



Developing and Validating a RADEC-based Student Worksheet to Prevent Bullying in Elementary School

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ABSTRACT

The phenomenon of bullying in elementary schools, recorded more than 30% of cases according to KPAI, reflects the degradation of student character and confirms the essential role of Pancasila education and the need for contextual learning media to build student character. This study aims to develop and validate Student Worksheets (LKPD) based on the Read-Answer-Discuss-Explain-Create (RADEC) model that integrates bullying prevention activities. The ADDIE development model was applied with a focus on the stages of needs analysis, design, development, and expert validation. Quantitative analysis techniques were in the form of scores and percentages, while qualitative analysis was based on validator comments. The results of validation by four experts showed an average score of 3.65 (91.3%), covering aspects of content relevance, language clarity, visual design, and potential student engagement. This RADEC-based LKPD is declared to be highly valid and suitable for use as a learning medium for bullying prevention in elementary schools.

Keywords: Validation; RADEC; Student Worksheet; Bullying; Elementary school.

ABSTRAK

Fenomena perundungan di sekolah dasar, yang tercatat lebih dari 30% kasus menurut KPAI, merefleksikan degradasi karakter siswa dan menegaskan peran esensial Pendidikan pancasila serta perlunya media pembelajaran kontekstual untuk membentuk karakter siswa. Penelitian ini bertujuan untuk mengembangkan dan memvalidasi Lembar Kerja Peserta Didik (LKPD) berbasis model Read-Answer-Discuss-Explain-Create (RADEC) yang mengintegrasikan aktivitas pencegahan perundungan. Model pengembangan ADDIE diterapkan dengan fokus pada tahap analisis

kebutuhan, desain, pengembangan, dan validasi ahli. Teknik analisis kuantitatif berupa skor dan persentase, serta analisis kualitatif berdasarkan komentar validator. Hasil validasi oleh empat ahli menunjukkan skor rata-rata 3,65 (91,3%) yang mencakup aspek relevansi konten, kejelasan bahasa, desain visual, dan potensi keterlibatan siswa. LKPD berbasis RADEC ini dinyatakan sangat valid dan layak digunakan sebagai media pembelajaran untuk pencegahan perundungan di sekolah dasar.

Kata Kunci: Validasi; RADEC; LKPD; Perundungan; Sekolah Dasar.

INTRODUCTION

Bullying remains one of the most serious issues in elementary education in Indonesia. Data from the Indonesian Child Protection Commission (2023) shows that more than 30% of cases of violence in elementary schools are related to bullying, which can be physical, verbal, or social. Bullying reflects a degradation in the attitude, character, and morals of students that is contrary to the values of Pancasila and inhibits the learning process as well as mental and character development. For this reason, Pancasila education is essential in shaping national identity by instilling the values of Pancasila and fostering national and civic awareness (Kotgirwar et al., 2025; Ye et al., 2023; Zhao et al., 2024). Primary education must integrate positive character building in addition to cognitive development, especially in the context of preventing bullying. Teachers play a strategic role as role models for students, while also strengthening professionalism through character and multicultural education (Datunsolang et al., 2021; Huda, Maftuh, et al., 2023).

In order to stimulate student activeness, create a more enjoyable academic learning atmosphere, and strengthen critical thinking skills, it is necessary to innovate learning media and learning approaches (Fatmawati et al., 2025). One potential approach to integrating character values and stimulating critical thinking skills into learning is by using systematically designed Student Worksheets. Well-designed student worksheets not only increase student engagement in the learning process but also shape attitudes and behaviors that are in line with human values (Azhari & Zulyusri, 2025; Kamilah & Suprihatiningrum, 2024; Koretsky et al., 2018; Utari et al., 2020). Previous studies have shown that student worksheets can help implement learning models and help students increase their interest and motivation to learn so that they can easily understand the material being taught, because student worksheets have several functions, including serving as practical teaching materials to help improve their understanding of the concepts being studied (Ansumarwaty et al., 2023; Buffalari, 2022; Ellianawati et al., 2024; Rahmah et al., 2024). However, most school program or student worksheet used in elementary schools still focus solely on academic aspects and have not explicitly included content on bullying prevention or character building (Gaffney et al., 2021; Rohim, 2020; Valle et al., 2016), so there is a need for an appropriate model approach to integrate them, one of which is the RADEC model.

