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Student response to the radec learning model in improving teacher pedagogic competence

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ABSTRACT

Pedagogical competence is the main competency that must be possessed by teachers and begins to be learned by every prospective teacher since they study at higher education level. Much of higher education research has forgotten the sustainability of this competency and has put more emphasis on competence in understanding learning content, even though a learning innovation is needed that makes this competency continue so that it is not just theory but practice for prospective teachers. Therefore, this research was conducted with the aim of looking at the responses of students (prospective elementary school teachers) to the usefulness and sustainability of learning innovations that have been carried out through the RADEC (Read-Answer-Discuss-Explain-Create) learning model in order to increase these pedagogical competencies. The research was conducted through a qualitative descriptive method, using data collection techniques through a survey method. The study involved 144 respondents. The data obtained revealed that the majority of students gave a positive response to the RADEC learning process in order to increase their pedagogical competence. Thus, it is hoped that the results of this research can become material for practical reflection for education practitioners to be able to redevelop the RADEC learning model, especially in the context of increasing teacher pedagogical competence in addition to increasing learning content competencies.

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1. INTRODUCTION (12 pt)

Education that continues to develop is a characteristic that this field is one of the spearheads in building the nation's civilization. Therefore, in building a good civilization, a progressive and advanced education system is needed. One of the keys to the success of education is in the hands of the teacher (Rusman, 2012). The teacher as a leading sector that is directly in contact with students at school, in carrying out their profession must be able to ensure that the learning process goes well. The learning process is the most important part that must be carried out by teachers in schools. The success of a student in understanding the context of the material being taught depends on how far the learning process can be carried out properly. The learning process involves various activities between students, teachers, and the learning environment itself, which is then controlled in the lesson plan made by the teacher. Therefore, teachers have high responsibility and professionalism in the field of education.

In their professionalism, teachers are required to master a set of basic competencies or abilities that enable these teachers to carry out their duties properly. One of the basic competencies or abilities of the teacher in question is pedagogic competence. Pedagogical knowledge, competence and ability are competencies that uniquely characterizes and distinguishes the teaching profession from other professions (Nur, 2014). Mastery of developmental theory and learning theories absolutely belongs to the teacher. Therefore, it is necessary to raise awareness that mastery of student development material, learning theories, curriculum development, evaluation techniques mastery of teaching models and methods is a component that must be mastered by teachers in addition to mastery of subjects and science and technology related to teaching. It is even clearer that there are at least three tasks that must be carried out by teachers related to pedagogic competencies including planning lessons, implementing lesson plans, and evaluating learning (Alawiyah, 2013).

Some of the competencies mentioned above have actually been facilitated in teaching and learning strategies courses in elementary schools which are the main subjects that must be completed by every prospective teacher, especially prospective elementary school teachers. However, the learning process that is usually carried out using lecture methods and presentations alone seems to be insufficient to instill these competencies in prospective teachers. Thus, a learning innovation is needed that facilitates theory and practice in a balanced way while still paying attention to efficiency and effectiveness in terms of time and activities, especially with students who are students at the higher education level. The innovation is trying to emerge through the use of the RADEC learning model (Read-Answer-Discuss-Explain-Create) which is assumed to be able to overcome some of the concerns and obstacles in question because this learning model has characteristics that are in accordance with the acquisition of philosophical abilities with the stages of perceptual, memorial, introspective and a priori (Nugraha & Prabawanto, 2021a).

The RADEC learning model is a learning model that was developed based on several learning activities including the reading stage, answering pre-learning questions, discussions during learning, explaining the results of the discussion through presentations ending with the creation of works in the create stage (Sopandi, 2023). Therefore, based on the learning stages presented, RADEC learning is assumed to be able to provide the readiness of the actual development zone where there is material that is mastered independently before learning through the reading stage and answering pre-learning questions which are then enhanced again in aspects of the zone of proximal development that are aligned with social development (Nugraha & Prabawanto, 2021a).

Based on this explanation, this study aims to answer the research question in the form of how students (prospective elementary school teachers) respond to RADEC learning in improving their pedagogic competence. In order to answer this question, of course, an in-depth analysis is needed, especially in the aspect of implementing RADEC learning at the higher education level. Therefore, this research is expected to provide a fundamental and in-depth description of the RADEC learning reflection that is implemented at the higher education level, especially in the context of increasing the pedagogical competence of prospective teachers which is still not widely carried out in addition to knowledge of the content of prospective teachers, so that it can expand study material and be useful. in improving learning design.

