

# Teachers' Spatial Organization Skills in Relation to Self-Paced Learning of Students

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**Abstract.** This study investigated the impact of teachers' spatial organization skills on the self-paced learning of junior high school students in Cluster 5 Public Secondary Schools in Davao City. Using a non-experimental, descriptive-correlational research design, data were gathered from 150 randomly selected students through stratified random sampling. The data were analyzed using mean scores, Pearson product-moment correlation, and regression analysis. Results revealed that both teachers' spatial organization skills and students' self-paced learning were moderately extensive. A significant positive relationship was found between teachers' spatial organization skills—specifically in areas such as engaging and interactive learning, growth mindset, and inclusivity—and students' self-paced learning. Furthermore, teachers' spatial organization skills were identified as significant predictors of students' self-paced learning. These findings highlight the importance of fostering spatial organization skills in educators to enhance student autonomy and academic performance in self-paced learning environments.

**KEY WORDS** 1. Teachers' spatial organization skills 2. self-paced learning 3. Junior High School

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## 1. Introduction

Low self-paced learning among students can significantly influence learning effectiveness, often resulting in less favorable educational outcomes. Low self-paced learning can lead to reduced intrinsic motivation. Students may lack a personal connection to the material and feel less motivated to explore topics in-depth or seek additional resources. This can result in surface-level learning rather than deep understanding. When students have a low level of self-paced learning, they may be less engaged in their studies. They may view learning as a passive process, primarily driven by external factors such as lectures or assignments, rather than an active process where they take control of their learning. Encouraging students to develop self-paced learning skills, such as time management, autonomy, and intrinsic motivation, promotes deep understanding and long-term knowledge retention. Reeve et al. (2004) reported that students with low self-paced learning skills may struggle with time management. They may procrastinate, leading to rushed or incomplete assignments. This can hinder their ability to absorb and retain information effectively. Self-paced learning is closely tied to autonomy and independence. When students have a low level of self-paced learning, they may rely heavily on external guidance and not take ownership of their learning process. This can lead to a lack

of critical thinking and problem-solving skills. Also, Pajares and Schunk (2001) reported that students with low self-paced learning skills may focus on memorization rather than comprehension. They may aim to meet minimum requirements without delving deeper into the subject matter. In addition, Otoo et al. (2018) argued that self-paced learning often involves adapting to different learning styles and preferences. Students with low self-paced learning skills may struggle to adjust their approach based on their needs. They may miss opportunities to explore alternative resources or methods that could enhance their understanding. In the Philippines, Bautista (2015) reported that students with low self-paced learning skills may limit their exploration to what is explicitly assigned, missing out on the breadth of knowledge available. A lack of self-paced learning skills can increase stress and anxiety, particularly when faced with deadlines or assessments. Students may feel overwhelmed by the pace of instruction and struggle to cope with the demands of their coursework. More so, Abria et al. (2020) noted that students with low self-paced learning skills may struggle to transfer these skills to real-world situations and future learning experiences. Retention and long-term understanding can suffer when students do not actively participate in their learning. They may forget information shortly after exams or assignments, as they may not have engaged in meaningful, self-directed review and reflection. Meanwhile, Francis et al. (2018) highlighted that self-paced learning allows students to explore complex challenges independently, promoting critical thinking and problem-solving skills. In technology-related courses, these abilities are essential for troubleshooting and finding innovative solutions to practical issues. According to Ayub et al. (2016), self-paced learning enables students to tailor their learning experiences to suit their preferences and grasp concepts more effectively and efficiently. Likewise, Kim et al. (2015) pointed out that the ability of students to control their learning gives them a sense of ownership and responsibility for their progress. This ownership fosters intrinsic motivation, driving them to set goals, overcome challenges, and excel in their vocational education. Spatial organization skills were defined as the set of abilities to effectively organize and utilize the physical learning environment to enhance teaching and learning experiences. It involves creating a well-structured and conducive classroom setup that supports various instructional activities, fosters student engagement, and promotes a positive learning atmosphere (Raba, 2017). According to Le et al. (2017), a well-organized classroom promotes active learning by giving students enough space to collaborate, participate in discussions, and engage in hands-on activities. In addition, Millis (2014) clarified that spatial organization encourages a student-centered approach to learning, where students can access resources, materials, and technology to support their individual learning needs. Similar to how the physical arrangement of a classroom can foster better student engagement, the use of structured learning tools, like Saliga's 'Easy Multiplication Using Grid,' provides a visual and organized method to support self-paced learning. By breaking down complex concepts into manageable steps, such tools help students internalize knowledge independently (Saliga, 2024). Previous research demonstrated a connection between teachers' spatial organization skills and self-paced learning among students. For instance, Schmuck (2001) noted that practical spatial organization skills of teachers could significantly influence the self-paced learning of students by creating a well-designed and conducive learning environment; teachers can empower students to take ownership of their learning journey and become more self-directed in their educational pursuits. Also, Khalid et al. (2013) showed that providing flexible seating options or dedicated spaces for individual study or focused tasks encourages

learning autonomy. An adaptable learning environment allows students to customize their learning experiences based on their preferences and learning styles. The research gap in the study about teachers' spatial organization skills and students' self-paced learning lies in the limited empirical research that directly investigates the relationship between these two factors in various educational settings. While some studies have explored the impact of spatial organization skills on students' self-paced learning, there is a lack of comprehensive research that specifically focuses on the role of spatial organization skills of teachers in promoting students' self-paced learning. Thus, in this context, the researcher needed to fill in the research gap by conducting a study in the Philippine setting, particularly in Cluster 5 secondary schools in Davao City, using a quantitative approach. Specifically, the researcher used a descriptive correlational design to determine the influence of teachers' spatial organization skills on students' self-paced learning, which is scarce.

### 1.1. Review of Significant Literature—

*1.1.1. Teachers' Spatial Organization Skills*—Spatial organization refers to teachers' ability to arrange learning spaces for optimal student engagement (Marzano Pickering, 2010; Saputra Aziz, 2014). Effective organization fosters accessibility, safety, and inclusivity (Le et al., 2017; Van Leeuwen et al., 2013). Skills in spatial arrangement can enhance interaction, learning, and motivation, promoting a sense of ownership among students (Raba, 2017; Savolainen, 2016). Conversely, poorly managed spaces can hinder engagement and collaboration (Al-Zu'bi Kitishat, 2013; Tofade et al., 2013).

*1.1.2. Engaging and Interactive Learning*—Spatial skills help design environments that encourage interaction, collaboration, and active learning (Marzano Pickering, 2010; Cakici et al., 2012). Engaging classroom layouts increase student motivation and enhance retention of knowledge through interactive methods

like discussions and group work (Rogers, 2012; Blazar, 2016).

*1.1.3. Growth Mindset*—Teachers with a growth mindset in spatial organization adapt their strategies based on feedback and professional development, enhancing classroom dynamics (Marzano Pickering, 2010; Suyitno, 2017). Encouraging growth mindsets in students fosters perseverance, intellectual flexibility, and better study habits (Krawec Montague, 2012; Hossain, 2015).