The *Read-Answer-Discuss-Explain-Create* (RADEC) learning model proposed by (Sopandi, 2017) is a learning model that encourages students to be active in the learning process. Being active in this context means encouraging students to demonstrate creativity, innovation, and responsibility in learning activities. The RADEC learning model encourages students to take responsibility individually and as a group, interact, think critically, solve problems, communicate, collaborate, develop character, and improve conceptual understanding and creativity. As an innovative model, RADEC emphasizes critical reading, answering reflective

questions, discussing, explaining concepts, and creating learning products that have been proven effective in increasing student engagement and understanding (Kurino & Herman, 2024). Previous studies have shown that RADEC can help teachers stimulate students to be actively and cooperatively involved in constructing their knowledge across various subjects and educational levels (Alimuddin et al., 2024; Fatimah et al., 2024; Lestari & Suhandi, 2020; Ritonga et al., 2021; Rohmawatiningsih et al., 2021; Setiawan et al., 2020; Siregar et al., 2020; Sukmawati et al., 2020; Ulum et al., 2025). This study is grounded in the framework of character education through civic education and the RADEC learning model, which emphasizes active and critical learning processes.

However, so far, the application of RADEC in the design of student worksheets that focus on character education and bullying prevention has not been empirically studied, especially at the elementary school level. In accordance with the results of research by (Huda, Sapriya, & Sopandi, 2025) which states that research on the relationship between interactive learning multimedia and character education in elementary schools is still limited. Based on literature studies, there are several research gaps that underlie this study, namely:

1. The lack of student worksheets that specifically address the theme of bullying prevention in the context of character education in elementary schools.
2. There has been no research examining the validity of RADEC-based student worksheets with a focus on bullying prevention, particularly in terms of content appropriateness, language clarity, model integration, and character values.
3. Most RADEC studies still focus on improving cognitive learning outcomes, without touching on the affective and socio-emotional aspects of students.

Following up on the results of the analysis and research gaps, this study aims to (1) develop and validate RADEC-based student worksheets for bullying prevention in elementary schools, (2) integrate character values (empathy, tolerance, responsibility) into learning activities, and (3) design worksheets that accommodate both cognitive and socio-emotional aspects. Therefore, this study not only produced a validated LKPD product but also offered an integrated approach between RADEC, character education, and bullying prevention.

METHODS

Type and Design

This research is a research and development study. The development model used to develop and validate the RADEC-based student worksheet is the ADDIE (Analyze, Design, Development, Implementation, Evaluation) model, as shown in Figure 1. However, this study is limited to the analysis, design, and development stages, with a particular focus on expert validation. The implementation and evaluation stages are not included in this study and are recommended for further research in the future. The ADDIE method was chosen because it is a systematic, flexible, and proven instructional development model for producing valid, practical, and effective learning products. ADDIE allows researchers to go through the stages of needs analysis, theory-based design, prototype development, limited implementation, and continuous evaluation. With this structure, ADDIE ensures that the LKPD developed is aligned with the curriculum and contextualized to real-world issues in elementary schools, specifically

bullying. Nevertheless, this article focuses on presenting the results of the development and expert validation of the student worksheet's feasibility.

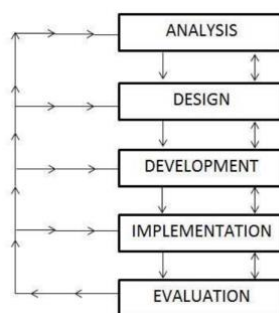


Figure 1. ADDIE Model Stage

1. Analyse stage

The aim is to obtain data and information on the development needs of RADEC-based Student Worksheets oriented towards the prevention of bullying. The analysis stage is carried out by examining the characteristics of students, teaching materials, and learning outcomes of Pancasila education subjects.

2. Design stage

The aim is to design a RADEC-based Student Worksheet development plan oriented towards bullying prevention. In this stage, the following are carried out: (1) compiling the student worksheet systematics, (2) creating instructional strategies, and (3) creating instruments to assess validity, practicality, and effectiveness.

