The Influence of Differentiate Learning and Student Learning Motivation on Nationalistic Insight of Elementary School Students

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Abstrak

Penelitian ini muncul karena kebutuhan untuk memahami bagaimana pembelajaran berdiferensiasi memengaruhi wawasan kebangsaan siswa Sekolah Dasar (SD). Pembelajaran berdiferensiasi adalah pendekatan yang memungkinkan guru untuk menyajikan materi pembelajaran dengan cara yang berbeda sesuai dengan kebutuhan dan tingkat pemahaman masing-masing siswa. Penelitian ini bertujuan untuk menganalisis dampak pembelajaran berdiferensiasi dan motivasi belajar terhadap wawasan kebangsaan siswa Sekolah Dasar (SD). Penelitian ini menggunakan pendekatan eksperimen dengan desain treatment by level 2 x 2. Partisipan penelitian melibatkan 100 siswa SD. Wawasan kebangsaan diukur melalui tes esai. Analisis data dilakukan menggunakan perangkat lunak SPSS Vol 26, dengan teknik analisis mencakup uji deskriptif, uji prasyarat, dan analisis inferensial menggunakan uji ANAVA dua arah. Hasil penelitian menunjukkan bahwa terdapat pengaruh signifikan dari model pembelajaran berdiferensiasi terhadap wawasan kebangsaan siswa SD, serta pengaruh positif dari motivasi belajar terhadap peningkatan wawasan kebangsaan siswa SD. Penelitian ini juga menemukan adanya interaksi antara model pembelajaran berdiferensiasi dan motivasi belajar siswa terhadap wawasan kebangsaan siswa SD. Implikasi penelitian ini dapat digunakan sebagai panduan bagi guru SD dalam mengembangkan wawasan kebangsaan siswa, dengan memperhatikan faktor pembelajaran berdiferensiasi dan motivasi belajar.

Kata Kunci: Pembelajaran Berdiferensiasi, Motivasi Belajar, Wawasan Kebangsaan, Sekolah Dasar

Abstract

This research arose because of the need to understand how differentiated learning affects the national insight of elementary school students. Differentiated learning is an approach that allows teachers to present learning material in different ways according to the needs and level of understanding of each student. This study aims to analyze the impact of differentiated learning and learning motivation on the national insight of elementary school students. This study used an experimental approach with a treatment design by level 2 x 2. The study participants involved 100 elementary school students. Nationality insight is measured through essay tests. Data analysis was performed using SPSS Vol 26 software, with analysis techniques including descriptive tests, prerequisite tests, and inferential analysis using the two-way ANAVA test. The results showed that there was a significant influence of the differentiated learning model on the national insight of elementary school students, as well as the positive influence of learning motivation on increasing the national insight of elementary school students. This study also found an interaction between differentiated learning models and student learning motivation towards the insight of nationality of elementary school students. The implications of this research can be used as a guide for elementary school teachers in developing students' national insights, by paying attention to differentiated learning factors and learning motivation.

Keywords: Differentiated Learning, Learning Motivation, Nationalistic Insight, Elementary School

1. INTRODUCTION

Nationalism is a comprehensive and in-depth grasp of a state or nation's identity, history, culture, and values (Handley, 2014; Yang & Guo, 2015). It entails understanding the various components of a nation, such as its political history, geography, governmental structure, language, religion, traditions, visual arts, and national symbols. It is crucial because it fosters a sense of belonging, harmony, and national identity among the citizens of a

country. Additionally, it fosters cooperation among individuals and helps people feel more accountable for the growth and advancement of their country (Alexander et al., 2018; Jones et al., 2023). People with strong nationalistic insights are more likely to respect and value diversity in society. People can also comprehend their role in preserving the nation's integrity, upholding citizens' rights and responsibilities, and assisting in the social, economic, and political advancement of their nation. It can also entail knowledge of international relations, the role of the state in the world, and the opportunities and difficulties the state or country faces on a global scale (Klein et al., 2022; Tosheva, 2016). Overall, national insight lays the groundwork for encouraging harmony, collaboration, and national interests as well as raising awareness of and respect for a nation's shared identity, values, and goals. As a result, it's important to foster nationalistic understanding in children early on, even in elementary school.