*1.1.4. Inclusivity and Diversity*—A well-organized space promotes inclusivity, where diversity is respected, and students feel valued (Abramovich et al., 2019; Lerner et al., 2014). Inclusive classrooms foster empathy, understanding, and a sense of belonging, critical for academic success (Le et al., 2017).

*1.1.5. Self-Paced Learning*—Self-paced learning empowers students to take control of their educational journey (Ayyildiz Tarhan, 2015). High-level students can tailor their learning and focus on mastery, promoting deep engagement with subjects of interest (Tang Tseng, 2013; Archana Chamundeswari, 2013). Teachers play a critical role in supporting self-paced learning, forming positive relationships that motivate students (Maulana et al., 2013; Rimm-Kaufman Sandilos, 2013).

*1.1.6. Motivation and Decisiveness in Learning*—Self-paced learning encourages students to be decisive and responsible for their progress, with high-achieving students particularly benefiting from these skills (Ayyildiz Tarhan, 2015; Brown, 2014). Flexible learning environments promote autonomy, motivation, and the ability to set personal goals (Schmuck, 2001; Wegner et al., 2014).

*1.2. Synthesis*—The synthesis of the literature on teachers' spatial organization skills and the self-paced learning of students reveals a strong and interconnected relationship between these two factors in the educational context. Research consistently highlights that the physical

layout of the classroom significantly impacts students' ability to engage in self-paced learning. Teachers' spatial organization skills are crucial in creating an environment that supports or hinders self-directed learning. Teachers' spatial organization skills create an enhanced learning environment that aligns with the principles of self-paced learning. The relationship between teachers' spatial organization skills and self-paced learning is intricate and symbiotic. Effective spatial organization contributes to an environment that supports student autonomy, motivation, engagement, and resource accessibility—all essential elements for successful self-paced learning. Recognizing this relationship, educators can leverage their spatial organization skills to foster an empowering, student-centered classroom environment conducive to self-directed learning.

*1.3. Theoretical/Conceptual Framework—*The study is anchored on Deci and Ryan's (1985) Self-Determination Theory. In the context of instructional space management skills, an environment that allows students to have some control and choice in how they engage with the learning space fosters autonomy. When students can choose their seating arrangements, collaborate with peers, or personalize their learning spaces, they experience greater autonomy over their learning process. Applying the Self-Determination Theory in studying the relationship between instructional space management skills and learning autonomy can provide insights into how the learning environment influences students' motivation, engagement, and self-directed learning behaviors—the need to feel a sense of choice and control over one's actions and decisions. Autonomy involves behaving in ways that align with one's values and interests rather than feeling coerced or controlled. One needs to experience a sense of effectiveness and mastery in one's activities and pursuits. In support, Schmuck (2001) proposed that spatial organization skills of teachers can significantly

influence the self-paced learning of students in tech-voc (technology vocational) courses by creating a well-designed and conducive learning environment, teachers can empower students to take ownership of their learning journey and become more self-directed in their educational pursuits. Also, Wegner et al. (2014) postulated that by allowing students to have ideas in their learning space, they may feel more motivated and responsible for their learning outcomes. As shown in Figure 1, the study is consisting of two variables. The independent variable is the teachers' spatial organization skills or the educators' ability to effectively arrange and utilize physical and virtual classroom spaces to optimize the learning environment for their students. According to Marzano and Pickering (2010) the measures of spatial organization skills are engaging and interactive learning or the educators' ability to design and arrange physical and virtual learning environments in a way that actively involves students in the learning process; growth mindset or the belief that these skills can be developed and improved over time through dedication, effort, and continuous learning; and inclusivity and diversity or the ability to create a welcoming and accepting environment that celebrates the uniqueness of each student, promotes cultural diversity and values individual perspectives and experiences. The dependent variable is the self-paced learning of students or the ability and willingness of learners to take responsibility for their learning process and make independent decisions about their educational journey. As proposed by Ayyildiz and Tarhan (2015), the measures of self-paced learning of students are interest in learning or the degree of curiosity, motivation, and enthusiasm that students have for acquiring new knowledge and skills when they are given the autonomy and flexibility to learn at their own pace; learning responsibility or the development of skills and habits that enable students to take ownership of their Learning process; motivation in the learn-

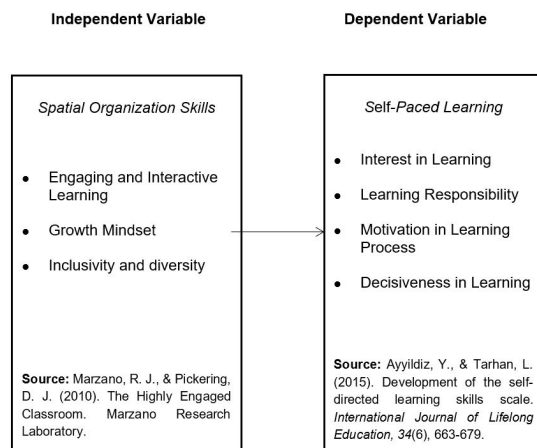


Fig. 1. The Conceptual Framework of the Study

ing process or the motivation and eagerness towards learning; and decisiveness in learning or the development of the ability to make effective and timely decisions in independent learning.

**1.4. Statement of the Problem**—The study was set to decipher which domains of teachers’ spatial organizational skills significantly influence the self-paced learning of students in Cluster 5 Public Secondary Schools in Davao City. Specifically, this study sought to answer the following questions:

- (1) What is the extent of teachers’ spatial organization skills in terms of:
  - (1) engaging and interactive learning;
  - (2) growth mindset; and
  - (3) inclusivity and diversity?
- (2) What is the extent of self-paced learning of junior high school students in terms of:
  - (1) interest in learning;
  - (2) learning responsibility;
  - (3) motivation in the learning process; and
  - (4) decisiveness in learning?
- (3) Is there a significant relationship between teachers’ spatial organization skills and the self-paced learning of students in Cluster 5 Public Secondary Schools in Davao City?

**1.5. Hypotheses**—The following hypotheses were tested at a 0.05 level of significance: H01: There is no significant relationship between teachers’ spatial organization skills and the self-paced learning of students in Cluster 5 Public Secondary Schools in Davao City. H02: None of the domains of teachers’ spatial organization skills significantly influence the self-paced learning of students in Cluster 5 Public Secondary Schools in Davao City.