3. Development stage

The third stage is to produce valid RADEC-based student worksheets so that tools can be obtained that can be used in the learning process. In this study, there were two trials as follows:

a. Student worksheet Validation Test

The student worksheets that have been developed are then tested for their suitability by experts who focus on the content, design, language, and relevance to learning outcomes, in order to obtain suggestions and improvements to produce suitable student worksheets. The expert validation process was conducted twice online by sending RADEC-based student worksheets to the validators, who were each given one week to provide their assessment.

b. Expert Assessment of Student Worksheet

Expert assessment was conducted to obtain feedback on the quality of the RADEC-based student worksheet product aimed at preventing bullying in elementary schools that had been developed. The experts' suggestions were used as a reference for improvements. The result of this stage was a RADEC-based student worksheet product that was ready for widespread testing.

Aspects validated by experts include (a) the suitability of the content to the learning objectives of bullying prevention, (b) the suitability of the RADEC approach to the cognitive and social development stages of elementary school students, (c) the clarity of the language and sentence structure used, (d) the effectiveness of visuals and layout

in supporting student understanding, and (e) the potential for active student engagement through activities in the worksheet.

Data and Data Sources

The research subjects consisted of four expert validators, namely a lecturer specializing in Pancasila Education at elementary schools, a lecturer specializing in the development of learning media for elementary schools, a lecturer specializing in Indonesian language at elementary schools, and an elementary school teacher. In educational product development research, the appointment of four expert validators meets the minimum standard for initial validation (Plomp & Nieveen, 2013), as this number is sufficient to obtain representative content validity and construct validity assessments, although the validity produced is limited to the experts' perspectives and does not yet reflect broader generalizations. They were selected purposively based on their competence and experience in their respective fields. The following is a table of eligibility criteria for RADEC-based student worksheet oriented towards the prevention of bullying in elementary schools, which can be seen in Table 1.

Table 1. RADEC-based Student Worksheet Eligibility Criteria

Level of achievement (%)	Category
81-100	Highly valid
61-80	Moderately valid
41-60	Less valid
≤40%	Not valid

Data collection techniques

Data was collected through expert validation sheets that were filled out independently by each validator after they read and studied the student worksheet that had been developed, as well as comments and suggestions from the validators for improving the student worksheet.

Data analysis

The data were analyzed descriptively, quantitatively, and qualitatively. Quantitative analysis was performed by calculating the average score for each aspect of validation, then converting it into a percentage to determine the feasibility category. The feasibility criteria based on the percentages are shown in Table 1. Meanwhile, qualitative analysis was performed on the comments or suggestions from the validators, which were used as the basis for revising the student worksheet.

RESULTS AND DISCUSSION

Results of Student Worksheet needs analysis

The needs analysis was conducted through field observations, interviews with fourth-grade teachers, and the distribution of questionnaires to teachers and students at Tambakrigadung 1 Public Elementary School in Lamongan Regency. This analysis aimed to determine the actual conditions of Pancasila education, the need for innovative teaching materials, and the urgency of strengthening anti-bullying values in fourth grade.

Based on the data collected, several important findings were identified as follows:

1. Lack of Contextual Learning Media

Teachers revealed that the available student worksheets are still textual in nature, lack interactivity, and do not integrate the real-life contexts of students, especially social issues such as bullying that often arise in interactions between classmates. Student worksheets do not provide space for reflective and applied exploration of Pancasila values.

2. High Demand for Values-Based and Reflective Learning

Most teachers stated the need for a learning approach that not only transfers knowledge but also instills values and attitudes. The RADEC (Read–Answer–Discuss–Explain–Create) approach is considered suitable because it guides students to read values, answer critically, discuss, explain meanings, and create real solutions – thus supporting active and contextual character learning.

3. The Persistence of Mild Bullying Behavior in Elementary Schools

Based on observations and interviews, several forms of mild bullying, such as name-calling, shunning friends, and physical pushing, are still found in school environments. Teachers find it difficult to explicitly incorporate anti-bullying education into Pancasila learning due to the limited availability of thematic and integrated teaching materials.

4. The Relevance of Grade IV Pancasila Material to the Topic of Anti-Bullying

Grade IV Pancasila education material covers important topics such as the identity of the community around where I live, respecting differences in community identity, social and cultural diversity in the surrounding area, mutual cooperation, and unity and diversity in the environment around where I live. These materials are highly relevant for internalizing anti-bullying values, especially in social problem-based learning in the students' environment.

5. Teachers' Need for Active Learning Guidelines

Teachers feel the need for teaching tools that can guide students through active, enjoyable, and collaborative learning activities. The RADEC model is considered to meet these needs as it emphasizes literacy-based learning processes, discussions, and solution creation, which can help students recognize and reject bullying behavior from an early age.

