The Influence of Regional Origin on the Interest in Differentiated Learning and Culturally Responsive Teaching

Yesi Martha Afrillia, Universitas Negeri Yogyakarta, Indonesia Sekar Purbarini Kawuryan, Universitas Negeri Yogyakarta, Indonesia

> The Korean Conference on Education 2024 Official Conference Proceedings

Abstract

Each student has a different regional origin. This study aims to determine the effect of regional origin on interest in differentiated learning and culturally responsive teaching in PGSD students in the class of 2022 at Sanata Dharma University. A sample of 136 students from various regions of Indonesia participated in this study, such as Sumatra, Java, Kalimantan, Sulawesi, and Papua. This study uses quantitative research design and questionnaires as data collection tools. We use structural equation modelling with partial least squares as the method. The results show that regional origin significantly influences interest in differentiated learning of visual, auditory, and kinesthetic elements, as does interest in culturally responsive teaching. These results suggest the importance of considering students' regional backgrounds when designing effective learning strategies and promoting cultural responsiveness in educational contexts. This study's findings enhance student learning outcomes and guide classroom instruction.

Keywords: Regional Origin, Differentiated Learning, Culturally Responsive Teaching, Mathematics

iafor

The International Academic Forum www.iafor.org

Introduction

Education is essential for the rapid advancement of a nation and serves as its foundation (Kamble et al., 2020). Regional cultural characteristics significantly influence educational achievement at all levels, from basic to higher education, in Indonesia, a nation renowned for its cultural and geographical diversity (Gastil, 2016). This diversity presents unique challenges, particularly in urban environments where students come from a diverse range of linguistic, cultural, racial, ethnic, and knowledge backgrounds. In the development of teaching and learning strategies, educators must take into account the cultural differences and perspectives of students (Kieran & Anderson, 2019).

Regional origin has a substantial impact on education, particularly in terms of the potential for learning and the availability of resources. Students from less developed regions, such as Eastern Indonesia, frequently encounter substantial infrastructure and educational support constraints. Conversely, students from more developed regions, such as Western Indonesia, typically have greater access to educational facilities, technology, and extracurricular programs (Sihombing, 2019). These discrepancies may impact the caliber of graduates, which in turn may affect students' motivation and learning outcomes. In order to ensure that all students, irrespective of their nationality, receive an equitable and high-quality education, it is imperative that educators and legislators comprehend and resolve these concerns. This will promote long-term social and economic development in Indonesia, as well as improve academic performance.

In order to facilitate academically diverse children, it is imperative to differentiate instruction in a mixed-ability classroom according to their learning profiles, interests, and preparation, as well as their place of birth (Tomlinson et al., 2003). In order to foster justice and success in education, variable learning is indispensable, as it caters to the distinctive learning needs of each student and increases motivation (Tomlinson, 2005). Differentiated instruction improves learning outcomes, motivation, interest, creativity, and accomplishment in mathematics (Siregar et al., 2023). Differentiated learning in higher education improves motivation, engagement, and outcomes by tailoring instructional strategies to the unique learning preferences and interests of each student (Gobiberia, 2021). As a result, it is essential to customize instruction according to the learning preferences and interests of each student at the higher education level.

It is also essential to adjust instruction to the cultural influences of a diverse student body in consideration of the diverse geographic origins. By integrating the cultural backgrounds, experiences, and perspectives of students, culturally responsive teaching improves the quality of education (Gay, 2002a). Culturally responsive education facilitates the academic success of ethnically diverse children by making academic information and skills more personally relevant and applicable to their lives (Gay, 2002b). Teacher candidates in urban schools promote culturally responsive teaching by incorporating students' interests into the curriculum, providing learners with a diverse range of options, and establishing real-world connections (Tanase, 2022). In order to legitimize the perspectives of students from diverse backgrounds, promote equality in schools, and demonstrate sociocultural comprehension, culturally responsive teacher candidates may facilitate change (Villegas & Lucas, 2016).

