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EFFECTIVENESS OF TEACHING AT THE RIGHT LEVEL (TaRL) APPROACH WITH CONSTRUCTIVE FEEDBACK IN IMPROVING STUDENT WELL-BEING OF JUNIOR HIGH SCHOOL STUDENTS IN SCIENCE LEARNING

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Abstract

The purpose of this study was to determine the effectiveness of increasing student well-being of Grade 8 junior high school students in science learning by using the Teaching at the Right Level (TaRL) approach by providing constructive feedback on the material of Effort and Energy. The method used is pre-experiment. The population in this study was 157 junior high school students in Grade 8. The sample was obtained through cluster random sampling by selecting one experimental group with a sample size of 62 students. The average value of N-Gain obtained is 0.8525. The average N-Gain value explains that the application of the Teaching at the Right Level (TaRL) approach by providing constructive feedback is very effective in improving student well-being of learners. The maximum value of student well-being of learners is in the indicator of being able to participate in learning activities and being able to communicate their thoughts and feelings during the learning process by using the Teaching at the Right Level (TaRL) approach with constructive feedback in the mentoring and monitoring steps.

Keywords: TaRL, Constructive Feedback, Student Well-Being.

INTRODUCTION

The Merdeka Belajar Curriculum provides space for students to learn according to their abilities and potential. The potential and abilities of students need to be accommodated by organizing targeted education. This is in accordance with the philosophy of education by KH Dewantara where education is essentially developing what is in a child's potential (Sasmito, 2023). The potential of children is diverse and education must be able to accommodate all these potentials.

All the potential that exists in each learner needs to be accommodated to produce prosperous and happy learners. If students are happy, it will be easier for educators to direct their students in accordance with the wishes of the educator which of course leads to the achievement of good academic results. This sense of happiness and prosperity is called student well-being.

Student well-being has gained prominence on both the scientific and political agendas, as it is recognized as a crucial skill in addressing the economic, ecological, and social challenges of the 21st century (Saxer, Schnell, Mori, & Hascher, 2024). Well-being in school is not experienced identically by all students, due to the possible varieties of patterns in response to school life events (Morinaj & Held, 2023). Therefore, the right approach is needed to be applied to students, so that students feel prosperity in

obtaining education. Student well-being (SWB) encompasses the physical, psychological, and social wellness of students (Khatri, Duggal, Lim, Thomas, & Shiva, 2024).

Student well-being is a condition of positive thoughts and emotions of students in participating in the learning process. According to Masitoh (2023), the well-being of a learner will be seen if the learner shows characteristics such as having satisfaction in learning, having a feeling of pleasure in learning, actively participating in the learning process, and feeling fulfilled all his needs. One of the factors that influences the process of receiving information is knowledge (Sepriani et al., 2022). The process of obtaining knowledge, having hopes and desires in his life, being optimistic, and happy to undergo every teaching and learning process. These feelings can arise in learners if they feel happy in classroom learning.

Student well-being can also be seen from several indicators in learners in the form of a sense of comfort, curiosity, honesty, optimism, and creativity (Hasanah, 2023). If a learner has raised these indicators in himself, it can be said that a learner has a sense of happiness in the learning process (Risqullah, Rizhardi, & Prasrihamni, 2023). This sense of happiness in teaching and learning activities followed by students will have an impact on students' good academic results as well (Masitoh, 2023).

Furthermore Kurniastuti & Azwar (2014) also added that there are ten indicators that can be a determining factor for a learner to have good student well-being, namely good emotional control, having a tough personality and not giving up easily in completing work, not feeling inferior in class, having high curiosity related to knowledge, persistent in learning, willing to participate in class, can communicate their ideas in class, can position themselves in their learning environment, have a sense of comfort in learning, and foster good relationships between peers and teachers. These ten indicators can be a sign that the learner is enjoying the learning process.

The importance of student well-being in a learner forces education to accommodate students to gain a sense of happiness in participating in learning. The container in question is of course how educators can provide learning that can develop all the potential of their students so that students who are taught and educated have a sense of happiness in obtaining knowledge at the school where they study. Educators must also be able to provide the right content, process and product for each of their students who have different cognitive abilities.

