

## **Instructional Space Management Skills and Learning Autonomy among TECH-VOC Students in Carmen District, Davao Del Norte**

**Mark Angelo Sanorjo<sup>1</sup>**

<sup>1</sup>Carmen National High School, Davao, Philippines

Corresponding author e-mail: [markangelo.sanorjo09@gmail.com](mailto:markangelo.sanorjo09@gmail.com)

Article History: Received on 15 April 2024, Revised on 2 June 2024,  
Published on 26 June 2024

**Abstract:** In this study, instructional space management skills is a measure expected to improve the learning autonomy of the tech-voc students. In this study, the researcher selected the 150 junior high school students in Carmen District, Davao del Norte as the respondents of the study. Findings revealed that teachers' instructional space management skills was rated as extensive, while, learning autonomy of the tech-voc students in Carmen District in Davao del Norte was described as moderately extensive. Further, correlation analysis demonstrated that there is a significant relationship between teachers' instructional space management skills and learning autonomy of the tech-voc students in Carmen District in Davao del Norte. Evidently, regression analysis proved that instructional space management skills in terms of engaging and interactive learning; growth mindset; and inclusivity and diversity were significant predictors of learning autonomy of the tech-voc students in Carmen District in Davao del Norte. The study, therefore, conducted for further utilization of findings through publication in reputable research journal.

**Keywords:** Home Economics, Learning Autonomy, Teachers' Instructional Space Management Skills

### **A. Introduction**

In the USA, a significant challenge was the traditional curriculum structure that often-emphasized standardized testing over individualized learning, limiting students' opportunities to engage in self-directed learning activities (Smith & Carver, 2019). In Asia, particularly in countries like China and Japan, cultural expectations and educational systems that prioritized rote memorization and teacher-centered instruction impeded the development of independent learning skills (Wang & Lin, 2020). In the Philippines, the challenges were compounded by inadequate resources and infrastructure, along with a curriculum that did not sufficiently promote critical thinking and learner autonomy, leading to a reliance on teacher guidance rather than fostering self-management skills

among students (Bautista, Bernardo, & Ocampo, 2020). These issues highlighted the need for educational reforms that encourage learner autonomy through curriculum redesign, teacher training, and the provision of resources to support self-directed learning practices.

Despite the substantial body of research on the influence of instructional space management skills on learning autonomy, most of these studies had been conducted in foreign settings, particularly in Western countries such as the USA and Europe. This created a significant research gap, as the unique cultural, educational, and socio-economic contexts of tech-voc students in the Philippines had not been adequately explored. The existing studies largely utilized qualitative methods, providing valuable insights but lacking the statistical rigor needed to generalize findings across larger populations. Therefore, there was a pressing need to conduct a study within the Philippine setting utilizing a quantitative approach. This approach would allow for a more comprehensive and empirically robust examination of how instructional space management impacted the learning autonomy of tech-voc students in the Philippines, addressing the specific challenges and opportunities within this context and contributing to more effective educational strategies tailored to the local environment.

Conducting a study on the influence of instructional space management skills on the learning autonomy of tech-voc students represented a state-of-the-art approach in educational research, leveraging contemporary educational theories and advanced methodological techniques. Recent advancements emphasized the critical role of learning environments in fostering student engagement, motivation, and self-directed learning capabilities (Brooks, 2020). The integration of technology in instructional spaces, coupled with innovative classroom designs that promoted flexibility and inclusivity, underscored the modern perspective on effective teaching practices (Zandvliet & Fraser, 2020). Furthermore, employing a quantitative approach allowed for the use of sophisticated statistical analyses to uncover nuanced relationships and causal effects, providing robust and generalizable findings. This research not only aligned with current educational priorities but also addressed the evolving needs of tech-voc education in preparing students for a rapidly changing workforce, making it a timely and relevant contribution to the field (Sullivan et al., 2021).

The novelty of conducting a study on the influence of instructional space management skills on the learning autonomy of tech-voc students lay in its potential to bridge existing gaps in educational research, particularly within the context of vocational education. While extensive research had been conducted on traditional classroom settings, the unique requirements and dynamics of tech-voc environments had been relatively underexplored. This study stood out by focusing specifically on how strategic space management could enhance learning autonomy, a critical component for student success in vocational training

programs (Gaffney, 2021). Additionally, by incorporating modern technological tools and flexible classroom designs, the research reflected current trends and innovations in educational practices, providing fresh insights into how these elements could be optimized for tech-voc settings (Fisher & Frey, 2018). The application of a quantitative approach further added to its novelty, as it offered the potential for more precise measurement and generalization of findings, thereby contributing valuable data that could inform policy and practice in vocational education both locally and globally (Smith, 2020).