For elementary school pupils, it is crucial to establish nationalistic insight. This level of nationalistic insight education aids in the development of a strong sense of national identity and love (Aftiansyah, 2023; Suarja et al., 2023). The values, history, and culture of their nation will be taught to the students. Students will be able to recognize honourable national figures, comprehend state symbols, and value Indonesia's multiculturalism. Students will learn about regionalism and the environment through an understanding of nationalism. The geographical diversity of Indonesia and the significance of environmental preservation will be taught to students. Additionally, this education teaches tolerance and appreciation for differences. Students will gain an appreciation for Indonesia's diverse groups' cultures, beliefs, and traditions. Primary school kids will have a strong sense of nationalism and comprehend their obligations as citizens due to the development of nationalistic awareness.

However, according to the initial assessment of elementary school kids' patriotic understanding, the mean score is 54.39. This finding demonstrates how little nationalistic understanding exists among primary school children. According to the researcher's analysis, elementary school pupils' lack of nationalistic understanding is a result of their learning process not being tailored to their needs. Since nationalistic insight is an abstract concept, it requires a tangible learning procedure that is in line with student needs. Every learner has a unique learning style, such as a kinesthetics, auditory, or visual one. However, in other instances, the learning models employed in elementary schools tend to rely on just one kind of approach, such as emphasizing listening or reading activities.

Students will struggle to comprehend and retain the knowledge given if the learning model does not fit their learning preferences (Babinčáková & Bernard, 2020; Rasheed & Wahid, 2021). A learner with a visual learning style, for instance, can comprehend things better if they are presented to them as images, graphs, or diagrams. However, if the whole focus of learning is on verbal explanations, pupils may struggle to comprehend and retain the information. Students who suffer a mismatch between their preferred learning style and the learning methods used tend to lose interest in and motivation for their studies because of this condition. The learning process will leave students uninterested, bored, or even frustrated (Cardino Jr & Cruz, 2020; Huang et al., 2020; Nazempour & Darabi, 2023). This may result in a lack of focus, limited comprehension, and limited growth in learning insights. Teachers must use inclusive and varied models of learning to solve these problems.

A differentiated learning model is a method of instruction that considers students' unique differences, including learning styles, comprehension speed, interests, and other learning requirements (Bondie et al., 2019; Deunk et al., 2018). Teachers must create and implement learning strategies that are tailored to the needs of each student under the differentiated learning approach. Based on the findings of the students' diagnostic tests, this procedure was created. Students can gain greater knowledge with the aid of a differentiated learning model (Al Hamdani, 2015; Malacapay, 2019). Teachers can use images, graphs, or

diagrams to help students who respond better to visuals understand concepts more effectively. Teachers can incorporate kinesthetic or physical learning exercises into lessons for pupils who are more receptive to them. Following their abilities, students can study using the differentiated learning model (Heacox, 2018; Morgan, 2014). In this situation, teachers might give assignments or materials that are customized to each student's level of comprehension. Students who require more challenge can be given more challenging material, while students who require more assistance can be given additional guidance. Students will experience increased engagement, motivation, and the ability to gain greater learning insights using the differentiated learning model (Demir, 2021a; Sun et al., 2020). Students will believe that their education is being adapted to their requirements and learning preferences, maximizing their learning capacity, and preparing them to build their nationalistic perspective.

Additionally, according to the researcher's theory, pupils' passion for studying also contributes to elementary school students' low levels of nationalistic awareness. Learning motivation is a significant component that influences students' level of involvement and performance in the learning process (Afsar & Umrani, 2020; Halif et al., 2020). Students often lose interest in and excitement for improving their ideas when they lack motivation. Lack of understanding of the value of learning and the lack of connection between the learning materials and students' daily life are two factors that contribute to low learning motivation. Students may lose interest and motivation to learn more deeply if they cannot comprehend how the learning material will benefit them or how it relates to their daily lives. A less attractive learning environment can also have an impact on students' willingness to learn (Law et al., 2019; Saleh & Majeed, 2021). Students are likely to feel less motivated to participate and work harder to produce better results when they do not feel supported, respected, or actively engaged in the learning environment. As a result, teachers must establish a stimulating and engaging learning environment utilizing techniques including setting clear learning objectives, connecting the lesson material to students' daily lives, and offering constructive feedback. Students learning motivation can be boosted by creating a pleasant and encouraging environment and by boosting their self-confidence. As a result, they will be more inspired to learn and advance their nationalistic insight. This is how the researcher anticipates learning motivation will affect elementary school kids' nationalistic perspectives.