The teaching at the right level approach or abbreviated as TaRL is one approach that can be used by teachers in generating a sense of happiness in students in the classroom. This TaRL approach uses steps such as diagnostic tests, forming groups based on potential or ability, applying basic pedagogical skills of educators, and mentoring and monitoring in the learning process (Ningrum, Juwono, & Sucahyo, 2023). These steps refer to the Teaching at the Rigt Level Approach Chart in Figure 1 below.

Figure 1: Steps of the TaRL Approach to Learning

The learning process that uses the TaRL approach begins with a diagnostic test. A diagnostic test is a test used for the purpose of knowing some of the symptoms that educators want to see in the learning process (Izza, Nurhamidah, & Elvinawati, 2021). The symptoms that educators want to know in this case are the initial abilities of students in the material of effort and energy in junior high school science learning grade 8. Learners are given 10 essay questions that are answered at the beginning of learning. Before conducting the test, students were informed in advance that there would be a test related to the material of Effort and Energy in the upcoming meeting. The initial ability of these learners is grouped into 3 groups, namely groups with undeveloped categories, developing categories, and developing categories (Nur Avianti et al., 2023). This TaRL approach is not an approach that groups students based on age or grade level, but groups students based on the ability or initial understanding of the students themselves (Mubarokah, 2022). Such grouping will better assist learners in improving their abilities with confidence.

The initial ability of the learners is certainly based on the potential, interests and talents that exist in the learners. Learners are not forced to have the same initial abilities as other learners. All learners are entitled to learning that is able to accommodate or accommodate all their initial abilities with the aim of obtaining the expected learning objectives. The basis of group division should not be conveyed to learners so that there is no inequality between fellow learners. The products produced by each group will be complementary and balanced so that there is no gap between groups.

The application of basic pedagogical skills for educators is applied in this step. Educators design learning, implement learning, and evaluate learning appropriately according to the group division. According to (Vicente, Reomero, Flores, Amora, & Almagro, 2024) A prominent feature of the successful educational transformation in many countries is that policy reform efforts and programs are guided by a clear goal or vision, and implemented through a coherent planning, management, and monitoring process. In line with this statement, basic pedagogical skills are needed for teachers to be able to develop students' potential so that the desired learning goals are achieved. Educators can do content differentiation, process differentiation, and product differentiation in the science learning process (Munandar, 2024). Differentiation of material is related to the teacher's accuracy in choosing material that has not been mastered by each group from various existing materials. Differentiation of the learning process is related to the selection of appropriate learning activities that can be implemented by educators for their students. Product differentiation is related to the selection of what outcomes are appropriate for each group. The different treatment of each group will make each group exchange knowledge.

Mentoring and monitoring activities are carried out at the end of the learning steps using this TaRL approach. Mentoring or better known as mentoring is an activity carried out by educators to their students such as finding out activities, listening activities, and activities to help students who experience difficulties in the learning process (Moloi & Dimema, 2014; Nelly, Situmorang, & Iriani, 2022). Monitoring results (Nasihi & Hapsari, 2022) Mentoring and monitoring activities are a form of maximum service from an educator to his educator. Mentoring and monitoring activities will have better results if they use constructive feedback.

Constructive feedback is a technique utilized by teachers in the classroom globally to increase students' academic performance (Aslam, Khan, & Ahmed, 2023). Constructive Feedback will be responded to by learners if it meets two criteria including feedback must be specific to the thing given feedback, and feedback must be full of friendliness (Fong et al., 2021). Specific here means that comments in the form of feedback that educators give must be clear about the object being commented on. For example, if the educator wants to comment on the work of students, it must be clear what work number and part. Friendliness in giving constructive feedback is feedback that uses praise and politeness in giving it. Praise and politeness in giving feedback can touch the feelings of learners to want to follow what is directed by the educator in the feedback. The constructive feedback with some characteristics - specific and actionable; descriptive and helpful; showing respect; addressing issues and tasks; and providing dialogue - were immediately provided by the tutors on the students' discussion and their written assignments (Susilana & Pribadi, 2021).

The implementation of learning with the TaRL approach accompanied by the provision of constructive feedback is expected to be able to make science learning at the Secondary School Level more enjoyable and have an impact on excellent student well-being. For this reason, this research needs to be carried out so that readers can find out the effectiveness of increasing student well-being of students by using the Teaching at the Right Level approach by providing constructive feedback in the mentoring and monitoring steps in science learning in the material of Effort and Energy. Communicating constructive feedback is essential to the teaching and learning process (Groves et al., 2015; Plakht, Shiyovich, Nusbaum, & Raizer, 2013). Feedback can be constructive or corrective in nature, considered negative feedback, or reinforcing positive feedback (Altmiller et al., 2018).

