

Improving Students' Grammar Competence through Discovery Learning for Islamic Education Program

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Abstract

This research aims to improve students' grammar competence by using Discovery Learning for student of Islamic education program at STIT Ibnu Rusyd Tanah Grogot. Discovery learning is one of learning model of student-centered learning approach. The research method is classroom action research (CAR). This research applied two cycles. From the pre-test, the mean score got 60.45. The first cycle, the mean score got 70.5 and second cycle got 80.1. It showed the significant improvement from pre-test and post-test. This method is an endeavor that goes beyond merely addressing issues, simultaneously seeking scientific evidence to underpin problem-solving. This outcome demonstrated the positive impact of discovery learning on enhancing the grammar proficiency of students in the Islamic education program. Discovery learning enhances students' foundational knowledge of grammar, fosters their motivation to learn grammar, sparks their grammar curiosity, nurtures their grammar creativity, facilitates the acquisition of both factual information and an in-depth understanding of grammar analysis, and boosts students' self-confidence to use grammar perfectly. The authors recommend to search more and more about discovery learning for the learning and teaching English grammar. Further studies are still needed to complete the conclusions in this research. The development of teaching materials in adapting this teaching model is very necessary to add to the repertoire in developing grammar teaching materials.

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INTRODUCTION

The term "Grammar" can act as a sensitive topic in discussions related to society and education. When introduced in conversations, both in the past and in the present, it often leads to the perception that grammar instruction for young people nowadays is different from how it was traditionally taught (Hodgson & Harris, 2021). Grammar, nowadays can be taught through several paths (Munuyandi et al., 2021). Based on Syafrizal et al., (2021) grammar can be taught

through direct instruction, where rules are explicitly presented to students, through indirect teaching, where rules are not explicitly highlighted but are grasped implicitly through exposure to various stimuli and diverse forms of engagement, employing a deductive method, where rules are initially explained to students, utilizing an inductive approach, where students discern patterns independently by analyzing numerous examples, independently, by teaching grammar rules in isolation, in a unified manner, by integrating grammar instruction with other learning activities.

The preceding examination of the existing literature reveals that lectures in practice have a variety of choices when it comes to instructing grammar in their classrooms. Nonetheless, within the context of ESL/EFL education, both students and lectures encounter numerous challenges related to grammar instruction ([Al-Mekhlafi & Nagaratnam, 2011](#)). EFL students are students who study English every day for the purpose of career prospects in continuing higher studies ([Darmiyani, 2023](#)). The teachers use theoretically endorsed techniques without always considering the potential challenges faced by both themselves and their students ([Isnaini, 2014](#)). They might not be aware of significant difficulties that could impede students' grasp of English grammar and may not option for an instructional approach that minimizes hurdles for their learners.

Especially for Islamic student, they assumed English language in one of the hardest materials in study activity. From [Djamdjuri et al., \(2021\)](#) for Islamic student, English is more foreign than Arabic language. They have more material in Arabic language than English in their curriculum. The hardest component in English language is grammar. Cited by [Syafryadin et al., \(2022\)](#) the difficulties of student are realized by the lectures. Basic concepts of grammar are how to differentiate noun, verb, adverb, and adjective and how to arrange them in to the proper sentences. Based on the observation, researcher found several significant problems. First, students have difficulty to contras between countable and uncountable noun. Besides, they have problem to converge singular and plural noun. Second, students often got misunderstanding of verb. For example, they tend to put the wrong verb form in sentence organization, particularly when they used tenses in speaking and writing. Third, they were difficult to recognize the adverb consists of manner, time and place. These difficulties were caused because they could not change correctly adverb from noun and verb. The fourth matter was adjective. Learners may encounter challenges when using prepositions because such words are not typically employed in their native language.

Grammar is material that is directly related to cognitive processes. To learn grammar, you must have a good memory, complete attention, language skills, decision making and problem solving ([Souisa & Yanuarius, 2020](#)). Grammar is a study of concepts and principles. Discovery learning has a learning model process that prioritizes cognitive processes and the mental process of assimilating concepts and principles in the mind ([Rahman, 2017](#)). So, this conclusion means that discovery learning is an appropriate model for learning grammar. Based on the previous description, this study would discuss about how discovery learning improves students' grammar competence. From the results of observation, student-centered learning has potential influence for students to get better learning outcome of grammar. One of model from student-centered learning is discovery learning. Researcher see research gaps based on the problems expressed. Grammar requires a learning model that can understand concepts and

principles. So, discovery learning can be applied to improve students' understanding of grammar. Based on field observations and identification, students lose understanding of concepts and principles in understanding grammar.