The novelty of this study lies in its focus which combines two important variables, namely differentiated learning and national insight of elementary school (SD) students, as well as identifying the influence of learning motivation on national insight. This study aims to find out how different learning models and student learning motivation affect the understanding of nationality of elementary school students. Although previous research has tried to explore the impact of different learning models on motivation and learning outcomes, research focusing on their effects on students' understanding of nationality has been limited. The importance of understanding nationality in the era of globalization and cultural pluralism is an important reason to carry out this research. This research is expected to shape students' understanding of national identity and love of homeland, as well as overcome challenges in different learning. In addition, this research can also help optimize students' learning motivation, which is key to achieving learning goals and personal development. Previous research has proven that different learning models have a positive impact on student learning outcomes, but the focus on psychosocial aspects such as nationalism still needs further research. Therefore, this research will be a new contribution in understanding the influence of different learning models in supporting the cognitive and affective development of primary school students.

2. METHODS

This study used treatment by level 2 x 2 design and was experimental. This research referred to the experimental approach where there were two factors studied and each factor had two levels or conditions. The applied learning model, which came in two conditions—differentiated learning model and conventional learning model—was the first factor in this study. Motivation was the second factor, and it likewise had two levels: high motivation and low motivation. Table 1 shows that any combination of these two elements will be compared in this design to determine how it will affect the study variables.

Table 1. Research Design

Treatment Variable		Learning Model (A)	
Attributes Variable		**Differentiated Learning Model (A1)**	**Conventional Learning Model (A2)**
Learning Motivation (B)	High (B1)	A1B1	A2B1
	Low (B2)	A1B2	A2B2

Annotation: A1=Students using differentiated learning model; A2 = Students using conventional learning model
B1 = Students with high learning motivation; B2 = Students with low learning motivation

The study involved 100 kids from primary schools. 50 primary school children made up the experimental group, and 50 additional elementary school students made up the control group. The research procedure begins with identifying the research objectives to determine the effect of a differentiated learning model and school students' learning motivation on the national insight of elementary school students. Then ensure the research design, randomization, and group distribution. After the grouping is carried out, the treatment is given according to the class that has been determined. After giving the treatment, the final data collection was carried out. An essay test was utilized to gauge nationalistic insight. A sense of nationality, national knowledge, and national spirit are the three characteristics of national insight that were used to design the essay test's maximum of 10 questions. After passing a content validity check, experts deemed the questions to be feasible. Additionally, the questions received helpful validation. According to the measurement data, the r-count was higher than the r-table. This demonstrated the validity of every query created. Additionally, the reliability test reported that a reliability rating of 0.913 had been attained. This indicated that the prepared questions had a high degree of reliability. Software named SPSS Vol 26 was used to analyze the data in this study. Descriptive analysis, prerequisites tests (normality test and homogeneity test), and inferential analysis using the two-way ANOVA test were all used in the data analysis.

3. RESULTS AND DISCUSSION

Result

Both classes received learning in accordance with the set plan. Students were given a nationalistic insight test after the treatment. The examination outcomes were then tabulated. The data tabulation findings are presented in Table 2 as follows.

Table 2. Tabulation of Research Data

	N	Minimum	Maximum	Mean	Std. Deviation
Differentiated Learning Class, High Motivation	25	88	98	94	2
Differentiated Learning Class, Low Motivation	25	75	93	88	2

	N	Minimum	Maximum	Mean	Std. Deviation
Conventional Learning Class, High Motivation	25	62	68	69	5
Conventional Learning Class, Low Motivation	25	58	61	58	1
Valid N (listwise)	**25**				

The average value for each class group is shown in Table 2 for comparison. The next step was the normality test. The Kolmogorov-Smirnov test and the Shapiro-Wilk test were used to determine the normality of the data, with a sig value of each class more than 0.05. These findings demonstrated that all test classes had normal distributions. The homogeneity test was the subsequent test. The results of the homogeneity test yielded a sig value of 0.721 the based on mean section. These findings demonstrated that the sig value was more than 0.05, indicating that the variance in the data was homogeneous. The two-way ANOVA test should then be performed. Here are the test results.

Table 3. Two-Way ANOVA Test

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	17462.372[a]	3	6322.329	621.032	0.000
Intercept	563749.232	1	563749.232	53282.746	0.000
Learning_Model	17493.240	1	17493.240	1553.232	0.000
Motivation	2382.023	1	2382.023	203.328	0.000
Learning_Model * Motivation	119.329	1	119.329	11.435	0.000
Error	988.083	96	9.888		
Total	**623948.000**	**100**			
Corrected Total	**18392.730**	**99**			

The research goals were addressed using the data in Table 3. The learning model row explained the first research goal, which was to ascertain the impact of differentiated learning models on elementary school student's nationalistic knowledge. It is evident from the row that the obtained sig value is 0.000 less than the significance rate of 0.05. This finding demonstrated that pupils in elementary school who studied using differentiated learning had different nationalistic insights. The average value in the next table further supported this result.