METHOD

This research was researched using the pre-experiment method. The study used one experimental group without making comparisons with other groups (Marsden & Torgerson, 2012). The research design used was one group pretest posttest design. There is one group that is given treatment in the form of applying science learning using the Teaching at the Right Level (TaRL) approach by providing constructive feedback to examine the improvement of student well- being in students.

The sample in this study was 62 students who were in grade 8 junior high school in one of Padang City. The sample was obtained using cluster random sampling in order to obtain a sample group that could represent the nature of the entire population. The sample was taken randomly from the study population of 157 students. The research instrument used is a student well-being questionnaire sheet developed from 10 indicators, namely being able to control emotions, being resilient in dealing with problems, not feeling inferior, having high curiosity, participating in learning and school activities, persevering in the learning process, being able to communicate what is thought and felt, being able to position themselves in all conditions, showing comfort and confidence in interacting in class, and maintaining good relationships with educators and peers (Izza et al., 2021). These ten indicators will later be elaborated into twenty questions that will be given to the research sample. The description of the twenty indicators can be seen in Table 1.

Table 1: Indicators and Sub Indicators of Student Well-Being

Indicator	Sub Indicators
Able to Control Emotions	1. Not cheating and deceiving in the learning process
	2. Not feeling extreme anger or sadness
Resilient in the Face of Problems	3. Enthusiastic about going to school
	4. Removes all obstacles in doing homework and school work
Not Feeling Inferior	5. Good at doing schoolwork
	6. Not feeling anxious about other friends' arguments
Have high curiosity	7. Likes to solve problems with smart solutions with no coercion
	8. Want to find out things outside the lesson
Participate in Learning and School Activities	9. Participate in out-of-school activities
	10. Listening and participating in learning activities
Persevere in the Learning Process	11. Study hard and master the material
	12. Maximal in doing assignments
Able to Communicate What You Think and Feel	13. Can communicate thoughts and ideas
	14. Can express feelings
Able to Position Yourself in All Conditions	15. Caring about the condition of others
	16. Her heart is moved to listen to sad or funny stories from her friends
Demonstrate Comfort and Confidence in Interacting in the Classroom	17. Comfortable among friends and teachers
	18. Thinking positively that all friends and teachers are good
Maintain Good Relationships with Educators and Peers	19. Having many friends
	20. Has a good relationship with friends and teachers without discriminating between them.

(Kurniastuti & Azwar, 2014)

To categorize student well-being into several categories based on the student well-being indicators given, the researcher refers to Table 2 below.

Table 2: Categories of Student Well-Being

Value Range	SWB Category
≥ 85	Very good
70 - 85	Good
55 - 70	Fair
40 - 55	Not Good
≥ 40	Very Poor

(Gasila, Fadillah, & Wahyudi, 2019)

This student well-being (SWB) category consists of 5 categories that will be used to categorize the processed results of SWB questionnaire data. The value of student well-being will be categorized in qualitative form ranging from very poor to very good. Meanwhile, to categorize the average value of N-Gain obtained from the initial student well-being value with the final student well-being value, the following Table 3 is used.

Table 3: N-Gain Mean Value Categories

N-Gain Average	Category
N-Gain > 75	Very effective
55 < N-Gain ≤ 75	Effective
40 < N-Gain ≤ 55	Less Effective
N-Gain ≤ 40	Not Effective

(Tyaningsih, 2022)

This N-Gain value category consists of 4 categories which are analyzed from the results of the SPSS 26 N-gain value.

RESULT AND DISCUSSION

The purpose of the implementation of this study is to determine the improvement of Student Well-Being of students after implementing science learning with a teaching at the right level approach by providing constructive feedback at the mentoring and monitoring steps. The results of the increase in student well-being of learners are shown in Table 4 below.

Table 4: *Student Well-Being* N-Gain Mean Value

Value	Experimental Class		
	Pre-Test	Post-Test	N-Gain
Maximum	80	100	1
Minimum	15	70	0.55
Average	40.73	90.48	0.8525
Standard Deviation	16.813	8.234	0.12815

Table 4 explains the values that can be displayed from processed data using SPSS 26. In the table, it can be seen that the maximum N-Gain value obtained for improving student well-being of learners is 1 while the minimum improvement value is 0.55. The overall N-Gain value of 62 students averaged 0.8525 which indicates that the use of the teaching at the right level approach accompanied by the provision of constructive feedback in learning science in the material of Effort and Energy is very effective in improving student well-being of students.