Conducting a study on the influence of instructional space management skills on the learning autonomy of tech-voc students is highly relevant in today's educational landscape. As the demand for skilled vocational professionals grows, ensuring that tech-voc students develop strong learning autonomy is essential for their success in an increasingly complex and dynamic workforce. Effective instructional space management can create learning environments that promote self-directed learning, critical thinking, and problem-solving skills—key competencies for vocational careers. By understanding how space management impacts these areas, educators can tailor their practices to better support student autonomy, thereby enhancing overall educational outcomes. Additionally, this study is relevant for policymakers and educational planners seeking evidence-based strategies to improve tech-voc education. Insights from this research can guide the design of vocational training programs that are more engaging, inclusive, and conducive to independent learning, ultimately contributing to the development of a more competent and adaptable workforce.

The study was set to deciphered which domains of instructional space management skills significantly influence the learning autonomy of tech-voc students in Carmen District, Davao del Norte. Specifically, this study seeks to answer the following questions:

1. What is the extent of instructional space management skills of teachers in Carmen District, Davao del Norte in terms of engaging and interactive learning; growth mindset; and inclusivity and diversity?
2. What is the extent of learning autonomy of tech-voc students in Carmen District, Davao del Norte in terms of interest in learning; learning responsibility; motivation in learning process; and decisiveness in learning?
3. Is there a significant relationship between instructional space management skills and learning autonomy of tech-voc students in Carmen District, Davao del Norte?
4. Which domains of instructional space management skills significantly influence the learning autonomy of tech-voc students in Carmen District, Davao del Norte?

## **B. Methods**

This study used a quantitative design following a descriptive correlational approach. Quantitative research design refers to the systematic empirical investigation of observable phenomena via statistical, mathematical, or computational techniques. The objective of quantitative research is to develop and employ models, theories, and hypotheses pertaining to natural phenomena (Creswell & Creswell, 2018). A descriptive correlational approach in research is used to describe and measure the degree of association between two or more variables without manipulating them. This approach aims to observe, describe, and document aspects of a situation as it naturally occurs and identify potential relationships between variables (Siedlecki, 2020). Particularity, the study focused on determining which domains of instructional space management skills of teachers on learning autonomy of tech-voc students in Carmen District, Davao del Norte.

In this study, 150 junior high school students (Grade 7-10) in Carmen District, Davao del Norte were chosen as respondents using a stratified random sampling method. This sampling technique involves dividing the population into distinct subgroups, or strata, that share similar characteristics, and then randomly selecting samples from each subgroup. This approach ensures that each subgroup is properly represented in the sample, thereby enhancing the generalizability and accuracy of the research findings (Taherdoost, 2016). Additionally, the researcher utilized modified and enhanced adapted survey questionnaires, which were pilot tested in a nearby school to ensure high reliability and internal consistency of the instrument's items. The collected data were analyzed using statistical tools such as Mean, Correlation Analysis, and Regression Analysis.

## **C. Results and Discussion**

**SOP#1:** What is the extent of instructional space management skills of teachers in Carmen District, Davao del Norte in terms of engaging and interactive learning; growth mindset; and inclusivity and diversity?

Instructional space management skills in terms of engaging and interactive learning were extensive ( $M=3.46$ ). Such well-managed spaces not only capture students' attention but also enhance their engagement and interaction with the material, leading to improved comprehension and skill acquisition. Effective instructional space management thus directly contributes to creating a dynamic learning atmosphere where students are motivated to participate actively and take ownership of their learning. According to Lehtonen et al. (2022), engaging and interactive learning environments, shaped by proficient space management, significantly boost student motivation and educational outcomes in vocational education contexts.

Instructional space management skills in terms of a growth mindset were extensive (M=3.42). As affirmed by Claro et al. (2020), teachers who effectively manage instructional spaces create environments that encourage perseverance, resilience, and a focus on effort rather than innate ability. This involves organizing the classroom to support collaborative learning, where students can share ideas and learn from each other, and incorporating areas for self-directed projects that allow for experimentation and learning from mistakes. By designing spaces that promote active learning and provide diverse opportunities for success, teachers help students develop a growth mindset, viewing challenges as opportunities to grow rather than obstacles. In addition, classroom environments that are well-managed to support student engagement and collaboration significantly contribute to the development of a growth mindset, which is essential for long-term success in technical and vocational education.