Table 4. Average of Each Class Learning Model

	N	Minimum	Maximum	Mean	Std. Deviation
Differentiated Learning Class	50	75	98	91	2
Conventional Learning Class	50	58	68	64	3
Valid N (listwise)	**50**				

According to Table 4, differentiated learning classes' average nationalistic insight value was higher than that of conventional learning classes. These findings demonstrated that the differentiated learning model was successful in enhancing primary school kids' understanding of their own country. The second research purpose, which was to ascertain how learning motivation affected primary school kids' nationalistic knowledge, was addressed using the following measurement. The significance rate of 0.05 is exceeded by the sig value of 0.000 in the motivation row of Table 3. This finding demonstrated a distinction

between primary school kids with strong motivation and low motivation in terms of their nationalistic insight. The average value in the following table served as additional support for this conclusion:

Table 5. Average of Each Class Motivation

	N	Minimum	Maximum	Mean	Std. Deviation
High Motivation	50	62	98	82	2
Low Motivation	50	58	93	73	3
Valid N (listwise)	**50**				

According to Table 5, students in the high-motivation class had nationalistic insights that were on average higher than students in the low-motivation class. This finding demonstrated how highly motivated pupils have an impact on developing primary school kids' nationalistic insight. The third research objective, which was to determine how elementary school kids with high and low levels of learning motivation reacted to differentiated learning models, was the focus of the next test. n Table 3 in the Learning Model Motivation row, the sig value of 0.000 was smaller than the significance rate of 0.05. This finding demonstrated that students with high and low motivation who were educated through a differentiated learning model and a traditional learning model reacted to nationalistic knowledge. This result demonstrated that the nationalistic perception of primary school kids was influenced by both the differentiated learning model and the learning motivation of the students.

Discussions

According to the findings, the differentiated learning model had an impact on primary school pupils' nationalistic insight. Previous research stated that looked at the impact of differentiated learning on junior high school students' learning of geometry problem-solving supported the findings of this study (Bikić et al., 2016; Pardimin & Widodo, 2016). According to the findings, junior high school pupils' ability to solve mathematical problems in geometry could be enhanced by customized learning. This research is similar to the research the researchers developed; namely, they both study the effect of differentiated learning models. However, there are differences, namely in other research examining the effect of differentiated learning on learning geometry problem-solving for junior high school students. At the same time, this study found new findings that the differentiated learning model influences the national insight of elementary school students. The learning results of teachers who learn via differentiated learning and teachers who teach conventionally were compared in previous research (Kamran et al., 2019; Rudhumbu & Dziva, 2023). This research has something in common: they both examine the effect of differentiated learning. However, there is a difference; namely, this research was carried out for prospective teachers, which impacted the learning outcomes of prospective teachers. Meanwhile, the research conducted by the researchers examined elementary school students who used differentiated learning to increase students' insight into nationality. Previous study looked at the impact of differentiated learning on students' attitudes toward reading instruction and reading comprehension (Jefferson et al., 2017; Shaunessy-Dedrick et al., 2015). This research has something in common: they both examine the effect of differentiated learning. However, there is a difference; namely, the research conducted by Shaunessy-Dedrick focused on increasing students' reading comprehension and attitudes during learning to read. According to previous findings, kids who studied using differentiated learning had strong reading comprehension skills as well as a positive attitude about learning to read (Jefferson et al.,

2017; Shaunessy-Dedrick et al., 2015). Differentiated learning can influence elementary school children's nationalistic awareness, according to new research findings.

This research proves that the nationalistic insight of primary school kids was significantly impacted by differentiated learning. Students had a greater chance of obtaining a thorough awareness of their country's identity, history, culture, and values when learning was conducted with an approach that focused on students' characteristics. Teachers considered each student's learning needs, learning styles, and interests when implementing differentiated learning. Teachers can create lessons that adapt to the needs and interests of their students by considering these differences (Akran & Burhan, 2018; Demir, 2021b). Additionally, pupils who received customized learning showed greater interest and motivation in their studies. According to students' perceptions, learning was personalized to meet their needs and learning preferences, making it more meaningful and relevant (Arzhanik et al., 2015; Salendab, 2023). This will boost kids' interest in learning about national insight. Students were also able to improve their ability to think critically and solve problems due to differentiated learning. In the context of national insight, students were encouraged to investigate and evaluate relevant information, compare different perspectives, and get a deeper comprehension of the values and guiding principles of the state or nation. This can help students comprehend and value cultural diversity, react to social and political change, and contribute to the advancement of their nation. Additionally, differentiated learning may promote respect for social diversity and inclusive attitudes (Mengistie, 2020; Shareefa, 2021). The multiplicity of religions, cultures, languages, and customs that exist in their nation were taught to students, as well as how to respond to them. The foundation for creating a peaceful and courteous society is how students recognize that diversity was the wealth and source of strength of the country.