In response to diversity, two strategies have emerged: differentiated learning and culturally responsive teaching. Differentiated learning is a teaching approach that ensures students understand and demonstrate mastery of the material they have learned while considering their

individual characteristics (Desinguraj & Ebenezer, 2021). In the interim, educators must reassess their beliefs and perspectives regarding racial, ethnic, and cultural diversity. They must also focus on the teaching process, culture, and differences in order to educate in a culturally responsive manner (Gay, 2013). The purpose of this research is to investigate the influence of the place of origin of undergraduate students on their interest in these two learning approaches. PGSD students at Sanata Dharma University, specifically the class of 2022, are enthusiastic about the prospect of becoming future educators. This study will employ a quantitative methodology and survey design to investigate the preferences of students from a diverse range of Indonesian regions, including Sumatra, Java, Kalimantan, Sulawesi, and Papua.

Literature Review

Regional Origin

In Indonesia, the educational environment is characterized by a wealth of geographical and cultural diversity, and the concept of regional origin is particularly significant for comprehending social and cultural contexts. The distinctive characteristics of each island and region influence the learning experience of students. For example, students from Java may be more familiar with the principles of modesty, whereas students from Papua may possess a perspective that is more in alignment with the natural world. Local culture and traditions significantly influence these variables. Furthermore, communication difficulties may arise due to the diversity of local languages, particularly when pupils are more comfortable speaking their mother tongue. In general, students from urban areas have access to more facilities than students from remote areas, although the latter also experience fluctuations in their access to formal education. Local economic and social conditions also impact educational motivation and support.

Educators must implement inclusive learning strategies like differentiated learning and culturally responsive teaching methods to capitalize on this diversity. It is also essential to adapt teaching methods and develop relevant social skills in order to create a positive learning environment. By taking into account and appreciating the differences in the regional contexts of students, educators can create a more adaptable learning environment, which will allow all students to achieve their full potential and excel. In Indonesia, the principal islands are Papua, Sulawesi, Kalimantan, Java, and Sumatra.

Differentiated Learning

Educators who employ differentiation as a teaching strategy customize lesson plans, procedures, and final outputs to the learning profiles, interests, and preparedness of students (Kenney et al., 2024). From a growth perspective, differentiated learning optimizes learning by tailoring instruction to students' learning profiles, preparedness, and interests (Gheyssens et al., 2022). By initially identifying students' learning styles, we can implement differentiated learning to meet their needs (Nofitasari et al., 2023). The objective of mapping students' learning styles is to organize students according to the learning styles they possess. Once teachers identify each learner's learning style, they can tailor learning activities to each grouping, ensuring students can follow the learning process according to their individual learning styles.

Implementing differentiated learning can enhance the quality of learning and establish a positive classroom environment (Jhon & Alfiandra, 2024). Its objective is to accommodate the learning requirements and attract a diverse array of students to the classroom. In differentiated learning, there are three types of learning styles: auditory through the sense of hearing, visual through the sense of sight, and kinesthetic through body movements.

Culturally Responsive Teaching

A pedagogical approach known as "culturally responsive teaching" acknowledges and regards the cultural origins of students as valuable resources for the educational process. The growing diversity of their student body necessitates that instructors adopt a culturally sensitive teaching approach (Comstock et al., 2023; Hu et al., 2021; Irwin, 2021). This method has encouraged students to engage in self-reflection in order to cultivate their cultural identity and gain a better understanding of themselves and others (Rahmawati et al., 2019). Culturally responsive teaching is an educational model that is designed to enhance student achievement while simultaneously facilitating the acceptance and reinforcement of their cultural identity (Pebriansyah, 2020). Institutions such as schools and universities function as socialization institutions that assist students in acquiring knowledge of the local culture. Thus, it is imperative to ascertain the extent of cultural responsiveness that students in the high, medium, or low categories possess.