Grammar is how human arranges natural language and their logic in to sentences (Hinzen & Wiltschko, 2023). Grammar becomes major section in language to manage the sentences gathering the meaningful utterance. Grammar plays important roles in every language that we learn. According to Hong et al., (2020), grammar engages the cognitive and psychomotor of student in language. Grammar can be taught in many ways, for example, teaching grammar through game. Game entails the creation of system and activities that maintain learner engagement while they interact with the system or partake activities. Grammar also has different mindset from the student based on the gender (Zarrinabadi et al., 2021). It was also giving the different overview to the teacher how they built the teaching approach, method, media and material to develop grammar for them.

Teaching grammar could apply with many approaches. One of the best approaches for student is student centered learning approach. From Morel, (2021), integrating student-centered learning into course design is a crucial element that enhances student involvement and their active participation in their own education. Nevertheless, achieving student success involves more than just adopting a student-centered approach. Supported by Gu (2021), student centered learning includes a variety of cognitive and metacognitive abilities, each of which impacts the learning process in diverse ways. In the process of guiding students in their transition from teacher centered to student centered, educators assume a vital role. This responsibility entails educators innovating their pedagogical methods with the aim of enhancing student metacognitive abilities. Based on Tholibon et al., (2022), student-centered learning (SCL) is a widely employed teaching approach in contemporary education, promoting active involvement and classroom engagement, particularly in the context of theoretical material subjects. SCL engage critical thinking and discovery interesting significant learning material. Based on the (Benlahcene et al., 2020) the fundamental principle of the student-centered learning approach is to stimulate student engagement and active participation, ultimately bolstering their independent thinking, knowledge, and skills. Consequently, this approach contributes to the enhancement of critical thinking.

In this study, researcher applies discovery learning to teach grammar for students of Islamic Education Program. From Nusantara et al., (2021), it comes to implementing discovery learning, teachers are not the primary providers of information. Instead, students acquire information from various accessible sources. Some students, for instance, favor learning from experts, which may include their teachers. Added by Alimuddin et al., (2021), discovery learning is an educational approach that actively engages students in the teaching and learning process, enabling them to employ their cognitive abilities to uncover and grasp concepts or theories under study. Furthermore, this method fosters the development of collaborative skills among students, encouraging them to work together, exchange information, and incorporate the ideas of others into their learning. According to Hasanah (2023), this model promotes students to actively engage in critical and logical cognitive processes, encouraging them to independently explore and uncover meanings, concepts, principles, and relationships in a systematic manner.

Based on [Yerimadesi et al., \(2023\)](#), there are several steps to apply this model. First, at this point, the lecturer sets up an environment conducive to active and independent student learning, with the use of stimulus questions, examples, images, references, or explanations to guide students in problem-solving. This stimulation is also designed to cultivate students' curiosity and interest. Second, following the provided stimulation, students are afforded the chance to express their thoughts, viewpoints, or hypotheses pertaining to the subject of the discussion. Third, students employ a range of approaches based on their individual learning styles and capabilities to delve deep and gather as much pertinent information as they can. The aim of this data gathering is to search for corroborating evidence to ascertain the accuracy of the hypotheses they present. Fourth, based on the findings gathered from data collection, students proceed to conduct analysis and interpret the data in the context of the subject. Fifth, students communicate their discoveries and exchange them with one another, inviting responses that may take the shape of critique, recommendations, or perhaps queries. Sixth, the evidence presented by students serves as the foundation for forming generalizations. Both lecturers and students collaboratively draw conclusions, agreed upon within each group, using the presented results. Seventh, during the concluding phase of the learning process, both the lecturer and students engage in self-reflection, assessing all the processes undertaken and the knowledge and skills acquired. The lecturer may also offer reinforcement and corrections as needed, along with follow-up recommendations stemming from the conducted processes.

Beside model of teaching, media and materials would need to teach grammar for Islamic students. Teaching media play a crucial role in the instruction and acquisition of English. Employing suitable teaching media when teaching a new language enables educators to establish a more conducive learning environment in their classrooms ([Kosanke, 2019](#)). Lecturer must understand what the media could be applied effectively for Islamic student to teach grammar properly. Multimedia would be the best choice in this generation. Multimedia typically involves the recording and playback, display, or access of information content through devices that process data, including electronic and computerized devices. It can also be integrated into live presentations. Multimedia devices refer to electronic media tools used for storing and enjoying multimedia content ([Ritakumari, 2019](#)). However, media in teaching grammar must be followed by authentic material in learning process. According to [Nurjanah et al., \(2023\)](#), choosing the right educational resources holds significant importance in facilitating English language learning for Islamic students, particularly within the context of Islamic education. Teaching English in Islamic education is closely tied to contextual education, which necessitates the use of materials that closely mirror real-world scenarios, enabling learners to engage effectively with the subject matter.