**1.6. Significance of the Study**—It was assumed that the study would also benefit specific academic individuals and groups. Hence, the researcher hopes that this study would be beneficial to identified sectors of the academe: Department of Education. The Department of Education (DepEd) can use the study’s findings to make informed decisions about classroom design and spatial organization standards in educational institutions. Also, the study can help

allocate resources more effectively, ensuring that schools have the necessary tools and training to enhance spatial organization skills among teachers. Adding more, it can consider incorporating spatial organization training into teacher education programs and curriculum development. School Heads. School heads can identify the need for professional development opportunities focused on spatial organization skills for their teaching staff. The study's findings can guide school administrators in optimizing classroom layouts to support self-paced learning and student engagement. Teachers. Teachers can benefit from insights into effective spatial organization strategies that promote self-paced learning among students. Furthermore, understanding the importance of spatial organization can motivate teachers to seek professional development opportunities and improve their skills. Students. Classrooms designed to support students' autonomy and independence can provide more engaging and effective self-paced learn-

ing experiences. Spatially organized classrooms can also contribute to improved academic performance, as students are more likely to take ownership of their learning. Future Researchers. The study's findings can serve as a foundation for further investigation into the relationship between spatial organization and learning outcomes. For a more comprehensive understanding, the following terms were defined conceptually and operationally: Teachers' Spatial Organization Skills. This is conceptually defined as the ability of educators to effectively organize, design, and utilize the physical learning environment to enhance teaching and learning experiences. Self-paced learning is conceptually defined as the set of abilities that help students determine what they need for learning. In this study, the dependent variable was described in terms of interest in learning, learning responsibility, motivation in the learning process, and decisiveness in learning.

## 2. Methodology

In this chapter, we will outline the processes and steps involved in conducting the study. This will encompass selecting the study's design, identifying the respondents and the sampling method, choosing the research instruments for data collection, and delineating the data analysis process. The researcher employed artificial intelligence methods to meticulously proofread this work during its preparation. Artificial Intelligence (AI) was expressly utilized to enhance the overall quality, coherence, and precision of the manuscript. This methodology is being openly communicated to adhere to ethical norms in research. Leveraging AI for proofreading underscores a commitment to the responsible use of cutting-edge technologies and acknowledges AI's growing role and potential in professional and academic writing.

*2.1. Research Design*—In this study, the researcher utilized the quantitative descriptive-correlational technique of research to gather data ideas, facts, and information related to the influence of teachers' spatial organization skills on the self-paced learning of students. Bryman and Bell (2015) described quantitative research as focusing on the objective measurement and analysis of numerical data to draw conclusions

and make inferences about a specific population or phenomenon. This approach employs systematic and structured data collection techniques, such as surveys, experiments, or statistical analysis of existing datasets, to gather quantitative and statistically analyzed numerical data. The findings from quantitative research aimed to provide a deeper understanding of patterns, relationships, and trends within the data.

Meanwhile, descriptive correlational research, according to Gay, Mills, and Airasian (2019), is an approach that involves observing and measuring two or more variables without manipulating them. It aims to describe the relationship or association between variables as they naturally occur. This approach focuses on understanding the strength and direction of the relationship between variables, often using statistical measures such as correlation coefficients. In a descriptive correlational study, researchers collect data on variables of interest and analyze them to identify patterns, trends, or associations. The goal was to understand better how the variables relate to each other in a specific population or context. This approach was beneficial when exploring complex phenomena or when causality cannot be established due to ethical or practical limitations. The study mainly focused on determining which domains of teachers' spatial organization skills were used in self-paced learning by students.

2.2. *Research Respondents*—The study's respondents were junior high school students in Cluster 5 Secondary schools in Davao City. The 150 respondents were selected through a stratified random sampling technique in this study. According to Leedy and Ormrod (2018), stratified random sampling is a probabilistic sampling technique used in research to select a representative sample from a population by dividing it into subgroups or strata based on specific

The second part of the instrument is about students' self-paced learning. This questionnaire was adopted from the study of Ayyildiz and Tarhan (2015), who indicated an interest in learning, learning responsibility, motivation in the learning process, and decisiveness in learn-

2.4. *Data Gathering Procedure*—The researcher undertook the steps in conducting the

characteristics. Within each stratum, a random sample is drawn, and these samples are combined to create the final representative sample for the study. This method ensures that each subgroup is adequately represented in the sample, allowing for more accurate generalizations and inferences about the entire population. The primary consideration of this study was to choose respondents who could provide information to achieve its purpose. Hence, respondents should be currently enrolled in a high school in Cluster 5 Secondary schools in Davao City to be eligible for the study, and those who voluntarily signed the ICF were given the survey questionnaires. Moreover, the study was delimited only to the nature of the problem based on the research questions, and thus, it did not consider the students' socio-economic status.

2.3. *Research Instrument*—The study used researcher-made survey questionnaires to suit the current investigation. The first tool is about teachers' spatial organization skills. This questionnaire was distributed among the three indicators, namely engaging and interactive learning, growth mindset, and inclusivity and diversity. The scale obtained a Cronbach's alpha value of 0.893 for engaging and interactive learning, 0.730 for growth mindset, 0.731 for inclusivity and diversity, and an overall value of 0.934. The questionnaire made use of a 5-point Likert scale and was determined based on the following ranges of means:

The reliability of the original scale ranges from 0.80 to 0.90, which makes it reliable. The new scale obtained a Cronbach's alpha value of 0.892. The instrument made use of a 5-point Likert scale that was determined based on the following range of mean:

study after validating the research questionnaire. Permission to Conduct the Study. The researcher secured the permission to conduct the

<b>Range of Mean</b>	<b>Descriptive Level</b>	<b>Interpretation</b>
4.20 - 5.00	Very Extensive	The teachers' spatial organization skills are always observed.
3.40 – 4.19	Extensive	The teachers' spatial organization skills are oftentimes observed.
2.60 – 3.39	Moderately Extensive	The teachers' spatial organization skills are sometimes observed.
1.80 – 2.59	Less Extensive	The teachers' spatial organization skills are seldom observed.
1.00 – 1.79	Not Extensive	The teachers' spatial organization skills are never observed.

<b>Range of Mean</b>	<b>Descriptive Level</b>	<b>Interpretation</b>
4.20 - 5.00	Very Extensive	The self-paced learning of students is always manifested.
3.40 – 4.19	Extensive	The self-paced learning of students is oftentimes manifested.
2.60 – 3.39	Moderately Extensive	The self-paced learning of students is sometimes manifested.
1.80 – 2.59	Less Extensive	The self-paced learning of students is rarely manifested.
1.00 – 1.79	Not Extensive	The self-paced learning of students is never manifested.



study. The researcher secured the endorsement from the Dean of the Graduate School. The endorsement letter from the Dean of the Graduate School, was attached to the permission letters to be endorsed to the school's division superintendent and then to the school principals of the selected public schools in Cluster 5 Secondary Schools in Davao City. Distribution and Retrieval of the Questionnaire. The researcher distributed the research instrument to the respondents after the study was approved. The study was conducted last January 4-5, 2024. Upon distributing the questionnaires, the benefits of the survey were briefly discussed and explained to the identified respondents of the study. For the administration of the questionnaire, the study's respondents were given enough testing time to finish the questionnaires. After this, the data collected were subjected to quantitative analysis. Collation and Statistical Treatment of Data. After the questionnaire was retrieved, the scores of each respondent were tallied to organize the data per indicator. Then, each score was subjected to descriptive and inferential analysis using SPSS.