From this analysis, it can be concluded that the development of RADEC-based student worksheets that integrate Pancasila educational values with a focus on bullying prevention is greatly needed in fourth grade elementary schools. These student worksheets are expected to serve as learning media that not only support the mastery of cognitive material but also internalize noble values and strengthen students' character so that they are able to build healthy social relationships free from bullying. This aligns with research findings (Arango et al., 2024) which state that student activities designed to foster empathy, appreciate diversity, and provide focused peer support have been shown to reduce victimization according to peer reports, especially at the elementary school level, making them suitable for activity-based approaches such as role-play, empathy exercises, and group work. The implementation of Social Emotional Learning (SEL) practices in schools, which include explicit teaching of social-emotional skills, creation of a supportive learning environment, and family involvement, has been shown to improve students' social-emotional competencies, school climate, and academic achievement, while reducing negative behaviors such as conflict and bullying (Nickerson et al., 2019).

The results of the RADEC-based student worksheet design are oriented towards the prevention of bullying

This Student Worksheet Design was developed to support Pancasila Education learning in fourth grade elementary schools by integrating the RADEC (Read-Answer-Discuss-Explain-Create) approach and anti-bullying values. The design was developed based on an analysis of needs in elementary schools and the characteristics of 9-10-year-old students, who are still in the concrete operational stage according to Piaget, thus requiring contextual, visual learning media that facilitate active learning experiences. The RADEC-based student worksheet design can be seen in Figures 2 and 3.



Figure 2. RADEC Student Worksheet Display Instructions



Figure 3. Learning Achievement Display

Results of RADEC-based LKDP development

The development of Student Worksheets based on the RADEC (Read-Answer-Discuss-Explain-Create) model, which is oriented toward the prevention of bullying, was carried out in several stages, namely preliminary studies, product drafting, and validation by experts. This development process is designed to support learning in Pancasila Education for fourth-grade students, particularly on the topics of values of togetherness, tolerance, and respect for differences as a reflection of the implementation of Pancasila values. The following are the results of the development of RADEC-based student worksheet focused on preventing bullying in elementary schools, as shown in Figures 4 to 9.

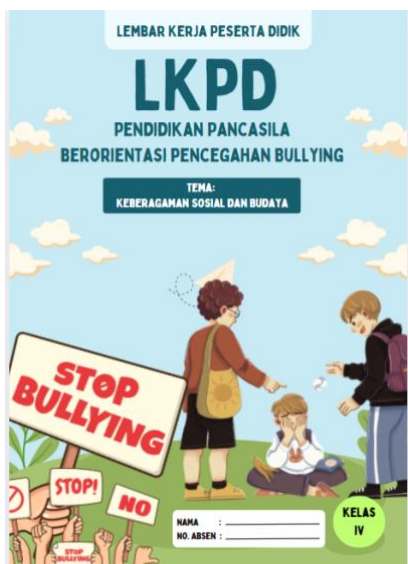


Figure 4. Front cover of student worksheet

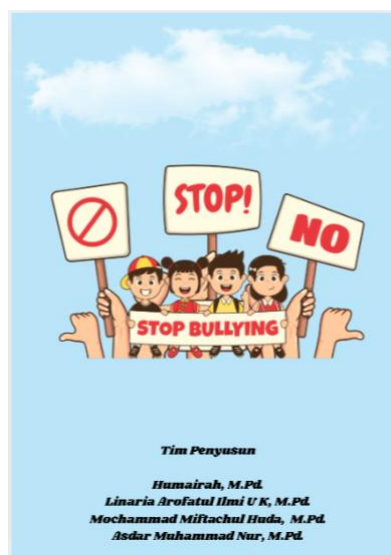


Figure 5. Back cover display of student worksheet



Figure 6. Read (R) stage, which displays contextual reading sources about bullying



Figure 7. Display of student worksheet activity instructions

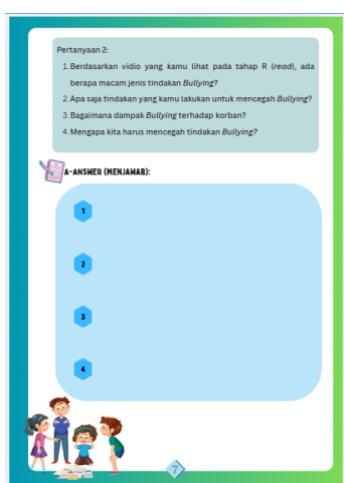


Figure 8. Answer (A) stage displaying questions to stimulate critical thinking about bullying prevention.