Methods

This investigation employed the survey methodology. The researcher used a Google Form to administer an online survey and distributed invitations to participants via a WhatsApp group in order to determine the geographical origin and distinctive learning interests of the 136 undergraduate students of Sanata Dharma University in 2022. We modified concept of differentiated learning interest (Sugianto, 2021). You have one week to complete the survey.

During the learning process, researchers distributed exam questions to assess the degree to which the students were learning in a culturally responsive manner. Students had twenty minutes to complete the form. We assured them that we would use the data they provided in the survey exclusively for research purposes and that it would not affect their course grade.

To collect data, we used a questionnaire with three components:

- 1. Demographic Section: Gathering data regarding the students' regions of origin, which include Java, Sumatra, Kalimantan, Sulawesi, and Papua.
- 2. Differentiated Learning Section: Assessing interest in differentiated learning, which encompasses visual, auditory, and kinesthetic components.
- 3. Culturally Responsive Teaching Section: Assesses the level of interest in cultural responsiveness, which is classified as high, medium, or low. The researcher divided the assessment into a scoring system of 1 and 0 after obtaining this data. Students are awarded one point each for their interest in culturally responsive teaching, differentiated learning, and regional origin, as determined by analyses conducted by previous researchers. If students do not possess these attributes, they are awarded zero points.



Figure 1: Variables Analyzed

Figure 1 illustrates the variables that underwent structural equation modelling-partial least square (SEM-PLS) analysis using the SmartPLS software program version 4.0.9. SEM-PLS analysis is implemented as a result of its numerous benefits. I. Able to test relationships of cause and effect, reliability, and validity all at the same time; II. Able to see both direct and indirect effects between variables; III. Able to test multiple dependent variables along with multiple independent variables; IV. Able to measure how much indicator variables affect each factor variable; and V. Able to measure factor variables that can't be directly measured by indicator variables (Nur Sasongko & Rusgiyono, 2016).

SEM-PLS research involves a series of steps: i) Conducting tests to identify variables; ii) constructing a measurement model (outer model) to establish the relationship between latent variables and their indicators; iii) designing a structural model of the relationship (inner model) to define the relationship between latent variables; iv) constructing a path diagram based on the outer and inner models; v) estimating evaluation parameters, which involves conducting multiple tests on variables, such as composite reliability and Cronbach's alpha, to demonstrate the degree of confidence in the measuring tool; vi) conducting hypothesis testing using the t-test to determine whether a relationship exists between latent variables and their indicators; vii) obtaining analysis results (Irwan & Adam, 2020).

Findings

The Undergraduate's Students Regional Origin

In order to comprehend the geographical distribution of students in the primary school teacher education program, a questionnaire was implemented to determine their regional origin. Figure 2 illustrates the student regional origin analysis results, which indicate that Java Island has the highest regional origin with a mean of 0.471. This suggests that nearly half of the pupils are from this island, which is indicative of the higher population density and superior educational infrastructure in Java. The island of Sumatera follows with an average of 0.221, indicating that despite having a lower number of students than Java, it remains a substantial source of students. In the meantime, the islands of Kalimantan and Sulawesi recorded an average of 0.147 and 0.110, respectively, suggesting that pupils from these

islands also exist, albeit in a lesser number. The number of pupils from the island of Papua is the most remarkable, with a mere 0.051.

This implies that a relatively small number of pupils originate on this island, which is frequently recognized for its limitations in terms of infrastructure and educational accessibility. The distribution of students' regional origins is significantly imbalanced, as indicated by this analysis. In contrast to islands in the Eastern region of Indonesia, such as Sulawesi and Papua, students are more influenced by those located in the Western region of Indonesia, including Java, Sumatra, and Kalimantan. This discrepancy may be influenced by a variety of factors, such as the quality of education facilities, the opportunities available to pupils in each region, and the disparity in access to education.