2. METHODS

This research is a non-experimental research using a qualitative approach that relies on survey methods (Nugraha & Prabawanto, 2021b). The background to this descriptive qualitative research is because the research has the aim of describing or providing a systematic and detailed description of student responses to the learning experiences that have been carried out (Kartini & Putra, 2020; Rosdiana & Sari, 2017) in teaching and learning strategies courses in elementary schools, especially in the topic of learning evaluation using the RADEC learning model. The research respondents involved were 144 students who were divided into four classes in the elementary school education study program. Thus, all respondents have participated in the same lecture activities with direct or offline learning mode.

Research data was collected using a questionnaire technique. Therefore, the instrument used was a questionnaire developed using a Likert Scale to collect data on student responses to the RADEC learning model in the topic of learning evaluation in elementary teaching and learning strategies courses. This is motivated by the fact that the use of a structured questionnaire will be more effective and relatively easy to manage and analyze (Cohen et al., 2018; Wilkinson & Birmingham, 2003). The questionnaire is divided into 6 category of learning quality. The data analysis was carried out based on the score guideline for the questionnaire assessment presented in Table 1 below (adapted from Allen & Seaman, 2007; Nicholls, 2010).

Table 1. Guideline Score Assessment by Students

Rating	Explanation	Score
NAS	Not at All Satisfied	1
SS	Slighty Satisfied	2
MS	Moderately Satisfied	3
VS	Very Satisfied	4
ES	Extremely Satisfied	5

Furthermore, all data from the student assessment questionnaire is recapitulated and each item statement is calculated using the following formula.

$$P\ (percentage\ of\ each\ item) = \frac{the\ total\ score\ of\ data\ collection\ results}{the\ sum\ of\ the\ criterion\ scores} \times 100\%$$

Based on the calculations that have been done, then the interpretation of the numerical score is carried out into a category. These categories are tottaly uneccaptable, unacceptable, slighty unacceptable, neutral, slighty acceptable, acceptable, and perfectly acceptable as given in Table 2 below (adapted from Kartini & Putra, 2020).

Table 2. Score Interpretation Criteria

No	Interval Score (%)	Category
1	0-14	Totally uneacceptable
2	15-29	Unacceptable
3	30-44	Slighty unacceptable
4	45-59	Neutral
5	60-74	Slighty acceptable
6	75-89	Acceptable
7	90-100	Perfectly acceptable

3. RESULTS AND DISCUSSION

3.1 Results

The basic idea behind this research is the idea of previous research from Kartini & Putra (2020) and Rosdiana & Sari (2017) which highlights student responses to learning that has been carried out as part of reflection on improving learning design. Therefore, what is different from this study is that it highlights students' responses to RADEC learning which has been carried out as reflection in action, reflection of action and reflection for action. Based on these ideas, this study obtained the results of students' responses to RADEC learning as their learning experience in the topic of learning evaluation which is described in detail in Table 3 below.

Table 3. Student Response Questionnaire Results

No.	Component	Rating (%)				
		Not at All Satisfied	Slightly Satisfied	Moderately Satisfied	Very Satisfied	Extremely Satisfied
A	**The quality of learning activities**					
1	Learning material or content that is studied	0	0	5,56	41,67	52,78
2	Learned learning media (power point, GForm, Video, Example of lesson plans, etc.)	0	0	5,56	45,14	49,31
3	The learning atmosphere is carried out	0,69	0	5,56	39,58	54,17
4	How to teach and guide lecturers towards students in learning activities	0,69	0,00	3,47	20,83	75,00

B	**The quality of the novelty of the learning process**					
1	The relevance of the media used with the novelty of the learning process	0	0	7,64	59,03	33,33
2	The relevance of examples of questions/cases/tasks used with the novelty of the learning process	0	1,39	9,72	58,33	30,56
3	The relevance of the lecturer's way of teaching with the novelty of the learning process	0	0	4,17	37,50	58,33
4	The relevance of the activities carried out with the novelty of the learning process	0	0,69	7,64	50,00	41,67
C	**The quality of the ease of the learning process**					
1	The relevance of the media used with the ease of the learning process (ease of access, ease of readability, ease of understanding)	0	0,69	11,11	53,47	34,72
2	Relevance of examples of questions/cases/tasks used with the ease of the learning process	0	0,69	13,89	55,56	29,86
3	The relevance of the lecturer's way of teaching with the ease of the learning process	0,69	0,00	4,17	33,33	61,81
4	The relevance of the activities carried out with the ease of the learning process	0	0	9,72	50,00	40,28
D	**The quality of interest in the learning process**					
1	The relevance of the media used with interest in the learning process	0,69	0	13,19	46,53	39,58
2	Relevance of examples of questions/cases/assignments used with interest in the learning process	0	0	9,72	59,72	30,56
3	The relevance of the lecturer's way of teaching with interest in the learning process	0	0	5,56	43,06	51,39
4	Relevance of activities carried out with interest in the learning process	0	0	11,81	44,44	43,75
E	**The quality of developing thinking skills in learning**					

