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Improving student outcomes IPAS using Learning Together assisted Smart Apps Creator grade IV SDN 27 Anak Air Padang

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ABSTRACT

This study aims to improve students' learning outcomes in IPAS (Integrated Science, Mathematics, and Social Studies) learning by using the Learning Together model assisted by Smart Apps Creator (SAC). The background of this study is the low learning outcomes, student activity, and engagement triggered by an ineffective learning process, resulting in suboptimal learning outcomes in Grade 4 at SDN 27 Anak Air, Padang City. The research method used was Classroom Action Research (CAR) with a qualitative and quantitative approach. The implementation of this study consisted of two cycles comprising the planning, implementation, observation, and reflection stages. The subjects of this study were the teacher and fourth-grade students of SDN 27 Anak Air, comprising 27 students 10 boys and 16 girls. Data collection techniques included observation, interviews, documentation, and assessment of learning outcomes. The results of the study showed an increase from an average of 68 to 75,83 in Cycle I and a further increase in Cycle II to 87,53. In line with this, the learning process also improved in terms of both the teacher and the students. Thus, it can be concluded that the application of the Learning Together Model assisted by Smart Apps Creator (SAC) can encourage students to be more active and participate in learning, which has an impact on improving learning outcomes.

Informasi Artikel

Kata Kunci:

Hasil belajar; IPAS;Kooperatif; Learning Together; Smart Apps Creator.

ABSTRAK

Penelitian ini bertujuan untuk meningkatkan hasil belajara peserta didik pada pembelajaran IPAS menggunaka model Learning Together berbantuan Smart Apps Creator (SAC). Latar belakang penelitian ini adalah rendahnya hasil belajar, keaktifan dan keterlibatan peserta didik yang dipicu oleh proses pembelajaran yang kurang efektif sehingga hasil belajar yang diperoleh kurang optimal di kelas IV SDN 27 Anak Air Kota Padang. Metode penelitian yang digunakan Penelitian Tindakan Kelas (PTK) dengan pendekatan kualitatif dan kuantitatif. Pelaksanaan penelitian ini terdiri dari dua siklus yang terdiri dari tahap perencanaan, pelaksanaan, pengamatan dan refleksi. Subjek dalam penelitian ini adalah guru dan peserta didik kelas IV SD Negeri 27 Anak Air dengan jumlah peserta didik 27 orang, yang terdiri dari 10 orang laki- laki dan 16 orang Perempuan. Teknik pengumpulan data diperoleh melalui observasi, wawancara, dokumentasi dan evaluasi hasil belajar. Hasil penelitian yang dilakukan menunjukkan peningkatan dari rata-rata 68 menjadi 75,83 pada siklus I dan meningkat pada siklus II menjadi 87,53. Sejalan dengan proses pembelajaran juga mengalami peningkatan baik dari aspek guru maupun aspek peserta didik. Dengan demikian, dapat disimpulkan bahwa penerapan Model Learning Together berbantuan Smart Apps Creator (SAC) dapat mendorong peserta didik menjadi lebih aktif dan berpartisipasi dalam pembelajaran yang berpengaruh pada peningkatan hasil belajar.

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1. Introduction

Education is a systematically designed process to develop an individual's potential through learning activities. Through education, individuals are able to enhance their ability to adapt to various changes and environmental conditions around them. Education is a crucial element in national development because it plays a strategic role in shaping character, instilling values, and developing the potential of future generations [1]. Education as a system demonstrates that the integration of various components within the educational system including the curriculum, educators, students, facilities and infrastructure, and the learning environment plays a vital role in achieving quality education. In practice, the national education system continues to undergo improvements, one of which is through curriculum development.

The government has updated the curriculum by implementing the Merdeka Curriculum with a *Deep Learning* approach, which is crucial as it helps students develop various skills, such as critical thinking, creative thinking, and the ability to communicate and collaborate with others [2]. This approach emphasizes more meaningful, in-depth, and student-centered learning. In this learning process, students do not merely memorize information but are able to comprehensively understand concepts, relate them to real-life contexts, and apply them in various situations.

In the Merdeka curriculum, there is the Natural and Social Sciences (IPAS) subject, which combines science (IPA) and social studies (IPS) learning. Natural and Social Sciences (IPAS) is an integrated program aimed at enhancing students' ability to think logically and critically. This is done to help students learn more holistically in understanding their environment [3]. Ideally, IPAS learning should take place interactively, with students actively asking questions, discussing, and expressing their opinions. Through IPAS learning, students can develop their potential through meaningful learning experiences [4]. The integration IPAS learning is capable of advancing education that is more comprehensive, multidisciplinary, and contextual. Therefore, teachers must be able to create an atmosphere healthy and creative learning takes place during the learning process, students are not merely objects but can also express themselves as subjects within the learning process [5].