Figure 2: The Undergraduate's Students Regional Origin

The Undergraduate's Students Differentiated Learning

Students' learning styles in differentiated learning were measured using a questionnaire, which aims to understand students' learning preferences in the context of primary school teacher education. Figure 3 presents the results of the analysis of students' learning styles, revealing that the visual learning style is the most common, with an average score of 0.441. This suggests that the majority of students favor learning methods that incorporate the use of the visual sense, such as multimedia presentations, visualizations, images, or diagrams. Additionally, the auditory learning technique, with an average score of 0.301, occupies the second position. This demonstrates that a significant number of students also employ their auditory sense to acquire knowledge, whether through lectures, discussions, or listening to recordings. The high demand for auditory learning styles underscores the significance of verbal interaction and communication in the learning process, thereby enhancing student engagement and comprehension.

Nevertheless, the kinesthetic learning style, which emphasizes physical activity and hands-on experience, has the lowest mean score of 0.257. This suggests that students are less likely to select learning methods that necessitate physical activity or hands-on experimentation. This could be the result of a variety of factors, including the student's unease with more dynamic physical activities or the absence of opportunities to participate in practical activities in the classroom.



Figure 3: The Undergraduate's Students Differentiated Learning

The Undergraduate's Students Culturally Responsive Teaching

We used questions about the comprehension and application of learning, considering students' cultural backgrounds, to evaluate culturally responsive teaching. Figure 4 illustrates the findings of the analysis, which indicate that the majority of primary school teacher education students exhibit a medium level of cultural responsiveness, with an average score of 0.515. This indicates that most students demonstrate a good awareness and understanding of the importance of culturally responsive teaching, despite not fully implementing the approach to its fullest extent.

Furthermore, a group of students demonstrated a high level of cultural responsiveness, with an average score of 0.309, suggesting a greater understanding and proficiency in implementing culturally sensitive learning practices. We can expect students with this high level of cultural responsiveness to adapt learning methods that are inclusive and respectful of diversity, and to manage classes containing students from various backgrounds more effectively.

However, the least culturally responsive level was in the low category, with an average score of 0.176. This shows that even though the number is not large, there are still students who need further attention and development in terms of cultural responsiveness. These low-level students may not have fully realized the importance of cultural aspects in education or have not received adequate training to integrate cultural values in their learning practices.



Figure 4: The Undergraduate's Students Culturally Responsive Teaching

R-Square

Table 1 displays the R-squared findings. The regional origin variable has a 9.2% impact on the differentiated learning variable, according to the R-squared value. Regional origin, on the other hand, has a 24.7% impact on culturally responsive teaching. Other factors not included in this study have an impact on the remainder.

Table 1: R-Square					
	R-Square	R-Square Adjusted			
Differentiated Learning	0.092	0.085			
Culturally Responsive Teaching	0.247	0.241			

Hypothesis Test

Testing hypotheses Table 2 explains the process of determining whether to accept or reject the hypothesis. The t-statistic value for the formation of regional origin on differentiated learning is 6.676 > 1.96 with a p-value of 0.000 < 0.05. Thus, the first hypothesis establishes the impact of regional origin on differentiated learning. The t-statistic value of 2.689 > 1.96 and the p-value of 0.007 < 0.05 are associated with the impact of regional origin on culturally responsive teaching. Thus, the second hypothesis illustrates the influence of students' place of birth on their culturally responsive teaching.

Table 2: Hypothesis Test						
	Original	Sample	Standard	T statistics	Р	
	sample	mean	deviation	(O/STDEV)	values	
	(0)	(M)	(STDEV)			
Regional Origin \rightarrow Culturally	0.690	0.647	0.148	6.676	0.000	
Responsive Teaching						
Regional Origin \rightarrow	0.472	0.501	0.175	2.689	0.007	
Differentiated Learning						