Instructional space management skills in terms of inclusivity and diversity were extensive (M=3.48). By creating a physical and social environment that celebrates diversity and promotes equity, teachers help all students to engage fully and thrive academically. These inclusive practices ensure that every student has equal access to learning opportunities and can participate actively in all classroom activities. It is concurred by Smith and Garrett (2020), that inclusive instructional space management is crucial in vocational education, as it fosters a sense of belonging and engagement among students from diverse backgrounds, leading to better educational outcomes.

Overall, instructional space management skills was extensive (M=3.45). This shows that the extensive instructional space management skills of teachers as research by Gaffney (2021) highlights that such interactive and engaging environments are crucial for improving educational outcomes in vocational education. In terms of engaging and interactive learning, teachers in this district excel in creating dynamic classroom environments that actively involve students in the learning process. By strategically organizing seating to encourage group activities, incorporating technology for interactive lessons, and designing multifunctional areas for hands-on practice, they ensure that students are not merely passive recipients of information but active participants in their education. These practices significantly boost student engagement and motivation, leading to deeper understanding and better retention of vocational skills.

**SOP#2:** What is the extent of learning autonomy of tech-voc students in Carmen District, Davao del Norte in terms of interest in learning; learning responsibility; motivation in learning process; and decisiveness in learning?

Learning autonomy in terms of interest in learning was moderately extensive (M=3.31). This intrinsic motivation is particularly important in vocational education, where practical

skills and hands-on learning are emphasized. Ratified by Deci and Ryan (2017), fostering an environment that supports autonomy and student interest is essential for effective learning, as it promotes self-determination and a deeper commitment to educational pursuits. Moreover, research by Vansteenkiste et al. (2018) shows that when students feel autonomous, they are more engaged and perform better academically, highlighting the importance of cultivating learning autonomy in educational settings.

Learning autonomy in terms of learning responsibility was extensive ( $M=3.42$ ). This sense of responsibility is fundamental in technical and vocational education, where students must often apply theoretical knowledge in practical, real-world settings. Further, Zimmerman and Schunk (2019), fostering a sense of learning responsibility helps students develop critical thinking and problem-solving skills, which are indispensable in technical careers. Furthermore, research by De Bruijn and Leeman (2017) indicates that students who are encouraged to take responsibility for their learning demonstrate higher levels of engagement, motivation, and academic achievement.

Learning autonomy in terms of motivation in learning process was moderately extensive ( $M=3.30$ ). It is important to empower students to engage deeply with practical and theoretical aspects of their training, fostering self-directed learning and critical thinking skills. As highlighted by Lemos and Veríssimo (2020), fostering learning autonomy in vocational education not only enhances students' current educational experiences but also prepares them for lifelong learning and adaptability in their future careers. This also includes providing opportunities for hands-on projects, offering guidance rather than direct instruction, and encouraging reflective practices.

Learning autonomy in terms of motivation in learning process was moderately extensive ( $M=3.46$ ). Fostering learning autonomy through decisiveness not only improves academic performance but also boosts students' confidence and readiness for the workforce as affirmed by Coutts and Sabourin (2020). Decisiveness in learning involves students' ability to set goals, choose learning strategies, and evaluate their progress independently. When students are decisive, they become more engaged and motivated, taking ownership of their learning outcomes. This, in turn, leads to enhanced skill acquisition and better preparation for real-world challenges.

Overall, the learning autonomy in terms of interest in learning; learning responsibility; motivation in learning process; and decisiveness in learning was moderately extensive ( $M=3.37$ ). Learning responsibility involves students taking ownership of their educational journey, including setting goals and managing time effectively, which enhances their ability to learn independently and apply their skills in practical settings (Murray & Mitchell, 2018). More, Motivation in the learning process, driven by both intrinsic and

extrinsic factors, plays a critical role in maintaining students' engagement and persistence in their studies (Schunk & DiBenedetto, 2020). Moreover, Decisiveness in learning allows students to make informed choices about their learning strategies and resources, fostering a proactive approach that is essential for adapting to the dynamic nature of vocational tasks (Bandura, 2019). Collectively, these aspects of learning autonomy significantly contribute to students' academic success and readiness for the workforce.

**SOP#3:** Is there a significant relationship between instructional space management skills and learning autonomy of tech-voc students in Carmen District, Davao del Norte?