1	The relevance of lecture activities to the development of critical thinking skills	0,69	0,69	4,86	50,00	43,75
2	The relevance of lecture activities to the development of creative thinking skills	0	0	6,49	45,83	47,22
3	The relevance of lecture activities to the development of collaborative skills	0	0	8,33	43,75	47,92
4	The relevance of lecture activities to the development of communicative abilities	0,69	0	9,03	40,97	49,31
F	**The lecturer quality during lectures**					
1	The lecturer's explanation during the lecture process	0,69	0	4,86	23,61	70,83
2	Lecturer guidance during the lecture process	1,39	0	4,86	27,08	66,67
3	Classroom management during the lecture process	0	0,69	4,86	35,42	59,03

Based on Table 3, it can be seen that the majority of students are interested in the various components in the RADEC learning that has been done. However, to facilitate and sharpen the study of student interest in learning, the data that has been obtained is then analyzed more deeply, so that it can produce a recapitulation of responses which can be seen in Table 4 below.

Table 4. The Recapitulation of Students Satisfaction in Each Learning Category

Learning Category	Rating (%)	Interpretation
The quality of learning activities	90,35	Perfectly Acceptable
The quality of the novelty of the learning process	86,53	Acceptable
The quality of the ease of the learning process	86,15	Acceptable
The quality of interest in the learning process	86,15	Acceptable
The quality of developing thinking skills in learning	87,67	Acceptable
The lecturer quality during lectures	91,62	Perfectly Acceptable
Total Average	**88,08**	**Acceptable**

Based on Table 4, it can be seen that 90.35% of students are interested in the quality of the learning activities carried out, 86.53% of students are satisfied with the novelty quality of the learning process, 86.15% of students state that the quality of ease and interest in the learning process is acceptable well, 87.67% of students were able to develop thinking skills in the learning that was carried out, and 91.62% of students were interested in the lecturer's way of teaching. Thus, this study obtained the results that the

implementation of RADEC learning in order to improve the pedagogical competence of students (prospective elementary school teachers) was well received and elicited positive responses from students.

3.2 Discussion

Pedagogic competence is a competency that uniquely characterizes and distinguishes the teaching profession from other professions. Therefore, optimizing the role of learning at the tertiary level must be able to provide a complete learning experience regarding pedagogical abilities, not just theory. Moreover, learning from a lesson is a task that can be managed in the context of other tasks and is a professional responsibility (William Cerbin & Bryan Kopp, 2006), so this means that learning carried out at the tertiary level must be able to teach students good and positive learning and make examples of learning development in their classes.

With the positive response from students regarding RADEC learning in order to increase their pedagogical competence, this indicates that the RADEC learning model can accommodate learning needs at the tertiary level which improves the quality of the process and learning achievement, especially in the aspect of increasing the pedagogical competence of prospective elementary school teacher students. This is in line with the background of the emergence of RADEC learning which was developed due to the need for alternative learning models that are able to improve the quality of processes and student learning achievements at various levels of education (Sopandi, 2017).

In addition, in the quality aspect of improving the thinking skills of prospective teacher students, most of the students realized that the RADEC learning they had done provided room for them to improve their thinking skills. Even in an open questionnaire, most students stated that they had had an impressive learning experience. This is in line with previous research that the use of the RADEC learning model can provide space for students to build thinking skills in the Indonesian context (Pratama et al., 2019).

Apart from these things, this research certainly has limitations in terms of reviewing the in-depth improvement of teacher pedagogical competence. Therefore, improving pedagogical competence must continue to be developed both while studying in higher education or post-study in the implementation of professional practice. Thus supporting the efficiency and effectiveness of increasing teacher competency is suggested further in addition to innovative learning model training can be in the form of innovative assessment, lesson study as well as classroom action and research (Sopandi, W., & Handayani, 2019).