*2.5. Ethical Considerations*—The researcher promptly observed the protocols deemed necessary as the standard guidelines in carrying out the research study following the study protocol assessment criteria, particularly in managing the population and data. The researcher provides potential respondents with clear and comprehensive information about the study. This information includes the purpose of the research, procedures, potential risks and benefits, confidentiality measures, voluntary participation, and the researchers' contact information. Informed Consent. The researcher gave the respondents a written informed consent form summarizing the study details in layman's terms. The ICF clearly states that participation is voluntary and that respondents can withdraw without penalty. Respondents were given a copy of the signed form for their records. It was clear that the respondent's involvement in the

study is voluntary. If they refused to participate, they were not forced by the researcher. Besides, the researcher was cautious in ensuring the respondents' psychological well-being. Written permission was secured from the respondents. The researcher informed the respondents that the study aimed to conduct a study on the factors that hinder/promote the self-paced learning of students about teachers' spatial organization skills and may contribute to the enhancement. Vulnerability of Research Participants. The study's respondents are teachers, so they are not considered vulnerable since all of them are of legal age, and they are not considered highly vulnerable psychologically. The researcher emphasized that the survey was set at the respondents' convenience. Also, the researcher protected the confidentiality of the information disclosed. Privacy and Confidentiality. This study observed the Data Privacy Act of 2012, wherein the researcher assured that the data could not be traced back to the respondents, who were the real source of information, to protect the identities of the participants. Moreover, the researcher assured that no personal data would be shared without the consent of the respondents. Thus, to ensure that no personal data would be exposed, access was limited to the researcher alone. To protect the privacy of the respondents, it was assured that the researcher is the only person that could access the data on the survey. After the necessary data was collected, the researcher permanently disposed of all the survey questionnaires and deleted the data results to ensure that data could not be traced back to the respondents, who were the real source of information. Risk, Benefits, and Safety - In administering the survey questionnaires, the researcher fully disclosed to the respondents the nature of their participation and explained thoroughly and properly the purpose and benefits of the study and the confidentiality of their responses as stated in the online survey questionnaire. Without restrictions, the respon-

dents could ask questions related to the study. Further, the researcher ensured that the respondents were not subjected to harm in any way whatsoever. Moreover, the questionnaire and interview guide used in this study did not contain any degrading or unacceptable statements offensive to the study's respondents. Likewise, this study is designed purely to collect academic information related to the study, and they were not asked for personal information. To minimize inconvenience, the researcher ensured that the respondents were given ample time to answer the survey questionnaire. The respondents were given the freedom not to answer questions that made them feel any psychological or emotional distress, and they would be free to withdraw as respondents to the study if they felt that they could not discuss the information that was being asked of them. The researcher valued their participation and placed their welfare as the highest priority during the study. Justice. To avoid impartiality in choosing the respondents, the researcher regarded all respondents equally regardless of whether they would be respondents in the survey. The researcher was not prejudiced in choosing the study respondents—anybody who fit the qualifications of being bonafide enrolled junior high school students in the purposively selected schools. During the study, the researcher made certain to respect the respondents by interrupting their routine as little as possible. To compensate for the time spent during data gathering, the researcher gave tokens of appreciation to the respondents. This token was an assortment of souvenirs. The tokens were sent via courier, sealed carefully in a package. Also, each token was sanitized before being sent to your doorstep. Transparency. To provide transparency in this study, any communication concerning the research was done honestly and fairly. To safeguard the welfare of the participants, the researcher properly implemented the methods discussed in this study. All the necessary documents that supported the

data analysis were included. Importantly, the researcher described the extent of the respondents' involvement in this study and shared how the researcher-maintained objectivity in analyzing data and presenting the study results. Qualification of the Researcher. The researcher ensured that other factors like the conflict of interest did not influence the respondents' responses. The study's findings could be accessed by the respondent's parents and school administrators of the participating schools because the information would be made available if they followed proper protocol to protect the anonymity of the respondents. The researcher also acknowledged the effort of every person who contributed to the success of the Study: The Division of Davao City was given a furnished copy of the research results so they can be accessed by the respondents and used for learning and further study. Adequacy of Facilities. The researcher engaged the respondents in a conducive environment and learning materials that were ample and available during the study, which was done within the time set by the researcher. The accuracy of gathering data from the respondents was ensured by encoding the ratings of the respondents properly during the day when the researcher was not too tired to do them to avoid errors in encoding. Also, the analysis and results were proficient and aligned, serving as a primary basis for adequacy. Community Involvement. It was good practice to involve the community during every phase of research, from planning to reporting. Hence, the researcher planned to share the findings generated with the community and community involvement was accorded primacy in making decisions about the research agenda, appropriate methods to apply in their context, and use of the results or findings. The findings of this study would then be shared with the community through gatherings, fora, and conferences.

2.6. *Data Analysis*—The following were the statistical tools utilized by the researcher in

processing the gathered data: Mean. This was useful in characterizing the teachers' spatial organization skills and self-paced learning of students in Cluster 5 Secondary Schools in Davao City. This was used to supply the answer for objectives 1 and 2. Pearson Product Moment Correlation. It was used in this study to assess the significant relationship between teachers' spatial organization skills and the self-paced learning of students in Cluster 5 Secondary Schools

in Davao City. It is a statistical measure of the strength of a linear relationship between paired data. In a sample, it was usually denoted by  $r$ . This was used to supply the answer for objective 3. Linear Analysis. It was applied to evaluate which domains of teachers' spatial organization skills significantly influence the self-paced learning of students in Cluster 5 Secondary Schools in Davao City. This was used to supply the answer for objective 4.

### 3. Results and Discussion

This chapter presents the results generated from the data gathered. It was sequenced based on the study's objectives as presented in the first chapter. Thus, it presents the extent of teachers' spatial organization skills and self-paced learning of students in Cluster 5 Public Secondary Schools in Davao City; the significant relationship between teachers' spatial organization skills and self-paced learning of junior high school students in Cluster 5 Public Secondary Schools in Davao City; and the influence of teachers' spatial organization skills on self-paced learning of students in Cluster 5 Public Secondary Schools in Davao City.

#### 3.1. Extent of Spatial Organization Skills of Teachers—

3.1.1. *Engaging and Interactive Learning*—Regarding teachers' spatial organization skills in terms of engaging and interactive learning, results in Table 1 reveal that its category mean is 3.28, which is moderately extensive, which means that this domain is sometimes observed. The result means that the ability of teachers to incorporate hands-on activities, tech-

nology, games, and real-world applications to make learning more engaging and relevant is sometimes observed by the students. This supports the idea of More and Miller (2015) that engaging and interactive learning strategies encourage students to actively participate in the learning process. Instead of passively receiving information, students are actively involved in discussions, problem-solving, and hands-on activities, leading to a deeper understanding of the subject matter.