Based on the KKTP success standards has been established as a benchmark in the learning process indicates that student learning outcomes in IPAS learning remain relatively low. This is based on a preliminary study conducted in Grade 4 of SDN 27 Anak Air in Padang City on January 14–15, 2026, through interviews, document analysis, and direct observation of the IPAS learning process.

Findings from the field indicate that IPAS learning often faces challenges. In terms of lesson planning, the formulation of learning objectives is overly simplistic, with teachers focusing solely on the affective domain without developing the cognitive and psychomotor domains. Ideally, learning objectives should be as specific as possible, encompassing the affective, cognitive, and psychomotor domains to prevent students from struggling to analyze problems. The learning model used lacks clear steps and has not been explained in detail. From the perspective of learning activities, the approach remains *teacher-centered,* with students passively receiving information from the teacher; consequently, students perceive IPAS learning as difficult and boring, which impacts suboptimal learning outcomes. From the perspective of learning activities, the approach remains *teacher-centered*, with students passively receiving information from the teacher. Consequently, students perceive IPAS learning as difficult and boring, which results in suboptimal learning outcomes. From the students' perspective, a lack of motivation in participating in learning means the process does not proceed actively. Additionally, students have not yet grasped the meaning of group learning; consequently, learning still exhibit individualism, making it difficult for them to express their opinions or arguments. This is exacerbated by the fact that the concepts presented in IPAS learning are abstract and not presented in an engaging manner; digital technology has not been utilized, resulting in many students facing difficulties in understanding IPAS material [6].

This situation impacts students' learning outcomes, particularly in IPAS lessons. This is evident from the data on students' learning outcomes in the summative exam scores for the odd semester of the 2025/2026 academic year.

Table 1 Results of the first-semester summative exam for Grade 4 at SDN 27 Anak Air, Padang City, in IPAS instruction

No	Name Student	KKTP	SAS Score	Remarks	
				Completed	Not Completed
1	Adl	75	87	P	
2	Axl	75	71		P

3	Akn	75	84	P	
4	Al	75	93	P	
5	Aql	75	65		P
6	Aqn	75	75	P	
7	Ark	75	84	P	
8	Ar	75	81	P	
9	Dvr	75	81	P	
10	Dnd	75	59		P
11	Glg	75	47		P
12	Itn	75	48		P
13	Adv	75	17		P
14	Ltf	75	82	P	
15	Fhr	75	56		P
16	Nm	75	61		P
17	Rf	75	82	P	
18	Rhs	75	93	P	
19	Rzk	75	53		P
20	Skl	75	59		P
21	Stn	75	46		P
22	Sra	75	77	P	
23	Trd	75	73		P
24	Vl	75	74		P
25	Zdn	75	67		P
26	Ans	75	70		P

Based on the table above, out of 26 students, only 11 students (38%) achieved the school's set minimum competency standard (KKTP) of 75, while 15 (62%) students scored below the KKTP, with a class average of
68. The data above indicates that the majority of students have not yet been able to achieve the expected competencies, whether in cognitive, affective, or psychomotor aspects. Therefore, it is necessary to make several improvements and modifications to the instructional design, from planning through to the implementation of instruction. Consequently, a learning model is needed that can enhance student activity, collaboration, and understanding of IPAS instruction.

One approach to address this issue is to implement a more innovative and creative learning model that transforms conventional learning into a more engaging and interactive model, such as the Cooperative *Learning Together* model. In line with the views of [7], the advantages of the cooperative learning model include students being more engaged in collaboration, more confident during presentations, and better understanding concepts through the principle of learning together. Additionally, learning is enhanced by using instructional media that support the delivery of material in a way that captures students' interest and motivation to achieve learning objectives [8]. *Smart Apps Creator* (SAC) is the latest digital interactive media that creates multimedia content that can be installed on laptops and does not require programming code.

Advantages of Smart Apps Creator According to [9], The advantage of SAC is that it does not require expertise programming, can be used on various platforms, can include animations, is more interactive, and supports saving various formats and web connectivity.