METHOD

The research design employed in this study is Classroom Action Research (CAR). Action research is a systematic investigation carried out by educators, including teachers, principals, school counselors, and other involved parties within the teaching/learning environment ([Davison et al., 2022](#)). Its purpose is to collect data about the functioning of their specific schools, their teaching methods, and the effectiveness of student learning ([Johannesson, 2022](#)). In essence, CAR is oriented toward resolving issues in the teaching and learning process to enhance educational practices.

This research was held from 5th March 2023 to 17 April 2023. It was placed at STIT Ibnu Rusyd Tanah Grogot and involved 20 students of Islamic Education Program at second semester. The data was gathered from test (pre-test and post-test), observation and documentation. Then the data test would be analyzed based on the indicator of task. The class percentage has minimum criteria 75 (standard of passing score) for each indicator to pass by student.

The mean of students used the formula

$M_x = \sum X / N$	M_x : Mean X : Individual score N : Number of students
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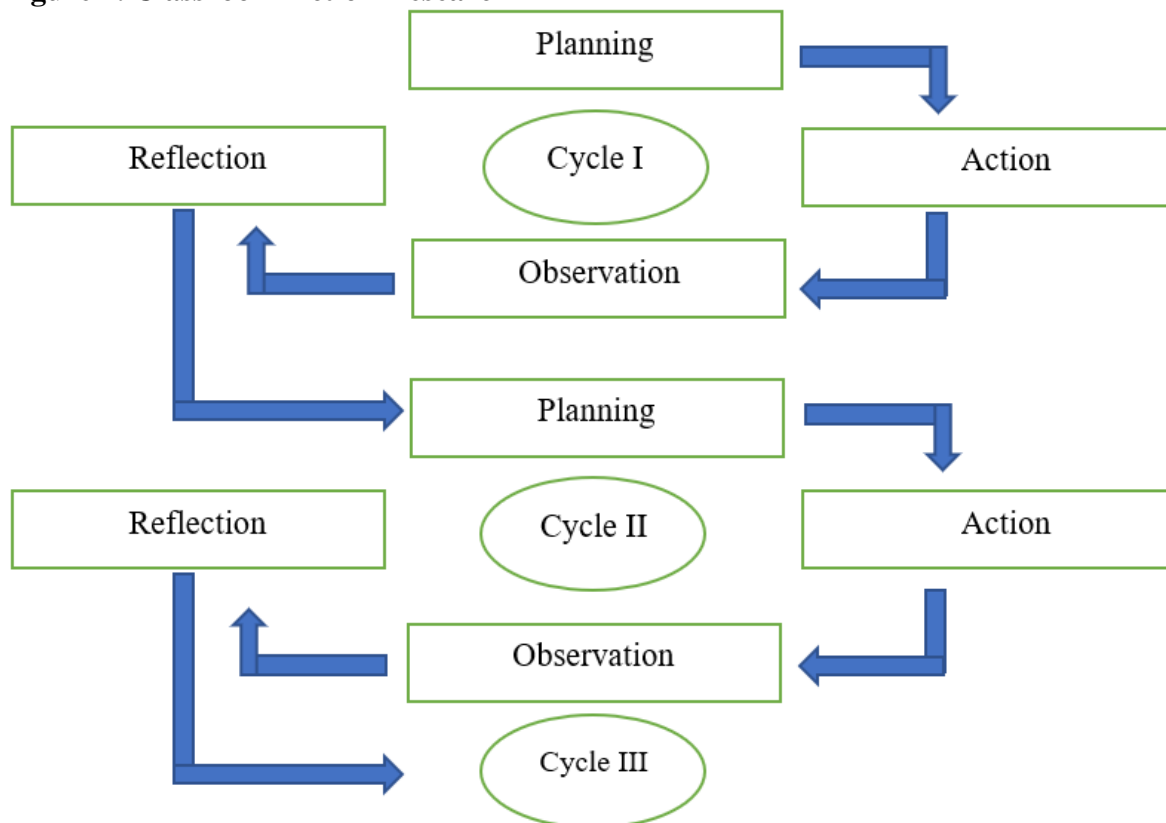
The class percentage, the researcher used the formula

$P = F / N * 100\%$	P : Percentage of Students' Improvement F : Total percentage score N : Number of student
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The students' score of grammar in cycle 1 and cycle 2