The table further reveals that the mean rating of the items ranges from 2.77 to 3.96. It is noteworthy that item "Using direct presentation to provide learners with information" has a mean rating of 2.77, described as moderately extensive, interpreted as an item sometimes observed, while item "Using specific questions that have specific answers" has a mean rating of 3.96, described as extensive and interpreted as item oftentimes observed. Sun (2013) says students practice effective communication and ac-

tive listening through interactive activities. They learn to articulate their thoughts, express ideas clearly, and respectfully engage with their peers, enhancing their communication skills.

3.1.2. *Growth Mindset*—The result in Table 2 shows that the teachers' spatial organization skills in terms of growth mindset were assessed by the respondents as moderately extensive with a category mean of 3.16, interpreted as sometimes observed. This implies that students sometimes observed the teachers' convic-

Table 1. Teachers' Spatial Organization Skills in Terms of Engaging and Interactive Learning

<b>Statement</b>	<b>Mean</b>	<b>Descriptive Rating</b>
Providing students with engaging and interactive learning to make the classroom more exciting and enjoyable for students.	3.13	Moderately Extensive
Training the students on distinguishing between the different characteristics of the same concept.	3.36	Moderately Extensive
Using specific questions that have specific answers.	3.96	Extensive
Helping students imitate desired models.	3.25	Moderately Extensive
Awarding students for the right answers.	3.02	Moderately Extensive
Using direct presentation to provide learners with information.	2.77	Moderately Extensive
Depending on the criteria for evaluating the students.	3.48	Extensive
Training students on learning simple behaviors till they reach the complicated behavior.	3.29	Moderately Extensive
<b>Overall Mean</b>	<b>3.28</b>	<b>Moderately Extensive</b>

tion that intelligence and skills can be cultivated through dedication and persistence, motivating students to welcome challenges and gain insights from their errors. The result agrees with the view of (2016) that encouraging a growth mindset inside the classroom is of utmost im-

portance as it positively impacts students' attitudes, beliefs, and overall learning outcomes. A growth mindset is the belief that abilities and intelligence can be developed through dedication, hard work, and perseverance.

Table 2. Teachers' Spatial Organization Skills in Terms of Growth Mindset

Statement	Mean	Descriptive Rating
Beginning with presenting the main ideas of the topic at the beginning of the class.	3.32	Moderately Extensive
Ending the learning situation by connecting the lesson parts together.	3.18	Moderately Extensive
Encouraging learners to verify information and facts before giving judgment.	3.62	Extensive
Moving from the abstract to the examples.	3.00	Moderately Extensive
Asking students to do a written or verbal summary of the information they get.	3.42	Extensive
Training learners to plan, observe, and evaluate their teaching activities.	2.51	Less Extensive
Training students on generating unified answers for the stimulator raised for them.	2.89	Moderately Extensive
Helping students identify their own learning methods.	3.37	Moderately Extensive
<b>Overall Mean</b>	<b>3.16</b>	<b>Moderately Extensive</b>

The table further reveals that the mean rating of the items ranges from 2.51 to 3.62. It is noteworthy that item Training learners to plan, observe, and evaluate their teaching activities has a mean rating of 2.51, described as less extensive, interpreted as an item seldom observed, while item Encouraging learners to verify information and facts before giving judgment has a mean rating of 3.62, described as extensive and interpreted as item oftentimes observed. According to Hossain (2015), by encouraging a growth mindset, educators can create an envi-

ronment where learning is valued for its own sake. Students become intrinsically motivated to learn and develop a passion for acquiring new knowledge and skills. This is congruent to Krawec and Montague's (2012) idea that encouraging an intellectually competitive environment provides a structure for learning when a task cannot be completed through a series of steps. Research has shown that students with a growth mindset achieve higher academic success. Their belief in their capacity to improve leads to better study habits and a focus on learn-

ing, leading to improved performance.

3.1.3. *Inclusivity and Diversity*—Regarding inclusivity and diversity, Table 3 shows a moderately extensive category mean rating of 3.30, which means that this domain of spatial organization skills is sometimes observed. This means that teachers’ ability to create a welcoming and accepting environment that celebrates the uniqueness of each student, promotes cultural diversity, and values individual perspectives and experiences is sometimes observed in Cluster 5 Public Secondary Schools in Davao City. The result is congruent with Abramovich et al.’s (2019) idea that embracing diversity and promoting inclusivity go beyond mere represen-

tation; it involves creating a culture of respect, understanding, and appreciation for the unique backgrounds, experiences, and perspectives of everyone. When students feel accepted and valued for who they are, they are more likely to engage actively in their learning and take academic risks. Adding more, exposure to diverse perspectives and experiences helps students develop empathy and understanding. The mean rating of the different items ranges from 2.85 to 3.91. The item “Allowing students to have more clarifications and explanations on the certain stimulus” reflects a mean rating of 2.85, described as moderately extensive and interpreted as sometimes observed.

Table 3. Teachers’ Spatial Organization Skills in Terms of Inclusivity and Diversity

Statement	Mean	Descriptive Rating
Allowing students more clarifications and explanations on the certain stimulus.	2.85	Moderately Extensive
Supporting students’ sympathy toward others.	3.91	Extensive
Helping learners have confidence in themselves.	3.59	Extensive
Encouraging students to interact positively amongst themselves.	3.03	Moderately Extensive
Taking part in improving students’ ability to control their reactions.	3.24	Moderately Extensive
Distributing different teaching-learning tasks to students.	3.11	Moderately Extensive
Letting students have their conversations positively.	3.38	Moderately Extensive
Training students to solve their problems comfortably.	3.29	Moderately Extensive
<b>Overall Mean</b>	<b>3.30</b>	<b>Moderately Extensive</b>

Meanwhile, “Supporting students’ sympathy toward others” is rated 3.91, described as extensive and interpreted as an item often observed among students. According to Lerner et al. (2014), respecting individual differences is a

humane approach because psychological reactions are considered one of the most important factors contributing to peaceful psychological health that paves the way toward achievement.

3.2. *Summarizes The Extent of Teachers' Spatial Organization Skills In Cluster 5 Public Secondary Schools In Davao City*—Lastly, Table 4 summarizes the extent of teachers' spatial organization skills in Cluster 5 Public Secondary Schools in Davao City. The table shows that teachers' spatial organization skills obtained an overall mean score of 3.25, descriptively rated as moderately extensive and interpreted as sometimes observed. This implies that teachers' ability to effectively organize, design, and utilize the physical learning environment to enhance teaching and learning experiences

is sometimes observed in Cluster 5 Public Secondary Schools in Davao City. This supports the findings of Saputra and Aziz (2014) that skilled spatial organization allows for flexibility in arranging the classroom layout to accommodate different instructional activities, group configurations, and learning styles. The space can be easily adapted to support various teaching methods and student needs. Le et al. (2017) state that effective spatial organization involves maintaining a well-organized, clutter-free classroom. Essential instructional materials, resources, and technology are readily accessible and strategically placed to support the learning objectives.

