explanations and discussions. As a practical step, teachers should pay more attention to the relationship between seating arrangements and student learning behavior. Teachers are advised to apply flexible and adaptive seating arrangements, which are appropriate to the learning objectives and needs of students. The involvement of students in determining the seating position can also be a strategy to increase the sense of belonging, comfort, and motivation to learn. This approach is expected to foster a learning environment that effectively balances students cognitive and affective engagement.

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