Integration of Learning Together with Smart Apps Creator creates complementary learning. The Learning Together learning model emphasizes cooperation, activeness, and social interaction in learning that are closely related to improving student learning outcomes. The implementation of the Learning Together model can significantly influence student learning outcomes because it can increase student participation and activeness in the learning process [10]. However, the effectiveness of Learning Together is influenced by the availability of learning media that can support group activities. Therefore, Smart Apps Creator (SAC) is used as an interactive learning media that supports the implementation of each stage of the Learning Together model. Smart Apps Creator (SAC) is an application development tool, which has the ability to combine text, images, and videos into interactive and attractive multimedia packages. Smart Apps Creator-based media has a high level of validity and is suitable for use in elementary school learning because it is able to integrate material interactively and help students understand concepts [11]. Therefore, the learning together model is closely related to the smart apps creator (SAC) as a tool in the learning process where Learning Together functions as a pedagogical strategy that encourages students to interact, work together, and create their own knowledge. Meanwhile, Smart Apps Creator is a media that supports the presentation of interactive materials, concept exploration, and learning assessment. By combining the two, the science learning process becomes more active, collaborative, contextual, and meaningful

This study focuses on integrating the Learning Together cooperative learning approach with Smart Apps Creator (SAC) media in IPAS class IV at Dasar School. In contrast to previous research, which often examines the two innovations in question in a comprehensive manner, this study examines smart apps. Creator as a form of media that supports every sin**taks** Learning Together makes the learning process more collaborative, interactive, and engaging for students. This study also provides empirical

evidence regarding the implementation of this integration in the context of the Tindakan Kelas study on the implementation of the Merdeka curriculum in Dasar schools**.**

Through Classroom Action Research (PTK) applies the Learning Together model supported by Smart Apps Creator was evaluated suitable for implementation in IPAS learning so that can improve the learning outcomes of fourth-grade students SDN 27 Anak Air, Padang City class of 26 students. The data above illustrates The data above illustrates that most students are not yet able to achieve the expected competencies, both in terms of cognitive, affective, and psychomotor aspects. Therefore, it is necessary to make some improvements and modifications to the learning design, from planning to instructional implementation. Therefore, a model is neede d learning model capable of enhancing activity, work and students' understanding of the learning IPAS.

2. Research Method

The type of research used is Classroom Action Research (CAR). Classroom Action Research is a reflective study that involves making improvements in the learning process aimed at addressing issues that arise in the classroom during instruction [12]. This study employs both qualitative and quantitative approaches. The qualitative approach focuses on the qualitative aspects of values and meanings described through words, involving the researcher directly in the research process [13], while the quantitative approach is a systematic method focused on quantifying variables and analyzing numerical data in the research. The research procedures used consist of planning, acting, observing, and reflection. In its implementation, the researcher applied the *Learning Together* cooperative model assisted by SAC to increase student engagement, motivation, and learning outcomes.

The research was conducted in the second semester (January–June 2026) of the 2025/2026 academic year in Grade 4 at SD Negeri 27 Anak Air in Padang City. The subjects of this study were the fourth-grade students of SD Negeri 27 Anak Air, totaling 26 students, comprising 10 boys and 16 girls. The techniques used to collect valid data included both test-based and non-test-based methods. Qualitative data were obtained through observation, interviews, and documentation, while quantitative data were obtained through evaluations in the form of completed by students at the end of each learning cycle to assess improvements in student learning outcomes. The formula for calculating student learning outcomes is as follow :

$$\text{Nilai peserta didik} = \frac{\textbf{Skor perolehan}}{\textbf{Skor maksimal}} \boldsymbol{x\ 100}$$

Table 2 Criteria for the level of success in achieving learning outcomes

Grade Conversion Scale (0–100)	Predicate	Classification
91–100	A	Excellent
81–90	B	Good
71–80	C	Fair
≤ 70	D	Poor

3. Result and Discussion

This study was conducted in the fourth-grade class at SDN 27 Anak Air, Padang City, during an IPAS lesson on "Varieties of Landforms" in the second semester of the 2025/2026 academic year. In the implementation, the researcher, as a practitioner, conducted the lesson, while the fourth-grade teacher served as an observer. The IPAS lesson was conducted using the *Learning Together* cooperative learning model, supported by SAC, in every learning process. The steps of the "*Learning Together*" cooperative learning model, according to [14], are: 1) Communicating objectives, 2) Presenting information, 3) Organizing students into cooperative groups, 4) Guiding groups to work and learn, 5) Supervising students during group discussions, 6) Presentation, 7) Evaluation, and 8) Providing recognition.