The happiness obtained by students in learning with the TaRL approach accompanied by constructive feedback is very visible from the beginning of learning to the end of learning. The ten indicators of student well- being experienced good and very good achievements. The results of student well-being of 8th grade junior high school students in science learning are shown in Figure 2 below.

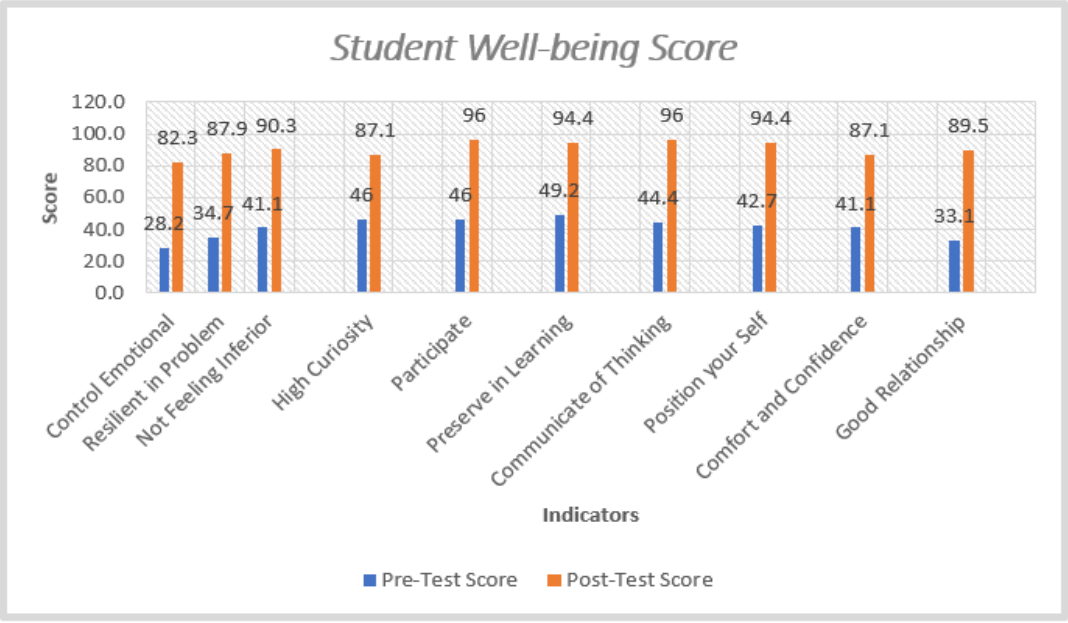

Figure 2 : Student Well-being Score

Figure 2 explains the comparison of student well-being scores at the beginning of learning and after the application of science learning using the TaRL approach with constructive feedback. If we refer to the previous Table 2, we can see that all student well-being scores are in the good and very good categories. The minimum value of student well-being of learners is 82.3 (good) and the maximum value of student well-being of learners is 96 (very good).

Student well-being is very good in the indicator of actively participating in learning and being able to communicate what students think and feel in front of educators and classmates. Almost all students participate in groups that have been formed based on diagnostic assessments that have been carried out at the beginning of learning. The undeveloped group joined with fellow undeveloped learners, and the developing group joined with fellow developing learners, and the developed group joined with fellow developed learners. The well-being of students is a critical factor in their overall academic success and personal development (Chauhan & Saxena, 2024).

This kind of grouped learning results in equal participation for all learners. Learners in their groups learn content that is different from other groups, experience learning processes that are different from friends in other groups, and produce products that are different from other groups. This result will be different later if we combine developed and undeveloped groups, which results in participation that tends to be in developed learners. Grouping students in the learning process greatly activates students who initially have not developed and feel less confident to participate and feel confident.

Besides active participation which is a source of happiness for students in carrying out science learning, there are other indicators that make students happier to follow science learning with the TaRL approach and constructive feedback. The indicator is able to communicate the results of thoughts and feelings well. Feedback is an integral part of any learning experience. Constructive feedback is a powerful instrument and facilitates the learner's professional and personal development (Bhattarai, 2007).