There is a significant relationship between instructional space management skills and the learning autonomy of tech-voc students, as evidenced by various studies. Effective instructional space management involves creating an environment that encourages student engagement, collaboration, and independence. Agreed to Velasco and González (2018), well-organized classrooms with clearly defined areas for different activities enhance students' ability to take control of their learning processes. This arrangement supports self-directed learning by providing spaces where students can work independently or in groups, access resources easily, and engage in hands-on projects.

Further supporting this relationship, a study by Moore and Peters (2019) found that students in well-managed instructional spaces reported higher levels of self-efficacy and engagement, key indicators of learning autonomy. These environments enable students to make decisions about their learning strategies and collaborate effectively with peers, which enhances their ability to manage their learning independently. Additionally, Fisher and Frey (2018) argue that instructional spaces designed to be flexible and student-centered allow for a variety of learning modalities, catering to diverse learning preferences and promoting autonomy. By providing students with a sense of control over their learning environment, teachers can significantly boost their students' motivation and self-regulation skills. These findings highlight the critical role of instructional space management in fostering an autonomous learning culture among tech-voc students.

**SOP#4:** Which domains of instructional space management skills significantly influence the learning autonomy of tech-voc students in Carmen District, Davao del Norte?

Instructional space management skills in terms of engaging and interactive learning; growth mindset; and inclusivity and diversity significantly influenced the learning autonomy of tech-voc students. Instructional space management in terms of engaging and interactive significantly influenced the learning autonomy of tech-voc students ( $B=0.391$ ,  $p<0.05$ ). Interactive learning environments engage in interactive learning, which involves active participation, collaboration, and the use of technology, it requires teachers to adapt

their instructional management skills accordingly. Also, as concurred by Sun and Gao (2021) it compels teachers to refine their instructional management skills, resulting in more organized, engaging, and effective teaching practices.

Instructional space management skills in terms of growth mindset significantly influenced the learning autonomy of tech-voc students ( $B=0.124$ ,  $p<0.05$ ). Students in tech-voc education, where practical skills and adaptability are essential with a growth mindset believes that their abilities and intelligence can be developed through dedication and hard work. This perspective encourages them to embrace challenges, persist through obstacles, and learn from feedback, which are crucial attributes for mastering instructional management skills. According to Dweck (2019), students with a growth mindset are more likely to take ownership of their learning and exhibit higher levels of self-regulation and initiative, which are key components of effective instructional management.

Instructional space management skills in terms of inclusivity and diversity significantly influenced the learning autonomy of tech-voc students ( $B=0.232$ ,  $p<0.05$ ). Inclusive classroom management improves student engagement and academic performance, and according to Burrows and Slater (2019), students are more likely to feel comfortable and supported in a diverse learning environment. On one hand, teachers who prioritize inclusivity and diversity, design classroom spaces that accommodate a wide range of learning needs and backgrounds, ensuring all students feel valued and supported. Additionally, Clark and Zygmunt (2020) emphasize that inclusive and diverse classroom spaces help students develop critical social and cultural competencies, which are essential for success in both education and future careers.

#### **D. Conclusions**

This research found a significant relationship between instructional space management skills and the learning autonomy of technical vocational students, with both aspects being rated as extensive. The effective organization and utilization of classroom spaces play a crucial role in fostering autonomous learning behaviors among students, enabling them to take charge of their educational journey through independent and self-directed learning. Additionally, the study revealed that engaging and interactive learning environments, the promotion of a growth mindset, and a focus on inclusivity and diversity significantly influence the quality of instructional space management skills. These factors collectively contribute to creating dynamic, supportive, and equitable learning environments that not only enhance student engagement and motivation but also ensure that all students have the opportunity to thrive and develop essential skills for their future careers. By prioritizing these elements, educators can further improve their instructional space management practices and, consequently, the learning autonomy of their students.



## **E. Acknowledgement**

I would like to extend my heartfelt gratitude to my family for their unwavering support and encouragement throughout this journey. To my friends and colleagues, thank you for your insightful feedback, camaraderie, and constant motivation, which have been instrumental in the successful completion of this study. I am deeply thankful to the Graduate School Faculty for their guidance, expertise, and commitment to fostering an environment of academic excellence. Lastly, I am profoundly grateful to God Almighty for granting me the strength, wisdom, and perseverance to overcome challenges and accomplish this research on instructional space management skills and the learning autonomy of technical vocational students. This achievement would not have been possible without the collective support and blessings from all of you.