$P = (y - y_1) / y * 100\%$	P : Percentage of Students' Improvement y : Pre-test result y_1 : Post-test 1
$P = (y_2 - y) / y * 100\%$	P : Percentage of Students' Improvement y : Pre-test result y_2 : Post-test 2

Figure 1. Classroom Action Research



Classroom Action Research is a research approach that centers on addressing issues that emerge within the classroom and enhancing the teaching and learning process through a cyclical process encompassing stages of planning, action, observation, and reflection (Saija & Pappalardo, 2022). Furthermore, action research is characterized by its cyclic nature, involving iterative phases of planning, acting, observing, and reflecting. It is common for a project to undergo multiple cycles as part of this iterative process (Sáez Bondía & Cortés Gracia, 2022)

FINDINGS AND DISCUSSIONS

Prior to implementing Cycle 1, the researcher performed an initial observation. This initial observation aimed to gain insights into the classroom environment and how students were engaging with the lesson. Additionally, the researcher carried out a pre-assessment to assess the students' cognitive abilities in grammar

Table 1. Grammar Competence

Indicators
Use the subject and verb correctly in one clause and multiple clause
Use present participle correctly
Use past participle correctly
Use appositives correctly
Use connectors correctly
Invert subject and verb with question words
Invert subject and verb with negatives

This table is an indicator in assessing improvement in grammar skills. Students work on test questions based on the indicators given. The student would test about their ability to analyze subject and verb in one clause and multiple clauses, then they were tested to use the tenses. In this case, they had test about present and past participle. They also got task about appositive in sentences to analyze the correct sentences from the task. Next, they were tested how invert subject and verb with question words and negative sentences.

Table 2. Pretest Grammar Score

N	Score	N	Score
1	81	11	64
2	73	12	72
3	45	13	56
4	72	14	47
5	65	15	54
6	54	16	46
7	44	17	45
8	67	18	67
9	79	19	55
10	57	20	66
Mean score		60.45	

The mean score of students' pretests is 60.45. It is about 10% students who passed the test. Based on the table of indicators, student had low grammar competence. Standard target from the institution is 75 for foreign language competence standard. Then, researcher would apply discovery learning to improve their grammar competence. Researcher also combined with modern media (video or slide) and authentic materials.

First Cycle

The planning phase serves as the initial step to set the stage for preparing and establishing commitments and subsequent actions. The compiled plan encompasses the intended actions to be executed. This involves creating a lesson plan aligned with the Discovery Learning. Additionally, it involves provisioning tools, materials, and educational resources, including learning media, to be utilized during the instructional activities. To assess student learning outcomes, the researchers prepare instructional worksheets and post-learning assessment questions. Lastly, there is coordination with the observing teacher to ensure observations occur as per the predefined schedule.

At the initial meeting, the researcher begun by offering greetings and leading a prayer. Following the prayer, the researcher established a conducive learning environment and prepares the students to commence the learning process. First meeting, researcher gave the student the stimulation. The stimulation is from the video about simple sentence and how the perfect sentence arranged grammatically. Researcher showed how to analyze subject and verb with one clause and multiple clauses. Second, researcher gave time to student to analyze the sentence and underline subject and verb in sentence. Students were be able to speak up how sentence arranged grammatically based on their conclusion. Third, researcher gave the student worksheet to analyze subject and verb based on the authentic material of TOEFL test. Student analyzed correct or incorrect answer based on the sentences on worksheet. Fourth, students worked the material before to answer the worksheet paper. Fifth, students presented their answer from the question. Students told their reason about the chosen answer. Sixth, students processed their understanding about the material. They generalized their understanding from their right answer and critical thinking of the reason they told.

Second meeting, the researcher begun by offering greetings and leading a prayer. Following the prayer, the researcher established a conducive learning environment and prepares the students to commence the learning process. At this meeting, researcher showed the explanation video of present and past participle. Next, student discussed with their group how to identify the different and concept of present and past participle. They gathered the data and made the hypothesis from the analysis. After that, student searched from the internet the concept of present and past participle to add their understanding of hypothesis. Then, student presented what they got from their analysis. Last, student generalized their understanding and reflect their concept and understanding about the present and past participle. In third and fourth meeting, student discuss about appositive, connectors, negative sentence and interrogative sentence. Student did as same as the first and the second meeting. Student accepted stimulation from the researcher. Researcher gave them video about the materials such as speech or conversation. Student made group and started to identify the material from the worksheet given by researcher. They gathered the concept data of materials from the internet. They analyzed and interpreted the data connected with the materials. They proved their findings. Then, they generalized and reflected their understanding and concept then they made recommendation for the next step. Last meeting researcher gave them post-test.