This study was conducted over two cycles. Cycle I consisted of 2 sessions, and Cycle II consisted of 1 session. Session 1 of Cycle I was held on Wednesday, April 22, 2026, with the topic “Understanding the Variety of Landforms in the Surrounding Environment.” Subsequently, the researcher conducted Cycle I, Session 2, on Tuesday, May 5, 2026, with the topic “Understanding the Natural Resources Produced in the Surrounding Environment.” Next, Cycle II, Session 1, was held on Tuesday, May 12, 2026, with the topic “The Relationship Between Landforms and Community Professions.”

The researcher prepared lesson plans before conducting the learning process, such as developing an In-Depth Lesson Plan (PPM), Student Worksheets (LKPD), and designing assessment instruments covering cognitive, affective, and psychomotor domains. Additionally, the researcher prepared observation sheets for the implementation of IPAS learning using the Learning Together Model with the assistance of Smart Apps Creator. The observation sheets include PPM assessments, teacher and student

activity assessment sheets, and observation sheets for student attitudes and skills observed during the learning process.

The initial learning outcomes of students in IPAS instruction prior to the implementation of the Classroom Action Research (PTK) indicated that learning achievements were still relatively low. Based on data from the first semester summative exam for the 2025/2026 academic year in the subject IPAS in grade at 4 SDN 27 Anak Air, Padang City, it was observased that the average score achieved by Student was only 68, while the school's minimum passing score (KKTP) was set at 75. After implementing the learning process in Cycle I, Session 1, students achieved an average score of 72,19, which then increased to an average of 79,47 in Cycle I, Session 2. Furthermore, in Cycle II, the students' average score also increased to 87,53. This demonstrates that the implementation of IPAS learning using the Learning Together model, supported by Smart Apps Creator, is capable of improving students' learning outcomes not only in the cognitive domain but also in the affective and psychomotor domains.

3.1. Cycle I

During the implementation of Cycle I, Session 1, several observations were conducted, ranging from observations of the In-Depth Lesson Planning (PPM), teacher and student activities, as well as assessments of learning outcomes (affective, cognitive, and psychomotor). The results of the In-Depth Lesson Planning (PPM) observations were not yet optimal because there were still several shortcomings that were not fully addressed in the lesson planning. Based on the PPM observation results, a score of 26 out of a maximum of 32 was obtained, representing 81% and a qualification of "Satisfactory". Furthermore, the results of observations of teacher and student activities during learning using the "Learning Together" model assisted by Smart Apps Creator were not yet fully implemented. During core activities, students were not actively engaged in learning and group discussions. The observation of teacher activities yielded a score of 30 out of a maximum of 40, representing 75% and a "Satisfactory" rating. In the observation of student activities, a score of 30 out of a maximum of 40 was obtained, with a percentage of 75%, qualifying as "Satisfactory". From the observation of student learning outcomes in the attitude aspect, the average score reached 71,88, falling into the "Satisfactory"category. In the knowledge aspect, students achieved an average score of 75,94 falling into the "Satisfactory"category, and in the skills aspect, an average score of 68,75 falling into the "Needs Guidance" category. The overall average learning outcome score achieved by students was 72,19 falling into the "Satisfactory" category. This indicates that the learning process has not yet met the set targets.

Based on Cycle I, Session 2, the PPM observation results reached 88% with a score of 28 out of 32, is in the Good. This indicates an improvement from the previous session, which was more systematic, and learning began to align with the steps used. The learning process also showed improvement, as seen in the observation of teacher activities and student activities. Teacher activities received a score of 35 out of a maximum of 40, with a percentage of 88%, categorized as "Good". Student activities also received a score of 35 out of 40, with a percentage of 88%, categorized as "Good". The improvement is evident in the students' active participation, cooperation, and willingness to express their opinions during the learning process. This process will support students in improving their learning outcomes compared to the previous session. The assessment of learning outcomes in the attitude aspect showed an average score of 78,85 categorized as satisfactory. In the knowledge aspect, the average score was 80, categorized as good, and in the skills aspect the average score was 79,57, categorized as satisfactory. The overall average score achieved by the students was 79,47, falling into the Good category. Based on the observations from Cycle I, Session 2 showed an improvement compared to the previous session. However, the learning outcomes in Cycle I have not yet reached optimal results, and further improvements are needed to enhance learning outcomes in Cycle II.