Discussion

The findings of this investigation suggest that the majority of students are from the Western region of Indonesia, specifically from islands such as Sumatra, Kalimantan, and Java. This suggests that these regions have a higher concentration of pupils than the islands in the eastern part of Indonesia, such as Papua and Sulawesi. This discovery is consistent with prior research, which demonstrated that the western region of Indonesia has made more progress than the eastern region (Sihombing, 2019). This connection is indicative of the improved socio-economic conditions and educational infrastructure in the western region, which facilitates a broader range of educational opportunities for students. The presence of students whose regional origins are predominant also influences the classroom dynamics and the teaching methods employed, as educators must consider the diverse cultural and educational backgrounds of their students. As a result, it is imperative that relevant entities, such as the government and educational institutions, acknowledge this issue. In order to guarantee that all prospective educators, regardless of their regional origin, have identical opportunities to participate in educational programs, it is imperative that we prioritize initiatives to improve access to education in remote and underdeveloped regions, such as Papua. There is a likelihood that the reduction of these inequalities will result in a more diverse and competent graduate cohort, which can subsequently facilitate more equitable educational development throughout Indonesia.

Furthermore, other research has found that students are more likely to have visual learning styles than auditory and kinesthetic learning styles. The visual learning approach is the most popular among students, as it prioritizes the use of visual aids, including diagrams, images, and videos. This finding is in accordance with previous research, which suggests that the majority of students prefer a visual learning approach (Syofyan & Siwi, 2018). This trend has substantial implications for education, as it enables educators to enhance the efficacy of the learning process by modifying instructional materials to include more visual elements. The majority of students prefer to employ their visual and auditory faculties in the learning process, while more physically active methods are less desirable, as indicated by these findings. This underscores the importance of developing instructional strategies that prioritize auditory and visual components, as well as kinesthetic elements, in order to create a more comprehensive and equitable learning experience. Educators must take these preferences into account when creating curricula and learning activities that are inclusive of all learning styles in order to improve the overall efficacy of learning.

In contrast, the research on culturally responsive teaching suggests that students exhibit a moderate level of cultural responsiveness. This suggests that, despite the fact that students acknowledge the importance of cultural competence, there is still room to improve their understanding and competencies in engaging with a variety of cultures. The research highlights the challenges in producing academically proficient graduates who can also comprehend and value cultural diversity (Repo et al., 2017). The level of cultural competence of student graduates is classified as medium. These results clearly demonstrate that, despite a substantial number of students demonstrating a moderate level of cultural responsiveness, there is still room for improvement. In the context of culturally responsive teaching, educators and educational institutions must provide additional support for the development of students' comprehension and abilities. Practical activities that involve direct interaction with a diverse array of cultures, seminars, or training can achieve this. The anticipated outcome is a more inclusive and respectful learning environment in the classroom, as all students will be able to improve their cultural responsiveness.

Consequently, these findings not only offer a more profound comprehension of the challenges and opportunities associated with improving the cultural competence of graduates, but they also provide insight into the regional origin patterns and learning styles of students. We anticipate graduates to be capable of adapting and collaborating with individuals from a diverse array of cultural backgrounds in a globalized educational environment. This is particularly relevant. As a result, it is crucial for educational institutions to create curricula that prioritize the development of social and cultural skills in addition to academic knowledge, as these are indispensable for success in the modern global economy and workplace.

Conclusion

In conclusion, the findings of this investigation suggest that the majority of pupils are from the Western region of Indonesia, which encompasses Java, Sumatra, and Kalimantan. This discovery suggests a disparity in educational opportunities between the Western and Eastern regions of Indonesia. Additionally, students' preference for visual learning styles over auditory and kinesthetic techniques emphasizes the importance of modifying teaching methods to improve learning efficacy. In order to interact with individuals from a diverse array of cultural contexts, it is essential that the students improve their cultural competence, despite their moderate level of cultural responsiveness. As a result, educational institutions must establish a comprehensive curriculum that prioritizes the development of social and cultural competencies in addition to academic subjects. This will provide graduates with the necessary tools to overcome the challenges that emerge in a world that is increasingly multicultural and globalized. This research is essential for comprehending the influence of geographical diversity on learning and preferences, and it serves as a guide for educational institutions in the development of more inclusive programs. The anticipated outcomes of this research have the potential to improve the quality of education and learning outcomes of students in Indonesia and other countries.