In the learning process, underdeveloped groups are given concept material related to the definition of effort and energy along with examples of effort and energy in everyday life. This material is needed by learners who have not developed towards the developing phase. The learning process applied is in the form of group discussions guided by a worksheet that leads students to produce products in the form of concept maps related to effort and energy and their applications.

For learners who are in the developing phase, the material provided is the types of energy along with the problems that need to be solved together by learners in their groups. The learning process applied also uses worksheets that lead learners in producing products in the form of making a collection of questions along with solving the questions which will later be presented by learners in developing groups in front of the class.

The group that has developed is given simple aircraft material which will produce a product in the form of an explanation in front of the class in the form of paper work explaining the working concepts of pulleys, wheels, inclined planes, and levers. The three groups received different treatments according to the students' initial abilities. The different treatment makes students happier which is indicated by the excellent student well-being score. This is in line with the opinion Sasmito (2023) which explains that if differences are combined into one class by releasing all the potential that

students have, the learning will make students able to participate actively and be able to express their opinions with confidence.

Learning experiences that educators design for each group of learners who have different abilities and potential will provide well-being for students. Apetatu (2023) added that learners' student well-being will increase if a school can provide the right learning experience for its learners. Matches pedagogical content to pupils' educational needs through various adapted activities after segmentation of pupils depending on their actual difficulties and needs (Binaoui, Moubtassime, & Belfakir, 2023).

Science learning using the TaRL approach with constructive feedback is also able to establish good relationships among friends and educators as well. Feedback that is full of praise with politeness will make learners comfortable to accept all improvements from their learners. Teacher well-being is highly relevant to teachers' work and students' outcomes (Dreer, 2023). By giving this feedback, it can produce positive emotions in learners (Glassey & Balter, 2020). These positive emotions will have an impact on the excellent student well-being of learners (Masitoh, 2023).

Students' well-being is a fundamental goal in education. The school has a strategic role in developing students' well-being (Aziz, Mulyadi, Hadi, Wahyuni, & Rubaidi, 2024). We can imagine that if we keep doing heterogeneous grouping, it is the learners who have developed the most control over the group and become representatives in the presentation. With the division of groups whose basis of division is unknown to these learners, learners who were previously reluctant to participate in discussions were indifferent, less diligent in completing science work, felt inferior to other friends, and felt uncomfortable because their position was not recognized by their groupmates became the opposite at this time. Learners become willing to participate in groups, care about group discussions, are diligent in completing group tasks, do not feel inferior, and feel comfortable with other group members because they are recognized by their environment. This kind of learning is very effective in improving learners' student well-being.

CONCLUSION

The conclusion obtained while carrying out this research is that through the application of the teaching at the right level approach by providing constructive feedback in science learning can help improve student well-being of students who are very effective as assessed by ten indicators of student well-being. For further research, researchers want to see the next academic results of students, whether it is directly proportional to the results of excellent student well-being.

References

1) Altmiller, G., Deal, B., Ebersole, N., Flexner, R., Jordan, J., Jowell, V., … Walker, D. (2018). Constructive feedback teaching strategy: A multisite study of its effectiveness. *Nursing Education Perspectives*, *39*(5), 291–296. https://doi.org/10.1097/01.NEP.0000000000000385

2) Apetatu, M. F. (2023). Penerapan Model Direct Instruction untuk Meningkatkan Kemampuan Speaking dan Student Well-Being Materi Expression of Offering Service/Help Siswa Kelas XII IPA Madrasah ALiyah Negeri ALor. *Jurnal Pendidikan Madrasah*, *I*(01).

3) Aslam, R., Khan, N., & Ahmed, U. (2023). Constructive Feedback Intervention for Students' Academic Achievement in Chemistry: A Case of Public Secondary Schools of Pakistan. *UMT Education Review*, *6*(1), 81–105. https://doi.org/10.32350/10.32350/uer.61.05

4) Aziz, R., Mulyadi, Hadi, M. S., Wahyuni, E. N., & Rubaidi. (2024). Students ' well-being development in the classroom : a mixed- method study Students ' well -being development in the classroom : a mixed- method study. *International Journal of Evaluation and Research in Education (IJERE)*, *13*(3), 1666–1672. https://doi.org/10.11591/ijere.v13i3.27145

5) Bhattarai, M. D. (2007). ABCDEFG IS - The principle of Constructive Feedback. *Journal of the Nepal Medical Association*, *46*(167), 151–156. https://doi.org/10.31729/jnma.293

6) Binaoui, A., Moubtassime, M., & Belfakir, L. (2023). The Effectiveness of the TaRL Approach on Moroccan Pupils' Mathematics, Arabic, and French Reading Competencies. *International Journal of Education and Management Engineering*, *13*(3), 1–10. https://doi.org/10.5815/ijeme.2023.03.01

7) Chauhan, V., & Saxena, T. (2024). Yoga and mindfulness in educational settings: impact on student well-being and performance. *Journal of Research Administration Society of Research Administrators International*, *6*(1), 707–720.