The findings of this study also indicated that the improvement of primary school kids' nationalistic insight was influenced by learning motivation. Previous research stated that which looked at the impact of learning motivation on high school students' learning achievement, support this conclusion (Lee et al., 2021; Rafiola et al., 2020). This study has something in common, namely, to determine the effect of learning motivation on the quality of learning. The high school students who have high learning motivation also have high learning achievements. At the same time, this study found that learning motivation results also affect elementary school students' national insight. Results from other studies, looked at how learning motivation affects students' learning activity (Lin et al., 2018; Yen & Lin, 2022). This study has something in common, namely, to determine the effect of learning motivation on the quality of learning. However, it has a difference, namely research conducted by Lin et al. found that students with high learning motivation also have high learning activity. At the same time, this study found that students with high motivation will influence the increase in the national insight of elementary school students. So, this study found new findings that learning motivation increases elementary school students' national insight.

Students are more actively engaged in learning when they are strongly motivated. Students looked for information, asked inquiries, and took part in classroom discussions about national insight. Students had a better chance of developing a deeper and more comprehensive awareness of their nation's identity, history, culture, and values through this active engagement. Additionally, when students saw a link between the course material and their personal beliefs, they became more motivated to learn (Rozie, 2018; Supriadi, 2017). Understanding national identity and values was necessary to improve national insight. Students will be more driven to explore and broaden their understanding of the nation once they realize how essential these issues are to their identity formation and relevance to their daily lives. Students who were very motivated to learn also explored national insight-related

issues in greater depth. Students in primary schools were motivated to read more books, look for reliable information, and participate in extracurricular activities that could deepen their grasp of the history, culture, and values of their country. The quality of information processing was also found to be improved by high levels of learning motivation (Cogdill, 2015; Oliveira et al., 2021). Students who are motivated tend to be more concentrated, and more focused, and to employ efficient learning techniques. They were able to obtain a deeper understanding as a result of being able to assimilate and process information on national insight more effectively.

Additionally, this study discovered that the impact of students' learning motivation and the differentiated learning model on primary school children's nationalistic insight is connected. The improvement of primary school children's nationalistic understanding was significantly impacted by the relationship between the differentiated learning model and kids' learning motivation. The differentiated learning model considers the unique characteristics of each student, including their learning preferences, interests, and needs (Melesse, 2015; Shareefa, 2021). In this strategy, students had the option to study in a way that suited their preferences and needs, which in turn increased their motivation to learn. Students that experienced differentiated instruction believed that the material was relevant to their daily life (Helmi et al., 2023; Sulistianingrum et al., 2023). Learning materials included references to topics like national identity, history, culture, and values that were recognizable to and significant to individuals. As a result, students felt strongly connected to the learning materials and their personal beliefs, which in turn boosted their motivation to learn. Students also had a successful learning experience due to the differentiated learning model (Du et al., 2020; Lv et al., 2019). They experience encouragement, worth, and motivation to grow. Teachers promoted active engagement and participation in learning by fostering a stimulating and encouraging environment for pupils. Students were inspired to learn more about their national identity in the framework of national insight, examining the country's history, culture, and values with huge enthusiasm. Students' motivation to learn was increased by this beneficial learning opportunity. Additionally, differentiated learning methods gave students the chance to gain a greater comprehension of national insight. Students had the chance to comprehend and absorb knowledge about their national identity through learning methodologies that are tailored to their learning preferences more fully (De Jager, 2017; Rachmawati et al., 2016). They felt intellectually satisfied and confident that they could master the subject. This sparked an increased motivation to learn and led to a greater comprehension of national wisdom. Additionally, differentiated learning methods supported students' growth in their capacity for critical thought (Coubergs et al., 2017; Helmi et al., 2023). In national insight learning, students were encouraged to explore information, analyze other points of view, and develop a more comprehensive understanding of the values and concepts that underlie their nation or country. Active student participation in the process promoted greater learning motivation and improved critical thinking abilities. Overall, the relationship between the differentiated learning model and students' learning motivation had a favorable effect on enhancing nationalistic insight. Students' motivation to learn rose when engaging, encouraging, and demanding learning experiences were provided following their learning preferences. This made it possible for students to become more involved, comprehend concepts better, and appreciate aspects of their own national identity, history, culture, and values.