Acknowledgements

I am grateful to the Ministry of Finance of the Republic of Indonesia's Education Fund Management Institute, or Lembaga Pengelola Dana Pendidikan (LPDP), for funding this study and offering scholarships.

References

- Comstock, M., Litke, E., Hill, K. L., & Desimone, L. M. (2023). A Culturally Responsive Disposition: How Professional Learning and Teachers' Beliefs About and Self-Efficacy for Culturally Responsive Teaching Relate to Instruction. *AERA Open*, 9(1), 1–18. https://doi.org/10.1177/23328584221140092
- Desinguraj, S. D., & Ebenezer, J. S. G. (2021). Differentiated Instruction in Education. *Research Ambition: An International Multidisciplinary e-Journal*, 5(IV), 11–14. https://doi.org/10.53724/ambition/v5n4.04
- Gastil, R. D. (2016). The Relationship of Regional Cultures to Educational Performance Author (s): Raymond D . Gastil Source : Sociology of Education , Vol . 45 , No . 4 (Autumn , 1972), pp . 408-425 Published by : American Sociological Association Stable URL : http://www. *Regional Culture*, 45(4), 408–425.
- Gay, G. (2002a). Culturally responsive teaching in special education for ethnically diverse students: Setting the stage. *International Journal of Qualitative Studies in Education*, *15*(6), 613–629. https://doi.org/10.1080/0951839022000014349
- Gay, G. (2002b). Preparing For Culturally Responsive Teaching. *Journal of Teacher Education*, *53*(2), 106–116.
- Gay, G. (2013). Teaching To and Through Cultural Diversity. *Curriculum Inquiry*, 43(1), 48–70. https://doi.org/10.1111/curi.12002
- Gheyssens, E., Coubergs, C., Griful-Freixenet, J., Engels, N., & Struyven, K. (2022).
 Differentiated instruction: the diversity of teachers' philosophy and praxis to adapt teaching to students' interests, readiness and learning profiles. *International Journal of Inclusive Education*, 26(14), 1383–1400.
 https://doi.org/10.1080/13603116.2020.1812739
- Gobiberia, I. (2021). Effectiveness of Differentiated Instruction in Higher Education. International Journal of Social Science and Human Research, 04(10), 2983–2984. https://doi.org/10.47191/ijsshr/v4-i10-43
- Hu, X., Xu, Z., Neshyba, M., Geng, Z., & Turner, R. (2021). A multi-dimensional model: implications for preparing pre-service teachers for culturally responsive teaching. *Asia-Pacific Journal of Teacher Education*, 49(3), 282–299. https://doi.org/10.1080/1359866X.2020.1753169
- Irwan. & Adam, K. (2020). Metode Partial Least Square (Pls) Dan Terapannya. *Teknosains*, 9(1), 53–68.
- Irwin, V. (2021). Report on the Condition of Education 2021. *Eric*, i–34. https://nces.ed.gov/pubs2021/2021144.pdf
- Jhon, L., & Alfiandra, A. (2024). Implementasi Pembelajaran Berdiferensiasi dalam Pembelajaran PPkn di SMP Negeri 33 Palembang. *Jurnal Pendidikan Tambusai*, 8(1), 1713–1720.