3.2. Cycle II

In Cycle II, the results of the In-Depth Learning Planning (PPM) observation improved significantly compared to the previous session, reaching a percentage of 94%, with 30 out of 32 scores falling into the Very Good (SB) category. Additionally, for teacher activities, a score of 37 out of 40 was achieved, representing a 93% rate in the "Very Good"category. Similarly, for student activities, a score of 37 out of 40 was achieved, with a 93% rate in the "Very Good" category. This indicates that students were able to increase their engagement in learning, participate and collaborate in group work, and express their opinions with confidence. This improvement was also supported by teachers who were able to implement the steps of the Learning Together model effectively and systematically, aided by the digital learning tool Smart Apps Creator (SAC). Smart Apps Creator (SAC) is capable of presenting learning materials in an engaging and interactive manner,

thereby encouraging students to understand the learning materials well. In this Cycle II, student learning outcomes also improved significantly. In terms of attitude, students achieved an average score of 86,54, categorized as "Good", while in terms of knowledge, they achieved an average score 90, also categorized as "Very Good". In the skills aspect, students achieved an average score of 86,06, categorized as good. The overall average score achieved by students in Cycle II reached 87,53. Based on these observation results, it is evident that the implementation of the Learning Together model assisted by Smart Apps Creator is effective in improving student learning outcomes in IPAS instruction in Grade 4 at SDN 27 Anak Air, Padang City.

Table 3 Observation Results for Cycle I and Cycle II

Aspect	Cycle I				Cycle II
	P 1	P 2	Total	Average	Score
	Score	Score			
PPM	81	88	169	84,5	94
Teacher Aktivity	75	88	163	81,5	93
Student Activity	75	88	163	81,5	93
Attitude Assessment	71,88	78,85	150,73	75,37	86,54
Knowledge Assessment	75,94	80	155,94	77,97	90
Skill Assessment	68,75	79,57	148,32	74,16	86,06
Learning Outcomes	72,19	79,47	151,66	75,83	87,53

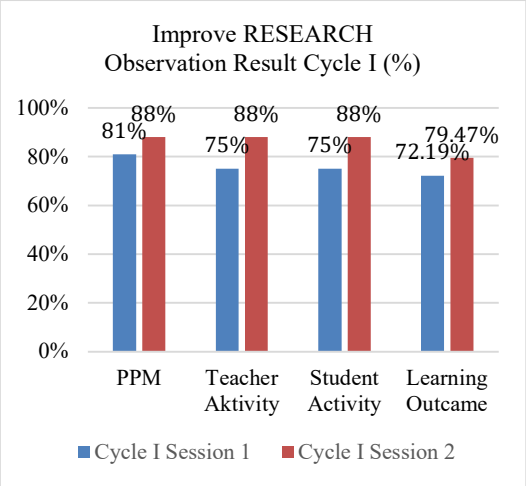
The learning conducted by the researcher in Cycle I and Cycle II regarding the learning process and student learning outcomes improved consistently across all assessed aspects, ranging from In-Depth Learning Planning, Implementation of Learning, and student learning outcomes. Based on the data obtained, it is evident that the implementation of the Learning Together model assisted by Smart Apps Creator (SAC) in IPAS learning has a positive impact on the quality of learning, which can improve student learning outcomes.

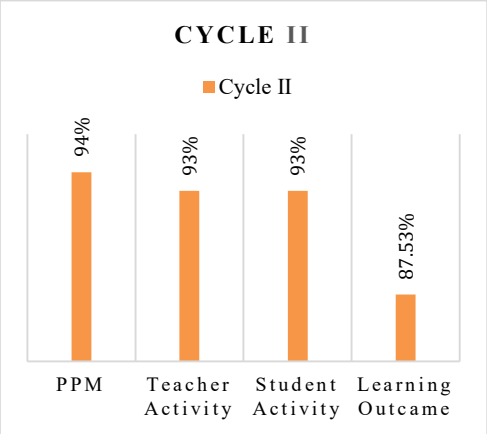
In the PPM aspect, Cycle I showed an improvement from an average of 84,5% (Good Category) to 94% in Cycle II (Very Good Category). This improvement demonstrates that the In-Depth Learning Planning was designed to be more focused, systematic, and aligned with the steps of the Learning Together model. Furthermore, in the implementation of learning, there was an improvement in teacher activities, with an average of 81,5% (Good Category) in Cycle I increasing to 93% (Very Good Category) in Cycle II. This improvement indicates that teachers successfully applied the Learning Together model in the learning process, particularly in group learning. Regarding student activities, the average score in Cycle I was 81,5%, increasing to 93%, which proves that the learning process proceeded as intended in accordance with the ideal of IPAS-specific learning. Students became more active, participated more, collaborated, and were more willing to express their opinions, thereby creating a learning experience that was neither boring nor meaningless, as students were actively engaged in the learning process.