8) Dreer, B. (2023). Witnessing well-being in action: Observing teacher well-being during field experiences predicts student teacher well-being. *Frontiers in Education*, *8*(March), 1–6. https://doi.org/10.3389/feduc.2023.967905

9) Fong, C. J., Schallert, D. L., Williams, K. M., Williamson, Z. H., Lin, S., Kim, Y. W., & Chen, L. H. (2021). Making feedback constructive: the interplay of undergraduates' motivation with perceptions of feedback specificity and friendliness. *Educational Psychology*, *41*(10), 1241–1259. https://doi.org/10.1080/01443410.2021.1951671

10) Gasila, Y., Fadillah, S., & Wahyudi. (2019). Analisis Keterampilan Proses Sains Siswa Dalam Menyelesaikan Soal IPA di SMP Negeri Kota Pontianak. *Jurnal Inovasi Dan Pembelajaran Fisika*, *06*(1), 14–22.

11) Glassey, R., & Balter, O. (2020). Put the Students to Work: Generating Questions with Constructive Feedback. *Proceedings - Frontiers in Education Conference, FIE*, *2020-Octob*. https://doi.org/10.1109/FIE44824.2020.9274110

12) Groves, M., Mitchell, M., Henderson, A., Jeffrey, C., Kelly, M., & Nulty, D. (2015). Critical factors about feedback: 'They told me what i did wrong; but didn't give me any feedback.' *Journal of Clinical Nursing*, *24*(11–12), 1737–1739. https://doi.org/10.1111/jocn.12765

13) Hasanah, N. (2023). Penerapan 2D (Diagnostic Assessment-Differentiated Learning) Meningkatkan Student Wellbeing pada Pembelajaran Kimia. *Jurnal IKA : Ikatan ALumni PGSD UNARS*, *13*(1), 88–100.

14) Izza, R. I., Nurhamidah, N., & Elvinawati, E. (2021). Analisis Miskonsepsi Siswa Menggunakan Tes Diagnostik Esai Berbantuan Cri (Certainty of Response Index) Pada Pokok Bahasan Asam Basa. *Alotrop*, *5*(1), 55–63. https://doi.org/10.33369/atp.v5i1.16487

15) Khatri, P., Duggal, H. K., Lim, W. M., Thomas, A., & Shiva, A. (2024). Student well-being in higher education: Scale development and validation with implications for management education. *International Journal of Management Education*, *22*(1), 1–22. https://doi.org/10.1016/j.ijme.2024.100933

16) Kurniastuti, I., & Azwar, S. (2014). Constructtion of Student Well-being Scale for 4-6th Graders. *Jurnal Psikologi*, *41*(1), 1. https://doi.org/10.22146/jpsi.6954

17) Marsden, E., & Torgerson, C. J. (2012). Single group, pre- and post-test research designs: Some methodological concerns. *Oxford Review of Education*, *38*(5), 583–616. https://doi.org/10.1080/03054985.2012.731208

18) Masitoh, S. (2023). Pengaruh Problem Based Learning (Pbl) Berbantuan Canva Terhadap Student Well Being Dan Hasil Belajar Ipa Siswa Sd Pada Materi Udara Bersih Bagi Kesehatan. *Pendas : Jurnal Ilmiah Pendidikan Dasar*, *8*(1), 509–523. https://doi.org/10.23969/jp.v8i1.7606

19) Moloi, K. C., & Dimema, M. (2014). Teaching and learning strategies to accommodate all students at a university of technology. *Mediterranean Journal of Social Sciences*, *5*(3), 493–501. https://doi.org/10.5901/mjss.2014.v5n3p493

20) Morinaj, J., & Held, T. (2023). Stability and change in student well-being: A three-wave longitudinal person-centered approach. *Personality and Individual Differences*, *203*(August 2022), 1–6. https://doi.org/10.1016/j.paid.2022.112015

21) Mubarokah, S. (2022). Tantangan Implementasi Pendekatan TaRL (Teaching at the Right Level) dalam Literasi Dasar yang Inklusif di Madrasah Ibtida'iyah Lombok Timur. *BADA'A: Jurnal Ilmiah Pendidikan*, *4*(1), 165–179. https://doi.org/10.37216/badaa.v4i1.582

22) Munandar, K. (2024). *Upaya Mewujudkan Melalui Pembelajaran Berdiferensiasi pada Peserta Didik Kelas X*. (4), 1–10.