- Kamble, D. K., Patil, A. M., & Joshi, P. B. (2020). Regional Imbalances in the Level of Literacy in Karnataka: Vital Inputs for Policy Formation To Bridge the Gap. *Geographical Analysis*, 9(1), 25–29. https://doi.org/10.53989/bu.ga.v9i1.5
- Kenney, A. W., Dulong Langley, S., Hemmler, V., Callahan, C. M., Gubbins, E. J., & Siegle, D. (2024). Different or Differentiated? Recoupling Policy and Practice in an Era of Accountability. *Educational Policy*, 38(1), 134–160. https://doi.org/10.1177/08959048231153612
- Nofitasari, F. E., Indiati, I., Suneki, S., & Sijamtini, N. (2023). Analisis Profilling Gaya Belajar Peserta Didik dalam Merancang Pembelajaran Berdiferensiasi Kelas III. *Jurnal Pendidikan ..., 7*(2), 8811–8820. https://mail.jptam.org/index.php/jptam/article/view/7631%0Ahttps://mail.jptam.org/in dex.php/jptam/article/download/7631/6310
- Nur Sasongko, E., & Rusgiyono, A. (2016). Penerapan Metode Structural Equation Modeling Untuk Analisis Kepuasan Pengguna Sistem Informasi Akademik Terhadap Kualitas Website (Studi Kasus pada Website sia.undip.ac.id). Jurnal Gaussian, 5(3), 395–404. http://ejournal-s1.undip.ac.id/index.php/gaussian
- Pebriansyah, B. F. (2020). Pendidikan Responsif Budayasebagai Upaya Menciptakan Pendidikan Multikultural. *Jurnal Pendidikan Sosiologi*, *10*(1), 770–775. http://ejournal.upi.edu/index.php/sosietas/
- Rahmawati, Y., Baeti, H. R., Ridwan, A., Suhartono, S., & Rafiuddin, R. (2019). A culturally responsive teaching approach and ethnochemistry integration of Tegal culture for developing chemistry students' critical thinking skills in acid-based learning. *Journal* of Physics: Conference Series, 1402(5). https://doi.org/10.1088/1742-6596/1402/5/055050
- Repo, H., Vahlberg, T., Salminen, L., Papadopoulos, I., & Leino-Kilpi, H. (2017). The Cultural Competence of Graduating Nursing Students. *Journal of Transcultural Nursing*, 28(1), 98–107. https://doi.org/10.1177/1043659616632046
- Sihombing, P. R. (2019). Does the Gap Between East and West Still Exist? a Study of Indonesia's Disparities. Udayana Journal of Social Sciences and Humanities (UJoSSH), 3(1), 1. https://doi.org/10.24843/ujossh.2019.v03.i01.p01
- Siregar, P. S., Nazurty, N., Sofyan, H., & Rosmiati, R. (2023). Differentiation Learning Models in Mathematics: A Review of Literature. *PPSDP International Journal of Education*, 2(2), 360–376. https://doi.org/10.59175/pijed.v2i2.136

Sugianto, A. (2021). Kuesioner Gaya Belajar Siswa. Repo-Dosen. Ulm. Ac. Id.

- Syofyan, R., & Siwi, M. K. (2018). The Impact of Visual, Auditory, and Kinesthetic Learning Styles on Economics Education Teaching. 57(Piceeba), 642–649. https://doi.org/10.2991/piceeba-18.2018.17
- Tanase, M. F. (2022). Culturally Responsive Teaching in Urban Secondary Schools. *Education and Urban Society*. https://doi.org/10.1177/00131245211026689

- Tomlinson, C. A. (2005). This Issue: Differentiated Instruction. *Theory Into Practice*, 44(3), 234–244. https://doi.org/10.1207/s15430421tip4403
- Tomlinson, C. A., Brighton, C., Hertberg, H., Callahan, C. M., Moon, T. R., Brimijoin, K., Conover, L. A., & Reynolds, T. (2003). Differentiating instruction in response to student readiness, interest, and learning profile in academically diverse classrooms: A review of literature. *Journal for the Education of the Gifted*, 27(2–3), 119–145. https://doi.org/10.1177/016235320302700203
- Villegas, A. M., & Lucas, T. (2016). Preparing Culturally Responsive Teachers Rethinking The Curriculum. *Journal of Teacher Education*, 53(1), 9–16.

Contact email: yesimartha.2023@student.uny.ac.id