In terms of learning outcomes, there was also a significant improvement from Cycle I, with an average of 75,83 (Satisfactory Category) to 87,53 (Good Category) in Cycle II. This average score was achieved not only in the knowledge aspect but also in the attitude and skill aspects. This improvement focused not only on learning outcomes but also on the learning process itself, which shifted from being monotonous and teacher-centered to becoming more interactive and meaningful. This demonstrates that the implementation of the "Learning Together" model has resuited in continuous improvement.

Therefore, it can be concluded that the implementation of the Learning Together model has an impact on improving the quality of learning—from planning, implementation, to the assessment of learning outcomes—in the IPAS curriculum for fourth-grade students at SDN 27 Anak Air in Padang City. The learning outcomes from Cycle II indicate that the learning process has met the established success indicators.

The following graph illustrates the improvement in student learning outcomes using the Learning Together model supported by Smart Apps Creator (SAC) in Grade 4 at SDN 27 Anak Air, Padang City, as follows:





The data above indicates that the implementation of the Learning Together Model assisted by Smart Apps Creator (SAC) is highly effective and significantly impacts students' learning outcomes. Through group learning and discussions, students are provided a platform to exchange ideas, express their opinions confidently, and collaborate effectively to develop critical thinking and teamwork skills.

Theoretically, this study employs constructivist theory, emphasizing active learning that builds meaningful understanding of knowledge for students. The use of visual digital media also supports the understanding of lesson material by connecting students' knowledge and experiences, thereby making learning more meaningful.

Practically, this study offers significant benefits significant benefits to teachers by enabling them to use more innovative learning models, such as "Learning Together," with the assistance of the Smart Apps Creator (SAC) platform, thereby transforming the quality of instruction and learning outcomes. Schools can implement this model as it aligns with the requirements of the "Merdeka" curriculum's deep learning approach which emphasizes meaningful, conscious, and enjoyable learning.

Comprehensively, the implementation of the Learning Together model has proven to consistently improve the quality and learning outcomes from Cycle I to Cycle II, as evidenced by observations of lesson plans, implementation, and learning outcome assessments. This consistent and sustained improvement has a positive impact on both the learning process and outcomes. Therefore, this model can serve as an innovative approach with effective strategies to support a higher-quality learning process.

4. Conclusion

Based on the results of the Classroom Action Research (PTK) conducted, it can be concluded that the Learning Together model supported by SAC is capable of improving student learning outcomes in the IPAS curriculum for fourth-grade students at SDN 27 Anak Air, Padang City. A systematically structured learning model effectively increases student engagement in learning, which influences the extent to which students achieve optimal learning outcomes. This is evidenced by the learning design implemented—from developing the Lesson Plan (PPM), conducting instruction, to assessing learning outcomes—which showed continuous improvement across each cycle. Regarding the lesson plans (PPM), the average score increased from 84,5% in Cycle I to 94% in Cycle II. This improvement indicates that the systematically designed learning plan effectively guided the learning process to become more meaningful through the steps of the Learning Together model, aligned with the students' characteristics.

In terms of instructional implementation, teacher activities showed a sustained increase from an average of 81,5% in Cycle I to 93% in Cycle II. Similarly, student activities increased from an average of 81,5% in Cycle I to 93% in Cycle II. This indicates an improvement in the learning process. By using this model, teachers and students were able to create a more interactive environment and engage students in the learning process. In terms of learning outcomes, students achieved an average score of 75,83 in Cycle I, which increased to 87,53 in Cycle II. This improvement occurred in the domains of knowledge, attitude, and skills. In the knowledge domain, students were able to understand the lesson material well regarding the IPAS concept; in the

attitude and skills domains, the model also trained and improved students' critical thinking, collaboration, and communication skills, as well as their confidence in presenting arguments. This illustrates that the improvement occurred not only in the knowledge aspect but also in the attitude and skill aspects.

Therefore, it can be concluded that the implementation of the Learning Together model assisted by Smart Apps Creator (SAC) in IPAS learning at SDN 27 Anak Air in Padang City can improve the outcomes and quality of the innovative learning process through effective strategies that support a higher-quality learning process.

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