23) Nasihi, A., & Hapsari, T. A. R. (2022). Monitoring Dan Evaluasi Kebijakan Pendidikan. *Indonesian Journal of Teaching and Learning (INTEL)*, *1*(1), 77–88.

24) Nelly, Situmorang, R., & Iriani, T. (2022). E-mentoring : Alternatif Peningkatkan Kompetensi Pedagogik Guru. *KONSTELASI : Konvergensi Teknologi Dan Sistem Informasi*, *2*(1), 217–228.

25) Ningrum, M. C., Juwono, B., & Sucahyo, I. (2023). Implementasi Pendekatan TaRL untuk Meningkatkan Motivasi Belajar Peserta Didik pada Pembelajaran Fisika. *PENDIPA Journal of Science Education*, *7*(1), 94–99.

26) Nur Avianti, M., Rizki Setiani, A., Lestari, I., Septiawati, L., Saefullah Program Studi Pendidikan Biologi, A., & Profesi Guru Prajabatan, P. (2023). Peningkatan Hasil Belajar Peserta Didik Kelas XI melalui Pendekatan TaRL (Teaching at the Right Level) pada Materi Sistem Ekskresi Improving Learning Outcomes of Class XI Students through the TaRL (Teaching at The Right Level) Approach on Excretion System. *Jurnal Jeumpa*, *10*(2), 231–239. https://doi.org/10.33059/jj.v10i2.7610

27) Plakht, Y., Shiyovich, A., Nusbaum, L., & Raizer, H. (2013). The association of positive and negative feedback with clinical performance, self-evaluation and practice contribution of nursing students. *Nurse Education Today*, *33*(10), 1264–1268. https://doi.org/10.1016/j.nedt.2012.07.017

28) Risqullah, R., Rizhardi, R., & Prasrihamni, M. (2023). Penerapan Pembelajaran Interaktif Berbasis Powerpoint untuk Menciptakan Student Well-Being Mata Pelajaran Bahasa Indonesia Kelas V SD. *Jurnal Pendidikan: Riset&Konseptual*, *7*(1), 82–92.

29) Sasmito, E. (2023). *542-Article Text-3419-1-10-20230331*. *3*, 131–139.

30) Saxer, K., Schnell, J., Mori, J., & Hascher, T. (2024). The role of teacher–student relationships and student–student relationships for secondary school students' well-being in Switzerland. *International Journal of Educational Research Open*, *6*(December 2023), 1–12. https://doi.org/10.1016/j.ijedro.2023.100318

31) Sepriani, R., Bafirman, Mudjiran, Gusril, Syafrudi, & Bachtiar, S. (2022). Athlete Doping Knowledge Analysis : A Case Study of the 20th National Sports Week (PON) Papua 2021 in Indonesia. *International Journal of Human Movement and Sports Sciences*, *10*(4), 723–731. https://doi.org/10.13189/saj.2022.100413

32) Susilana, R., & Pribadi, B. A. (2021). World journal on educational technology: Current issues. *World Journal on Educational Technology: Current Issues*, *13*(3), 514–528.

33) Tyaningsih, R. Y. (2022). Efektivitas Model Project Based Learning (PjBL) terhadap Kreativitas Siswa dalam Mengembangkan Inovasi Pembelajaran Matematika. *Griya Journal of Mathematics Education and Application*, *2*(4), 1149–1156. https://doi.org/10.29303/griya.v2i4.277

34) Vicente, R. S., Reomero, J. I., Flores, L. C., Amora, M. S., & Almagro, R. E. (2024). Comparative Analysis of Two Educational Systems in Both Basic and Higher Education between Japan and Singapore. *Asian Journal of Education and Social Studies*, *50*(1), 114–135. https://doi.org/10.9734/ajess/2024/v50i11243