Figure 9. Display of group activities in RADEC student worksheets to stimulate cooperation and mutual respect

Figures 4 and 5 show the LKPD cover designed with the title “Pancasila Education Oriented Towards Bullying Prevention in Elementary Schools” accompanied by anti-bullying icons and illustrations of socio-cultural diversity as a representation of the values of unity and respect for differences. On the back cover, there is an image of children happily holding up a “Stop Bullying” poster to reinforce the moral message, accompanied by the author's name as the identity of the LKPD compiler. Figure 6 shows the Read stage, where students are given various reading materials in the form of printed texts containing links to material on socio-cultural diversity and simple articles related to the prevention of bullying. In addition, links to relevant educational videos are also provided so that students can enrich their understanding through visual media. The presentation of these texts and videos aims to provide initial stimulus, practice literacy skills, and foster students' awareness of the importance of respecting differences and rejecting all forms of bullying.

Figures 7-9 show the Answer and Create stages, where students answer questions related to the reading and video content to measure their initial understanding. The Discuss stage shows students discussing in small groups about their experiences of diversity at school and in the community, while also formulating steps to prevent bullying. The results of the discussion are then presented in the Explain stage, where students explain tolerance and efforts to stop bullying. The culmination is in the Create stage, where students come up with creative problem-solving ideas in the form of a problem-solving report on the theme of Stop Bullying, which conveys a message of togetherness in socio-cultural diversity.

Results of expert validity testing

In order to ensure the quality, suitability, and validity of the RADEC (Read, Answer, Discuss, Explain, and Create) approach-based Student Worksheet for the prevention of bullying in elementary schools, researchers have conducted expert validity testing. This test was carried out as an integral part of the learning tool development process, which aims to create educational media that is not only informative but also character-building. The developed Students' Worksheet is designed to raise students' awareness of the dangers of bullying, foster social empathy, and internalize the values of diversity and Pancasila through an active and reflective learning process. Expert validity is a crucial step in assessing the appropriateness of content, pedagogical approaches, and the alignment of the instrument with the needs of elementary school students. The student worksheets and assessment guidelines provided to the validators cover several aspects, namely: (1) the suitability of the content to the learning objectives of bullying prevention; (2) the suitability of the RADEC approach to the cognitive and social development stages of elementary school students; (3) the clarity of the language and sentence structure used; (4) the effectiveness of visuals and layout in supporting student understanding; and (5) the potential for active student engagement through activities in the worksheets. Table 2 below shows the results of expert validation.

Table 2. Expert validation results

No.	Assessment Aspect	Average	Percentage	Category
1	Alignment of content with bullying prevention learning objectives	3,75	93,8%	Highly Valid
2	The suitability of the RADEC approach with the cognitive and social development stages of students	3,5	87,5%	Highly Valid
3	Clarity of language and sentence structure	3,75	93,8%	Highly Valid

4	Visuals and layout to support student understanding	3,5	87,5%	Highly valid
5	The potential for active student involvement through activities in LKPD	3,75	93,8%	Highly Valid
		3,65	91,3%	Highly Valid