Table 4. Summary of Teachers' Spatial Organization Skills in Cluster 5 Public Secondary Schools in Davao City

Indicators	Mean	Descriptive Equivalent
Engaging and Interactive Learning	3.28	Moderately Extensive
Growth Mindset	3.16	Moderately Extensive
Inclusivity and Diversity	3.30	Moderately Extensive
<b>Overall Mean</b>	<b>3.25</b>	<b>Moderately Extensive</b>

Adding more, the table indicates that teachers' spatial organization skills in terms of inclusivity and diversity acquired the highest mean score of 3.30 described as moderately extensive and interpreted as sometimes observed, while teachers' spatial organization skills in terms of growth mindset acquired the lowest mean score of 3.16 described as moderately extensive and interpreted as sometimes observed in Cluster 5 Public Secondary Schools in Davao City. This is congruent with Raba's (2017) idea that teachers' spatial organization skills consider students' diverse needs and learning styles, allowing for differentiation in instructional approaches and activities. Differentiated spaces may be created to support individual, small-group, or whole-class learning experiences. As pointed out by Nguyen et al. (2012), skilled space management incorporates creative and aesthetically pleasing

elements into the learning environment.

3.3. *Extent Self-Paced Learning of Junior High School Students*—

3.3.1. *Interest in Learning*—Consequently, the dimension of interest in learning, as shown in Table 5, is moderately extensive, with a category mean of 3.17. This implies that the degree of curiosity, motivation, and enthusiasm students have for acquiring new knowledge and skills when they are given the autonomy and flexibility to learn at their own pace is sometimes manifested in Cluster 5 Public Secondary Schools in Davao City. This is congruent with Bray and McClaskey's (2015) view that self-paced learning allows average-level students to tailor their learning experience to their needs and preferences. They can delve deeper into interesting areas or spend more time on challenging concepts, leading to improved comprehen-

sion and retention. The mean rating of the different items ranges from 2.83 to 3.40. The item “Prioritizing time for learning while planning a new day” reflects a mean rating of 2.83, described as moderately extensive and interpreted as sometimes manifested. Further, the item “Believing in the importance of playing an active role in learning” has a mean rating of 3.40, de-

scribed as extensive and interpreted as an item oftentimes manifested. According to Grant and Basye (2014), self-paced learning fosters the development of essential autonomous learning skills, such as time management, goal setting, and self-regulation. These skills are valuable for average-level students as they can become more independent and self-directed learners.

Table 5. Self-Paced Learning of Junior High School Students in Terms of Interest in Learning

Statement	Mean	Descriptive Rating
Reviewing notes during leisure time to be didactic.	3.21	Moderately Extensive
Prioritizing time for learning while planning a new day.	2.83	Moderately Extensive
Believing in the importance of playing an active role in learning.	3.40	Extensive
Believing that what they learn is more important than getting a passing grade.	3.25	Moderately Extensive
<b>Overall Mean</b>	<b>3.17</b>	<b>Moderately Extensive</b>

3.3.2. *Learning Responsibility*—This domain, as shown in Table 6, reflects a moderately extensive category mean of 3.04, which means that it is sometimes manifested. This implies that developing skills and habits that enable students to take ownership of their learning process is sometimes manifested in Cluster 5 Public

Secondary Schools in Davao City. The result supports the view of Manavipour and Saeedian (2016) that developing the ability to set clear, achievable goals is crucial. Average-level students can use this skill to break down larger learning objectives into manageable steps, making their learning journey more structured and attainable.

Notably, the mean ratings of the different items range from 2.49 to 3.37. The table further reveals that “Using the Internet for learning purposes, instead of having a good time” has a mean rating of 2.49, described as less extensive and interpreted as an item seldom manifested. Meanwhile, the item “Holding self-responsible for my learning” reflects a mean rating of 3.37,

described as moderately extensive and interpreted as sometimes manifested. According to Soyogul (2015), learning responsibility empowers average-level students to take ownership of their education. They become active participants in the learning process, choosing what topics to explore, resources to use, and strategies to employ.



Table 6. Self-Paced Learning of Junior High School Students in Terms of Learning Responsibility

<b>Statement</b>	<b>Mean</b>	<b>Descriptive Rating</b>
Using the internet for learning purposes instead of having a good time.	2.49	Less Extensive
Holding responsible for my own learning.	3.37	Moderately Extensive
They should take their time to learn related previous subjects well in order to learn a new subject without difficulty.	3.26	Moderately Extensive
<b>Overall Mean</b>	<b>3.04</b>	<b>Moderately Extensive</b>

3.3.3. *Motivation in the Learning Process*—As shown in Table 7, this specific domain has a category mean of 3.22, described as moderately extensive, which means that this domain of self-paced learning is sometimes manifested. It implies that students’ motivation and eagerness towards learning is sometimes manifested in Cluster 5 Public Secondary Schools in Davao City. This supports the view of Curtis (2017) that in a learning environment where motivated strategies are utilized, students have the agency to set their own goals for learning, create a reflective process during their journey to attain those goals, and be flexible enough to take their learning outside the confines of the traditional classroom. Adding on, the mean ratings of the different items range from 3.04 to 3.44. Specifically, the item “Learning a lesson no matter how it is complicated” shows a mean rating of 3.04, described as moderately extensive and interpreted as sometimes manifested.

Table 7. Self-Paced Learning of Junior High School Students in Terms of Motivation in Learning Process

<b>Statement</b>	<b>Mean</b>	<b>Descriptive Rating</b>
Learning a lesson, no matter how it is complicated.	3.04	Moderately Extensive
Being motivated in learning even in the presence of distracting factors.	3.17	Moderately Extensive
Being not bothered even if they could not solve the problems that they encountered.	3.44	Extensive
Planning what I should do instead of feeling despair when I encounter a difficult subject.	3.22	Moderately Extensive
<b>Overall Mean</b>	<b>3.37</b>	<b>Moderately Extensive</b>

The item “Being not bothered even if they could not solve the problems that they encountered” reflects a mean rating of 3.44, described as extensive and interpreted as an item oftentimes manifested. According to Haughey (2017), self-paced learning entails high motivation to achieve academically. The study indicated that academic motivation in terms of performance goals and self-efficacy significantly predicts the students’ academic performance.

3.3.4. *Decisiveness in Learning*—As shown in Table 8, this specific domain has a category mean of 3.15, described as moderately extensive, which means that this domain of self-paced learning is sometimes manifested. It means students’ ability to make effective

and timely decisions in independent learning is sometimes manifested among students. The result supports the view of Alsaleh (2020) that decisive learning enables high-achievers to adapt their learning strategies as needed. They can recognize when a particular approach is not working and have the confidence to switch to a more suitable method. Panadero (2017) viewed that high-achieving students can become adept at managing their time, allowing them to balance self-paced learning with other responsibilities and activities effectively. Decisiveness learning fosters self-discipline, essential for high-achieving students to stay committed to their self-paced learning goals.