## **References**

- Bandura, A. (2019). Applying social cognitive theory in vocational education. *Journal of Applied Psychology, 104*(6), 1146-1159.
- Bautista, G., Bernardo, A., & Ocampo, D. (2020). Education in the Philippines: Development, challenges, and prospects. *Asia Pacific Journal of Education, 40*(2), 151-165.
- Brooks, C. (2020). The impact of classroom design on student engagement and interaction. *Journal of Learning Spaces, 9*(1), 1-13.
- Burrows, L., & Slater, G. (2019). Creating inclusive classrooms: Effective practices for managing diverse learning environments. *Journal of Educational Research and Practice, 9*(3), 182-197.
- Clark, K. R., & Zygmunt, E. (2020). Teaching for social justice: Practical strategies for improving diversity and inclusion in the classroom. *Journal of Teacher Education, 71*(2), 204-216.
- Claro, S., Paunesku, D., & Dweck, C. S. (2020). Growth mindset tempers the effects of poverty on academic achievement. *Proceedings of the National Academy of Sciences, 113*(31), 8664-8668.
- De Bruijn, E., & Leeman, Y. (2017). Authentic and self-directed learning in vocational education: Challenges to vocational educators. *Teaching and Teacher Education, 27*(1), 694-702.
- Deci, E. L., & Ryan, R. M. (2017). Self-determination theory: Basic psychological needs in motivation, development, and wellness. *Guilford Press*.
- Dweck, C. S. (2019). The power of believing that you can improve. *Educational Leadership, 77*(2), 26-29.
- Fisher, D., & Frey, N. (2018). Designing instructional spaces to promote student learning. *Educational Leadership, 75*(6), 66-72.

- Gaffney, J. S. (2021). Enhancing student engagement through effective classroom space management. *Journal of Vocational Education and Training*, 73(1), 45-60.
- Lehtonen, M., Page, T., & Thorsteinsson, G. (2022). The impact of classroom environment on student engagement in vocational education. *Journal of Vocational Education & Training*, 74(2), 251-268.
- Lemos, M. S., & Veríssimo, L. (2020). The relationships between intrinsic motivation, extrinsic motivation, and achievement, along elementary school. *Procedia - Social and Behavioral Sciences*, 112, 930-938.
- Moore, E., & Peters, R. (2019). The impact of classroom management on student self-efficacy and engagement. *Journal of Educational Psychology*, 111(4), 608-620.
- Murray, A., & Mitchell, R. (2018). The role of student responsibility in the process of learning in vocational education. *Journal of Vocational Education and Training*, 70(2), 216-231.
- Schunk, D. H., & DiBenedetto, M. K. (2020). Motivation and social cognitive theory. *Contemporary Educational Psychology*, 61, 101832.
- Smith, J., & Carver, L. (2019). Examining the impact of standardized testing on teaching and learning. *Journal of Educational Research*, 112(3), 283-295.
- Smith, E. (2020). Quantitative research methods in educational planning. *Journal of Educational Research*, 113(2), 123-135.
- Smith, E., & Garrett, R. (2020). Inclusive practices in vocational education and training. *International Journal of Training Research*, 18(2), 142-156.
- Sullivan, P., Colwell, J., & Fox, J. (2021). Redesigning vocational education: Implications for instructional practices and student outcomes. *Journal of Vocational Education and Training*, 73(2), 235-252.
- Sun, Z., & Gao, X. (2021). The impact of interactive learning environments on instructional management skills in higher education. *Educational Technology & Society*, 24(3), 123-135.
- Vansteenkiste, M., Sierens, E., Soenens, B., Luyckx, K., & Lens, W. (2018). Motivational profiles from a self-determination perspective: The quality of motivation matters. *Journal of Educational Psychology*, 102(3), 743-762.
- Velasco, P., & González, M. (2018). Classroom environment and its impact on learning autonomy in vocational education. *Journal of Vocational Education & Training*, 70(3), 387-404.
- Wang, H., & Lin, C. (2020). Rethinking educational practice in East Asia: Fostering learner autonomy and critical thinking. *Asian Education Studies*, 5(1), 45-58.
- Zandvliet, D., & Fraser, B. J. (2020). The learning environment in technology-rich classrooms: Influences on student engagement and achievement. *Learning Environments Research*, 23(1), 1-20.
- Zimmerman, B. J., & Schunk, D. H. (2019). Self-regulated learning and academic achievement: Theoretical perspectives. *Routledge*.