4. CONCLUSION

The RADEC learning that has been carried out in order to increase the pedagogic competence of students (prospective elementary school teachers) has elicited several positive responses from students. With an accumulated total average of 88.08, it shows that the RADEC learning that has been carried out can be well received by students with positive responses from various learning categories including in the aspect of the quality of learning activities, the quality of the novelty of the learning process, the quality of the ease of the learning process, the quality of interest in the learning process, the quality of developing thinking skills in learning, the quality of the lecturer during lectures. This proves that a series of reflections on RADEC learning in the realm of reflection in action, reflection of action, and reflection for action must continue to be carried out in a better sustainable education. In addition, it is hoped that this student response will become a new benchmark that RADEC learning is able to improve the pedagogical competence of

students (prospective elementary school teachers), in addition to the rise of research that places more emphasis on aspects of the ability to understand learning content for teachers.

5. REFERENCES

Alawiyah, F. (2013). Peran Guru Dalam Pengembangan Kurikulum 2013. *Aspirasi*, *4*(1), 65–74. http://jurnal.dpr.go.id/index.php/aspirasi/article/view/480

Allen, I. E., & Seaman, C. A. (2007). Likert scales and data analyses. *Quality Progress*, *40*(7), 64–65.

Cohen, L., Manion, L., & Morrison, K. (2018). *Research Methods in Education* (8th ed.). Routledge.

Kartini, K. S., & Putra, I. N. T. A. (2020). Respon Siswa Terhadap Pengembangan Media Pembelajaran Interaktif Berbasis Android. *Jurnal Pendidikan Kimia Indonesia*, *4*(1), 12. https://doi.org/10.23887/jpk.v4i1.24981

Nicholls, M. E. R. (2010). Likert Scales. *The Corsini Encyclopedia of Psychology*, 1–1. https://doi.org/10.1002/9780470479216.corpsy0508

Nugraha, T., & Prabawanto, S. (2021a). The Enhancement of Students' Mathematical Conceptual Understanding Through RADEC Learning Model. *Eduma : Mathematics Education Learning and Teaching*, *10*(2), 167. https://doi.org/10.24235/eduma.v10i2.9073

Nugraha, T., & Prabawanto, S. (2021b). Exploring the Perspective of Indonesian In-service Elementary Teachers toward Pedagogical Content Knowledge (PCK) on Teaching Mathematics. *International Conference on Elementary Education*, *3*(1), 474–481.

Nur, A. A. (2014). Meningkatkan Kompetensi Pedagogik Guru di Sekolah Dasar Yayasan Mutiara Gambut. *Bahana Manajemen Pendidikan*, *2*(1), 65–831.

Pratama, Y. A., Sopandi, W., & Hidayah, Y. (2019). RADEC Learning Model (Read-Answer-Discuss-Explain And Create): The Importance of Building Critical Thinking Skills In Indonesian Context. *International Journal for Educational and Vocational Studies*, *1*(2), 109–115. https://doi.org/10.29103/ijevs.v1i2.1379

Rosdiana, L., & Sari, D. A. P. (2017). Respon Mahasiswa Terhadap Pembelajaran Model Inkuiri Dengan Menggunakan Animasi. *Jurnal Penelitian Pendidikan IPA*, *1*(1), 33. https://doi.org/10.26740/jppipa.v1n1.p33-36

Rusman. (2012). *Model-model pembelajaran: Mengembangkan profesionalisme guru* (Kedua). PT Rajagrafindo Persada.

Sopandi, W., & Handayani, H. (2019). The Impact of Workshop on Implementation of (RADEC) Learning Model on Pedagogic Competency of Elementary School Teachers. *International Conference of Innovation in Education (ICoIE)*, *178*(ICoIE 2018), 7–11.

Sopandi, W. (2017). The quality improvement of learning processes and achievements through the read-answer-discuss-explain-and create learning model implementation. *Proceeding 8th Pedagogy International Seminar 2017: Enhancement of Pedagogy in Cultural Diversity Toward Excellence in Education*, *8*(229), 132–139.

Sopandi, W. (2023). *Model Pembelajaran RADEC (Teori dan Implementasi di Sekolah)*. UPI Press.

Wilkinson, D., & Birmingham, P. (2003). *Using research instruments: A guide for researchers*. Taylor & Francis Group.

William Cerbin, & Bryan Kopp. (2006). Lesson Study as a Model for building Pedagogical Knowledge and Improving Teaching. *International Journal of Teaching and Learning in Higher Education* , *18*(3), 250–257. https://files.eric.ed.gov/fulltext/EJ1068058.pdf