Table 8. Self-Paced Learning of Junior High School Students in Terms of Decisiveness in Learning

Statement	Mean	Descriptive Rating
Solving the problems during learning based on a cause-and-effect relationship.	3.21	Moderately Extensive
Organizing study hours by making plans.	2.66	Moderately Extensive
Being able to know clearly and implicitly the objectives of the new subject to be learned.	3.14	Moderately Extensive
Finishing homework at the last moment.	3.48	Extensive
Reviewing the previous knowledge that forms the basis for the new subject when they start to learn something new.	3.28	Moderately Extensive
<b>Overall Mean</b>	<b>3.15</b>	<b>Moderately Extensive</b>

Adding on, the mean ratings of the different items range from 2.66 to 3.48. Specifically, the item “Organizing study hours by making plans” shows a mean rating of 2.66, described as moderately less extensive and interpreted as seldom manifested. The item “Finishing homework at the last moment” reflects a mean rating of 3.48

described as extensive and interpreted as item oftentimes manifested. This supports the idea of Mbatha (2015) that high-achieving students can benefit from decisiveness learning by efficiently allocating their time and energy to tasks and materials that are most relevant to their goals. They can avoid unnecessary distractions and focus on

what truly matters.

3.4. *Summary of Self-Paced Learning in Junior High School Students in Cluster 5 Public Secondary Schools in Davao City*—Lastly, the summary of the extent of self-paced learning of junior high school students is shown in Table 9. As shown in the table, the overall mean of self-paced learning of junior high school students is 3.15 which is described as moderately extensive. It means that the self-directedness, self-regulation, and the capacity to set personal learning goals and strategies is sometimes man-

ifested in Cluster 5 Public Secondary Schools. This supports the proposition of Izuchi and Onyekuru (2017) that self-paced learning encourages critical thinking skills. High-level students can engage deeply with content, analyze complex problems, and apply advanced critical thinking strategies. High-level students further develop their self-directed learning skills. They take responsibility for their educational journey, set ambitious goals, and actively seek out resources and challenges.

Table 9. Summary of Self-Paced Learning of Junior High School Students in Cluster 5 Public Secondary Schools in Davao City

<b>Indicators</b>	<b>Mean</b>	<b>Descriptive Equivalent</b>
Interest in Learning	3.17	Moderately Extensive
Learning Responsibility	3.04	Moderately Extensive
Motivation in the Learning Process	3.22	Moderately Extensive
Decisiveness in Learning	3.15	Moderately Extensive
<b>Overall Mean</b>	<b>3.15</b>	<b>Moderately Extensive</b>

Adding more, the table indicates that the self-paced learning of junior high school students in terms of motivation in the learning process acquired the highest mean score of 3.22 described as moderately extensive and interpreted as sometimes manifested, while self-paced learning of junior high school students in terms of learning responsibility acquired the lowest mean score of 3.04 described as moderately extensive and interpreted as sometimes observed in Cluster 5 Public Secondary Schools in Davao City. Subramanian (2016) states students are often motivated by challenging themselves and achieving excellence. Self-paced learning empowers them to set and attain ambitious goals, maintaining their motivation and enthusiasm. Self-paced learning allows students to use their time efficiently. They can allocate more time to the areas they need most, optimizing their learning experience.

3.5. *Relationship Between Teachers’ Spatial Organization Skills and Self-Paced Learning of Junior High School Students in Cluster 5 Public Secondary Schools in Davao City*—The results of the analysis of the relationship between teachers’ spatial organization skills and self-paced learning of junior high school students in Cluster 5 Public Secondary Schools in Davao City are presented. Bivariate correlation analysis using Pearson product-moment correlation was utilized to determine the relationship between the variables mentioned. Table 10 shows that teachers’ spatial organization skills have a significant positive relationship with the self-paced learning of junior high school students with a p-value of .000 that is less than the .05 level of significance (two-tailed) ( $r = 0.353, p < 0.05$ ). It means that as the extent of teachers’ spatial organization skills changes, the self-paced learning of junior high school stu-

dents also changes significantly. This supports the idea of Abdulwahab et al. (2016) that when students are encouraged to take initiative in their learning, they become less reliant on constant guidance from teachers. They develop problem-solving skills and become more resourceful in seeking answers and information. Meanwhile, the table also shows that teachers' spatial organization skills in terms of engaging and interactive learning, growth mindset, and inclusivity and diversity have a significant relationship with

the self-paced learning of junior high school students with a p-value of .000 is less than .05 level of significance (two-tailed) ( $r = 0.250, p < 0.05$ ), ( $r = 0.236, p < 0.05$ ), and ( $r = 0.306, p < 0.05$ ). According to Dung and Florea (2012), when students are encouraged to take initiative in their learning, they become less reliant on constant guidance from teachers. They develop problem-solving skills and become more resourceful in seeking answers and information.

Table 10. Significant Relationship Between Teachers' Spatial Organization Skills and Self-Paced Learning of Junior High School Students in Cluster 5 Public Secondary Schools in Davao City

Variables	Self-Paced Learning	r-value	p-value
<b>Decision</b>			
Engaging and Interactive Learning	0.250*	0.000	Reject H0
Growth Mindset	0.236*	0.001	Reject H0
Inclusivity and Diversity	0.306*	0.000	Reject H0
Overall, Teachers' Spatial Organization Skills	0.353*	0.000	Reject H0

\*Significant @  $p < 0.05$

**Legend:** Perfect Correlation for  $r=1.00$ ; Strong Correlation for  $0.7 < r < 1.00$ ; Moderate Correlation for  $0.3 < r < 0.7$ ; Weak Correlation for  $0.00 < r < 0.3$ ; No Correlation for  $r=0.00$ .

3.6. *Significance on the Influence of Teachers' Spatial Organization Skills on the Self-Paced Learning of Junior High School Students in Cluster 5 Public Secondary Schools in Davao City*—The significance of the influence of teachers' spatial organization skills on the self-paced learning of junior high school students was analyzed using linear regression analysis. Table 11 shows that teachers' spatial organization skills in engaging and interactive learning, growth mindset, and inclusivity and diversity are considered; the model is significant, as evident in an F-value of 11.336 with  $p < 0.05$ .

It is, therefore, stated that teachers' spatial organization skills predict the self-paced learning of junior high school students. Meanwhile, the computed adjusted R2 value of 0.256 indicates that teachers' spatial organization skills have contributed significantly to the variability of self-paced learning of junior high school students by 25.60 percent of the total variability. Therefore, the difference of 74.40 percent was credited to other factors not covered in this study. In addition, the table shows that there are domains of teachers' spatial organization skills that significantly influence the self-paced

learning of junior high school students. This table also indicates that engaging and interactive learning, growth mindset, and inclusivity and diversity are significant when considered as predictors of self-paced learning of junior high school students. This means that the odds for the extent of self-paced learning of junior high school students increase by 0.191, 0.173, and 0.139 for each unit increase in teachers' spatial organization skills. Thus, this leads to the rejection of the null hypothesis that none of the domains of teachers' spatial organization skills significantly influence the self-paced learning of junior high school students.