This research on differentiated learning methods in primary schools offers valuable insights. It examines how these methods impact students' national insight and motivation, crucial for civic education. By considering the primary school context, it ensures relevance and applicability. It identifies the influence of student motivation on achievement and national views. Practical recommendations derived from the research can benefit teachers and

policymakers. Using scientifically validated methods enhances the validity of the findings, contributing significantly to primary education improvement. Moreover, it contributes to learning methods, providing guidance for effective teaching strategies. By understanding the link between differentiated learning, motivation, and national insight, it aids in shaping students' perspectives. This research enriches educational theory and practice, fostering better national understanding among students. Its implications can guide teachers in fostering motivation and national insight. Future research should explore these aspects further, integrating interdisciplinary perspectives for a comprehensive understanding of students' learning and national identity

4. CONCLUSION

The results of this study concluded that there was an influence of the differentiated learning model on the national insight of elementary school students. Elementary school students who learn using differentiated learning have higher national insights than students who study with conventional learning. In addition, this study also concluded that learning motivation affected increasing the national insight of elementary school students. Elementary school students who have high motivation will also have high national insight. This study also concluded that there was an interaction between differentiated learning models and students' learning motivation on the national insight of elementary school students.

5. ACKNOWLEDGE

6. REFERENCES

Afsar, B., & Umrani, W. A. (2020). Transformational leadership and innovative work behavior: The role of motivation to learn, task complexity and innovation climate. *European Journal of Innovation Management*, *23*(3), 402-428. https://doi.org/10.1108/EJIM-12-2018-0257.

Aftiansyah, F. (2023). The Effect of Drugs on The Morals of Elementary School Students. *International Journal of Students Education*, *1*(3), 240-244. https://journal.berpusi.co.id/index.php/IJoSE/article/view/305.

Alexander, S., Rutherford, J., & Floyd, J. (2018). A critique of the Australian national outlook decoupling strategy: a 'limits to growth'perspective. *Ecological economics*, *145*, 10-17. https://doi.org/10.1016/j.ecolecon.2017.08.014.

Babinčáková, M., & Bernard, P. (2020). Online experimentation during COVID-19 secondary school closures: Teaching methods and student perceptions. *Journal of chemical education*, *97*(9), 3295-3300. https://doi.org/10.1021/acs.jchemed.0c00748.

Bal, A. P. (2016). The effect of the differentiated teaching approach in the algebraic learning field on students' academic achievements. *Eurasian Journal of Educational Research*, *16*(63). 185-204. https://dergipark.org.tr/en/pub/ejer/issue/24399/258654.

Bikić, N., Maričić, S. M., & Pikula, M. (2016). The effects of differentiation of content in problem-solving in learning geometry in secondary school. *Eurasia Journal of Mathematics, Science and Technology Ed ucation*, *12*(11), 2783-2795.https://doi.org/10.12973/eurasia.2016.02304a.

Bondie, R. S., Dahnke, C., & Zusho, A. (2019). How does changing "one-size-fits-all" to differentiated instruction affect teaching?. *Review of Research in Education*, *43*(1), 336-362. https://doi.org/10.3102/0091732X188211.

Chang, J. C., Wu, Y. T., & Ye, J. N. (2022). A study of graduate students' achievement motivation, active learning, and active confidence based on relevant research. *Frontiers in Psychology*, *13*, 915770. https://doi.org/10.3389/fpsyg.2022.915770.

Cloude, E. B., Wortha, F., Wiedbusch, M. D., & Azevedo, R. (2021, July). Goals matter: changes in metacognitive judgments and their relation to motivation and learning with an intelligent tutoring system. In *International Conference on Human-Computer Interaction* (pp. 224-238). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-77889-7_15.

Dalila, A. A., Rahmah, S., Liliawati, W., & Kaniawati, I. (2022). The Effect of Differentiated Learning in Problem Based Learning on Cognitive Learning Outcomes of High School Students. *Jurnal Penelitian Pendidikan IPA*, *8*(4), 1820-1826. https://doi.org/10.29303/jppipa.v8i4.1839.

De Jager, T. (2017). Perspectives of teachers on differentiated teaching in multi-cultural South African secondary schools. *Studies in Educational Evaluation*, *53*, 115-121. https://doi.org/10.1016/j.stueduc.2016.08.004.

Demir, S. (2021). Effects of learning style based differentiated activities on gifted students' creativity. *Journal for the Education of Gifted Young Scientists*, *9*(1), 47-56. https://doi.org/10.17478/jegys.754104.