- A. Learning material content: Relevance to bullying prevention objectives, alignment with the curriculum, and integration of character values such as empathy, courage, and inclusivity. Highlighting the strength of the student worksheet in mapping bullying issues to real-life situations faced by children, such as verbal intimidation, social isolation, and peer pressure. Validators assess that this student worksheet can serve as a preventive tool bridging the gap between theory and practice in character education. All activities are designed to include social and emotional competency indicators aligned with the developmental stage of elementary school children. From a content perspective, experts gave it an excellent rating with 93,8% alignment. This aligns with (Bowes et al., 2024; Fathoni et al., 2024)'s assertion that primary education should not only focus on cognitive aspects but also instill positive character values from an early age, particularly in the context of bullying prevention. In addition, materials related to the culture around where students live can also be added. Knowledge and experience can be easily acquired and understood by students through learning activities that integrate various things that are close to students (Huda, Sapriya, Sopandi, et al., 2025; Olovsson, 2021). This is in line with research on local wisdom in lamongan. The character contained in the local wisdom of rewang of the Jotosanur village community of lamongan district is the character of gotong royong as the main character and supporting characters, namely the character of harmony, caring, and togetherness (Huda, Supriatna, et al., 2023). This is in line with the statement (Bowes et al., 2024; Fathoni et al., 2024; Hutchings et al., 2025) that basic education should not only focus on cognitive aspects but also instill positive character values from an early age, especially in the context of bullying prevention. In addition, materials related to the culture around where students live can also be added. This is because knowledge and experience can be easily acquired and understood by students through learning activities that integrate various things that are close to students (Huda, Sapriya, Sopandi, et al., 2025; Khasanah, Ningrum, et al., 2023). In line with research on local wisdom in Lamongan, the character contained in the local wisdom of rewang of the Jotosanur village community of Lamongan district is the character of gotong royong as the main character and supporting characters, namely the characters of harmony, care, and togetherness (Huda, Supriatna, et al., 2023).
- B. Media design and visualization: Layout, color, illustration, and learning activity flow suitability. The validator assessed that the student worksheet design was attractive, not excessive, and accommodated children's visual learning needs. The infographic elements and colors used created a positive atmosphere that supported the formation of perceptions about bullying prevention. They also appreciate the integration of emotional expression icons in the Create phase, which is considered capable of conveying messages subliminally. The score given is 87,5%. This result actualizes (Handayani et al., 2019; Pratama et al., 2019)'s research on the syntax of the RADEC learning model, which is the result of reflecting on the needs and characteristics of

students and the curriculum implemented in Indonesia, making it relevant for implementation.

- C. Language: Language appropriateness, readability, sentence structure, and ease of understanding by elementary school students. The validator suggested that some terms, such as “social bullying,” be simplified to “excluding friends” to make them easier for lower-grade students to understand. However, overall, the language used was considered communicative and educational. The activity instructions were written clearly and in a child-friendly manner. The language validity score is in the range of 93,8%. These readability results align with (Handayani et al., 2019; Setiawan et al., 2020)'s research, which found that students can master concepts more quickly because their reading interest is stimulated through the Read syntax in the RADEC model, allowing them to focus more on understanding the taught material. Some researchers have also found that RADEC helps students become active, independent, and self-reliant in mastering 21st-century skills through literacy.

Based on the scores and comments from the four experts, the student worksheet obtained an average validity score of over 85% in each aspect assessed. This indicates that, overall, the RADEC-based student worksheet for bullying prevention is deemed feasible and valid for use in elementary school learning. The experts recommend that the student worksheet be piloted more widely in several schools with different social backgrounds to obtain practical feedback from teachers and students. With an average of 3.65 and a percentage of 91.3%, it shows that this RADEC-based student worksheet is very feasible, so it can be concluded that the RADEC-based student worksheet for preventing bullying in elementary schools can be widely applied in elementary schools, with the potential to become a systematic and reflective character learning medium.

This study is limited to the expert validation stage, so the effectiveness of RADEC-based LKPD in classroom practice cannot yet be generalized. Further research needs to involve field trials, integration of local wisdom values, and assessment of the long-term impact on students' character and social skills. Thus, this LKPD has the potential to support the Child-Friendly School program and strengthen character education for the prevention of bullying in elementary schools.

CONCLUSION

This study produced RADEC-based student worksheet (LKPD) focused on preventing bullying in elementary schools, which has high validity, especially in Pancasila Education lessons for fourth-grade students. Needs analysis shows that teachers and students still lack contextual learning media that integrate character values with real social issues, including bullying. The RADEC-based LKPD design, tailored to the cognitive development stage of 9-10-year-old students, has the potential to stimulate students to be active, reflective, and collaborative in learning that is relevant to their daily lives. The validation results from four experts showed a high level of feasibility (average of 91.3%), in terms of content suitability, language clarity, visual effectiveness, and potential student engagement. This LKPD is considered to have the potential to bridge the theory and practice of character education by instilling the values of empathy, tolerance, courage, and togetherness. Therefore, RADEC-based LKPD can function not only as teaching material but also as a contextual learning

medium to prevent bullying behavior and build character. This study adds to the literature on the application of RADEC in the context of character education and bullying prevention in elementary schools. However, this research is still limited to the expert validation stage, so field testing is needed to evaluate its effectiveness in a broader classroom environment. In the future, the development of LKPD can be integrated with local wisdom and child-friendly school programs to strengthen its impact in building students' character in the long term.

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