Table 11. Significance on the Influence of Teachers' Spatial Organization Skills on the Self-Paced Learning of Junior High School Students in Cluster 5 Public Secondary Schools in Davao City

Teachers' Spatial Organization Skills	B	S.E.	p-value	Decisions
Engaging and Interactive Learning	0.191*	0.059	0.000	Reject H0
Growth Mindset	0.173*	0.060	0.002	Reject H0
Inclusivity and Diversity	0.139*	0.072	0.000	Reject H0
<b>R<sup>2</sup></b>	= 0.256			
<b>F-value</b>	= 11.336*			
<b>p-value</b>	= 0.000			

\*Significant @ p<0.05

Affirming that self-paced learning of junior high school students is a function of teachers' spatial organization skills; the finding is parallel to the view of Schmuck (2001) that effective spatial organization can significantly influence the self-paced learning of students by creating a well-designed and conducive learning environment, teachers can empower students to take ownership of their learning journey and become more self-directed in their educational pursuits.

Lastly, this agrees with the anchored proposition of Wegner et al. (2014) that by allowing students to have ideas in their learning space, they may feel more motivated and responsible for their own learning outcomes. Thus, teachers can involve students in designing the classroom layout and decor, giving them a sense of ownership and autonomy in their learning environment.

#### 4. Conclusions and Recommendations

This part of the paper presents the researcher's conclusions and recommendations. The literature supported the discussions in the first chapters, and the conclusions stated the problem presented in this study.

4.1. Findings—The primary objective of this study was to determine which domains teachers' spatial organization skills significantly influence the self-paced learning of junior high school students utilizing a non-experimental quantitative design using a correlation tech-

nique. The researcher selected 150 junior high school students in Cluster 5, Davao City, as the respondents using a random sampling method. The researcher used modified and enhanced adapted survey questionnaires, which were pilot-tested in a nearby school to ensure high reliability and internal consistency of the items in the instrument. Teachers' spatial organization skills in Cluster 5 Public Secondary Schools in Davao City got an overall mean of 3.25 with a moderately extensive descriptive rating. Also, teachers' spatial organization skills in terms of engaging and interactive learning, growth mindset, and inclusivity and diversity obtained mean scores of 3.28, 3.16, and 3.30, respectively. The self-paced learning of junior high school students in Cluster 5 Public Secondary Schools in Davao City got an overall mean of 3.15 with a moderately extensive descriptive rating. Also, self-paced learning of junior high school students in terms of interest in learning, learning responsibility, motivation in the learning process, and decisiveness in learning obtained mean scores of 3.17, 3.04, 3.22, and 3.15, respectively. Teachers' spatial organization skills have a significant positive relationship with the self-paced learning of junior high school students in Cluster 5 Public Secondary Schools in Davao City with a p-value of .000 that is less than .05 level of significance (two-tailed) ( $r = .353$ ,  $p < 0.05$ ). Meanwhile, teachers' spatial organization skills in terms of engaging and interactive learning, growth mindset, and inclusivity and diversity were found to be significantly correlated with self-paced learning of junior high school students in Cluster 5 Public Secondary Schools in Davao City, as evident in coefficient correlation values ( $r$ ) of 0.250, 0.236 and 0.306, respectively. Teachers' spatial organization skills in terms of engaging and interactive learning, growth mindset, and inclusivity and diversity significantly influenced the self-paced learning of junior high school students in Cluster 5 Public Secondary Schools

in Davao City, as evidenced by the F-value of 11.336 and  $p < 0.05$ . The  $r^2$  value of 0.256 indicated that teachers' spatial organization skills had contributed significantly to the variability of self-paced learning of junior high school students in Cluster 5 Public Secondary Schools in Davao City by 25.60

4.2. *Conclusions*—Based on the findings of this study, several conclusions were generated: Teachers' spatial organization skills in Cluster 5 Public Secondary Schools in Davao City were moderately extensive. Meanwhile, teachers' spatial organization skills in engaging and interactive learning, growth mindset, and inclusivity and diversity obtained moderately extensive ratings. Teachers' ability to effectively organize, design, and utilize the physical learning environment to enhance teaching and learning experiences was sometimes observed. The self-paced learning of junior high school students in Cluster 5 Public Secondary Schools in Davao City was moderately extensive. Meanwhile, self-paced learning of junior high school students in terms of interest in learning, learning responsibility, motivation in the learning process, and decisiveness in learning acquired moderately extensive ratings. This means that self-directedness, self-regulation, and the capacity to set personal learning goals and strategies were sometimes manifested in Cluster 5 Public Secondary Schools. Teachers' spatial organization skills have a significant positive relationship with the self-paced learning of junior high school students in Cluster 5 Public Secondary Schools in Davao City. This means that as the extent of teachers' spatial organization skills changes, the self-paced learning of junior high school students also significantly changes. This denotes that when students are encouraged to take initiative in their learning, they become less reliant on constant guidance from teachers. Teachers' spatial organization skills in terms of engaging and interactive learning, growth mindset, and inclusivity and diversity significantly

influenced the self-paced learning of junior high school students in Cluster 5 Public Secondary Schools in Davao City. This affirmed that the self-paced learning of junior high school students was a function of teachers' spatial organization skills. It implies that effective spatial organization can significantly influence the fast-paced learning of students by creating a well-designed and conducive learning environment; teachers could empower students to take ownership of their learning journey and become more self-directed in their educational pursuits.

4.3. *Recommendations*—The Department of Education (DepEd) may include spatial organization skills training as a mandatory component of teacher education programs and professional development initiatives. Adding more, DepEd may develop guidelines or standards for classroom design that promote student-centered and self-paced learning environments. Ensure that these standards are accessible and adaptable to various school settings. School heads may offer ongoing professional development opportunities for teachers to enhance their spatial organization skills. These may include workshops, seminars, and resources on classroom design. In addition, they may provide class-

rooms with resources that support self-paced learning, including access to technology, a variety of learning materials, and flexible seating options. Teachers may use professional development opportunities offered by schools and educational institutions to enhance their spatial organization skills. They may engage in workshops and training programs focused on classroom design. Teachers may also stay informed about current research and best practices related to spatial organization and self-paced learning. Based on new insights, they may continuously update and adapt classroom arrangements. Students may communicate with teachers and school administrators about the importance of well-designed learning spaces that support self-paced learning. Encourage open dialogue and collaboration. Lastly, researchers may conduct further analysis on the factors that influence the self-paced learning of junior high school students since teachers' spatial organization skills only contributed 25.60 percent of the total variability. Moreover, researchers may continue researching the relationship between spatial organization skills and self-paced learning outcomes, particularly in the context of junior high school education.

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