Demir, S. (2021). The Impact of Differentiated Instructional Media on the Motivation and Opinions of Students towards Science Learning in Terms of Learning Styles. *Shanlax International Journal of Education*, *9*(3), 16-25. https://doi.org/10.34293/education.v9i3.3723.

Dewantara, J. A., Suhendar, I. F., Rosyid, R., & Atmaja, T. S. (2019). Pancasila as ideology and characteristics civic education in Indonesia. *International Journal for Educational and Vocational Studies*, *1*(5), 400-405. https://doi.org/10.29103/ijevs.v1i5.1617.

Dilshad, M., Nausheen, M., & Ahmed, Z. (2019). Impact of students' motivation for learning English on their achievement at secondary level. *Pakistan Journal of Social Sciences*, *39*(2), 689-696. http://pjss.bzu.edu.pk/index.php/pjss/article/view/693.

Du, D., Feng, H., Lv, W., Ashrafinia, S., Yuan, Q., Wang, Q., ... & Lu, L. (2020). Machine learning methods for optimal radiomics-based differentiation between recurrence and inflammation: application to nasopharyngeal carcinoma post-therapy PET/CT images. *Molecular imaging and biology*, *22*, 730-738. https://doi.org/10.1007/s11307-019-01411-9.

Gentry, R., Sallie, A. P., & Sanders, C. A. (2013). Differentiated Instructional Strategies to Accommodate Students with Varying Needs and Learning Styles. *Online Submission*, *2013*, 1-21. https://files.eric.ed.gov/fulltext/ED545458.pdf.

Handley, R. L. (2014). Cross-and extra-national journalistic partnerships: And the national outlook. *Journalism Studies*, *15*(2), 138-153. https://doi.org/10.1080/1461670X.2013.813209.

Helmi, A. M., Fauziati, E., & Muhibbin, A. (2023). Movers Teacher Perceptions of Sensory Learning Styles and Their Implementation in Product Differentiated Learning. *Jurnal Paedagogy*, *10*(2), 389-400. https://doi.org/10.33394/jp.v10i2.6880.

Huang, C. L., Luo, Y. F., Yang, S. C., Lu, C. M., & Chen, A. S. (2020). Influence of students' learning style, sense of presence, and cognitive load on learning outcomes in

an immersive virtual reality learning environment. *Journal of Educational Computing Research*, *58*(3), 596-615. https://doi.org/10.1177/0735633119867422.

Ismajli, H., & Imami-Morina, I. (2018). Differentiated instruction: Understanding and applying interactive strategies to meet the needs of all the students. *International journal of Instruction*, *11*(3), 207-218. https://doi.org/10.12973/iji.2018.11315a.

Kamran, M., Munir, N., & Wattoo, R. M. (2019). A comparative exploration of the effect of differentiated teaching method vs. traditional teaching method on students' learning at 'A'level. *Global Social Sciences Review*, *4*(1), 89-95. https://doi.org/10.31703/gssr.2019(IV-I).08.

Klein, N., Deutz, P., & Ramos, T. B. (2022). A survey of Circular Economy initiatives in Portuguese central public sector organisations: National outlook for implementation. *Journal of environmental management*, *314*, 114982. https://doi.org/10.1016/j.jenvman.2022.114982.

Klepar, M., Potapchuk, T., Chinchoy, A., & Nych, O. (2022). The Development of The Humanistic Outlook of Younger School Students of A General Education School In Extra-School Activities. *Mountain School of Ukrainian Carpaty*, (26), 124-128. https://doi.org/10.15330/msuc.2022.26.124-128.

Law, K. M., Geng, S., & Li, T. (2019). Student enrollment, motivation and learning performance in a blended learning environment: The mediating effects of social, teaching, and cognitive presence. *Computers & Education*, *136*, 1-12. http://dx.doi.org/10.1016/j.compedu.2019.02.021.

Lin, H. H., Yen, W. C., & Wang, Y. S. (2018). Investigating the effect of learning method and motivation on learning performance in a business simulation system context: An experimental study. *Computers & Education*, *127*, 30-40. http://dx.doi.org/10.1016/j.compedu.2018.08.008.

Maaliw III, R. R. (2020). Adaptive Virtual Learning Environment based on Learning Styles for Personalizing E-learning System: Design and Implementation. *Online Submission*, *8*(6), 3398-3406. https://doi.org/10.35940/ijrte.F8901.038620.

Magulod Jr, G. C. (2019). Learning styles, study habits and academic performance of Filipino University students in applied science courses: Implications for instruction. *JOTSE: Journal of Technology and Science Education*, *9*(2), 184-198. http://dx.doi.org/10.3926/jotse.504.

Malacapay, M. C. (2019). Differentiated Instruction in Relation to Pupils' Learning Style. *International Journal of Instruction*, *12*(4), 625-638. https://doi.org/10.29333/iji.2019.12440a.

Malone, T. W., & Lepper, M. R. (2021). Making learning fun: A taxonomy of intrinsic motivations for learning. In *Aptitude, learning, and instruction* (pp. 223-254). Routledge.

Oliveira, A., Ribeiro, F. S., Ribeiro, L. M., McPherson, G., & Oliveira-Silva, P. (2021). Disentangling motivation within instrumental music learning: A systematic review. *Music Education Research*, *23*(1), 105-122. https://doi.org/10.1080/14613808.2020.1866517.

Puspitarini, Y. D., & Hanif, M. (2019). Using Learning Media to Increase Learning Motivation in Elementary School. *Anatolian Journal of Education*, *4*(2), 53-60. https://doi.org/10.29333/aje.2019.426a.

Rachmawati, M. A., Nu'man, T. M., Widiasmara, N., & Wibisono, S. (2016). Differentiated instruction for special needs in inclusive schools: A preliminary study. *Procedia-Social and Behavioral Sciences*, *217*, 585-593. https://doi.org/10.1016/j.sbspro.2016.02.053.

Rafiola, R., Setyosari, P., Radjah, C., & Ramli, M. (2020). The effect of learning motivation, self-efficacy, and blended learning on students' achievement in the industrial revolution 4.0. *International Journal of Emerging Technologies in Learning (iJET)*, *15*(8), 71-82. https://doi.org/10.3991/ijet.v15i08.12525.

Rasheed, F., & Wahid, A. (2021). Learning style detection in E-learning systems using machine learning techniques. *Expert Systems with Applications*, *174*, 114774. https://doi.org/10.1016/j.eswa.2021.114774.

Shaunessy-Dedrick, E., Evans, L., Ferron, J., & Lindo, M. (2015). Effects of differentiated reading on elementary students' reading comprehension and attitudes toward reading. *Gifted Child Quarterly*, *59*(2), 91-107. https://doi.org/10.1177/001698621456871.

Sitorus, P., Simanullang, E. N., Manalu, A., Laia, I. S. A., Tumanggor, R. M., & Nainggolan, J. (2022). The Effect of Differentiation Learning Strategies on Student Learning Results. *Jurnal Penelitian Pendidikan IPA*, *8*(6), 2654-2661. https://doi.org/10.29303/jppipa.v8i6.2114.

Smale-Jacobse, A. E., Meijer, A., Helms-Lorenz, M., & Maulana, R. (2019). Differentiated instruction in secondary education: A systematic review of research evidence. *Frontiers in psychology*, *10*, 2366. https://doi.org/10.3389/fpsyg.2019.02366.

Smets, W. (2017). High Quality Differentiated Instruction--A Checklist for Teacher Professional Development on Handling Differences in the General Education Classroom. *Universal Journal of Educational Research*, *5*(11), 2074-2080. https://doi.org/10.13189/ujer.2017.051124.

Sulistianingrum, E., Fauziati, E., Rohmah, W., & Muhibbin, A. (2023). Differentiated Learning: The Implementation of Student Sensory Learning Styles in Creating Differentiated Content. *Jurnal Paedagogy*, *10*(2), 308-319. https://doi.org/10.33394/jp.v10i2.7030.

Tosheva, D. (2016). National-cultural outlook onto the zoonym component aphorisms. *Journal of Social Sciences and Humanities Research*, *4*(03), 22-25. https://journals.researchub.org/index.php/JSSHR/article/download/442/431/0.

Tulbure, C. (2013). The effects of differentiated approach in higher education: An experimental investigation. *Procedia-Social and Behavioral Sciences*, *76*, 832-836. https://doi.org/10.1016/j.sbspro.2013.04.215.

Wijaya, O. P., & Bukhori, I. (2017). Effect of learning motivation, family factor, school factor, and community factor on student learning outcomes on productive subjects. *JPBM (Jurnal Pendidikan Bisnis dan Manajemen)*, *3*(3), 192-202. http://dx.doi.org/10.17977/um003v3i32017p192.

Yang, C., & Guo, C. (2015). "National Outlook Movement" in Turkey: A Study on the Rise and Development of Islamic Political Parties. *Journal of Middle Eastern and Islamic Studies (in Asia)*, *9*(3), 1-28. https://doi.org/10.1080/19370679.2015.12023269.