Table 3. Post-test Grammar Score from Cycle 1

N	Score	N	Score
1	93	11	71
2	83	12	82

3	64	13	67
4	77	14	62
5	69	15	64
6	64	16	61
7	68	17	59
8	72	18	72
9	85	19	61
10	63	20	73
Mean score			70.5

The mean score of student test in cycle one is 70.5. It is about 25% student who passed the test. The improvement of student from the post-test in cycle 1 and pretest is 16.62%. It still needs improvement to reach 75 for the standard of significant. Based on the post-test of cycle one, it is evident that student learning outcomes have not met the benchmark for research success and continue to be categorized as subpar. The percentage of results achieved falls short of the research success threshold.

Second Cycle

The planning phase serves as the initial step for preparation and commitment, setting the course for forthcoming actions and their associated outcomes. This planning involves the development of a lesson plan tailored to the discovery learning model, as well as the provision of necessary tools and materials, including instructional media, for use during the learning process. Additionally, it encompasses the creation of research worksheets for assessing student learning outcomes, preparation of learning worksheets, and the formulation of post-learning assessment questions. The final aspect of planning involves coordination with an observing teacher, ensuring that observations align with the established schedule.

At the first meeting, the researcher began with greetings and a prayer. After the prayer, the researcher set up a conducive learning environment and prepared the students to start their learning journey. During the first meeting, the researcher provided students with a stimulating slide of the materials on constructing grammatically correct sentences, demonstrating how to analyze subjects and verbs in both single and multiple-clause sentences. In the second part, students were given time to practice sentence analysis by underlining subjects and verbs in provided sentences. They also had the opportunity to discuss how sentences are structured grammatically based on their observations. In the third phase, the researcher distributed worksheets to the students, containing authentic material from TOEFL tests, for further analysis of subjects and verbs. Students were required to determine whether the sentences on the worksheet were correct or incorrect. Subsequently, in the fourth step, students worked on the material before answering the worksheet questions. The fifth stage involved students presenting their answers and explaining the reasons behind their choices. Finally, in the sixth step, students processed their comprehension of the material, drawing conclusions from their correct answers and engaging in critical thinking regarding the reasons they provided.

At the second meeting, the researcher-initiated proceedings with greetings and a prayer. Following the prayer, the researcher ensured an optimal learning environment and prepared the students for the learning session. During this meeting, the researcher presented an explanatory video on present and past participles. Subsequently, students engaged in group discussions to explore the distinctions and concepts related to present and past participles. They collected data

and formulated hypotheses based on their analysis. Students also conducted online research to supplement their understanding of these concepts. Afterwards, they shared their findings from the analysis and concluded the session by summarizing their insights and reflecting on their comprehension of present and past participles. In the third and fourth meetings, students delved into topics such as appositives, connectors, negative sentences, and interrogative sentences. The format remained consistent with previous meetings: students received stimulation from the researcher, watched videos related to the materials (e.g. Video and slide), and then worked in groups to identify key points from worksheets provided by the researcher. They gathered data on the concepts related to the materials from online sources, analyzed and interpreted this data in connection with the materials, and substantiated their findings. Ultimately, they generalized their understanding, engaged in reflection, and proposed recommendations for future steps. In the last meeting, the researcher administered a post-test to assess student learning.

Table 4. Post-test Grammar Score from Cycle 2

N	Score	N	Score
1	97	11	77
2	91	12	88
3	76	13	76
4	81	14	75
5	77	15	80
6	81	16	81
7	79	17	79
8	85	18	80
9	89	19	75
10	76	20	79
Mean score		90.1	

The mean score of cycle 2 post-test is 80.1. Based on the score, there is significant increase and it is more than 75 from the standard of significant. The improvement of students from the post-test in cycle 2 and pre-test is 34.16% and the significant result from the passing standard is 100%. According to the grammar scores of the students in table 3, it is evident that all students have met the minimum completeness standard. The results from the second cycle indicate an improvement compared to the first cycle, demonstrating that students now have a more profound grasp of the subject matter than they did initially. The percentage data also confirms that the number of students meeting the completeness criteria aligns with the indicator for research.

The implementation of the discovery learning model in educational activities has demonstrated the anticipated enhancement in student learning results, as indicated by the research success benchmark, specifically the attainment of the required minimum completeness standard by a certain percentage of students. Furthermore, it is observed that student engagement in learning activities has risen and has also met the criteria for research success. This outcome demonstrated the positive impact of discovery learning on enhancing the grammar proficiency of students in the Islamic program. Discovery learning enhances students' foundational knowledge, fosters their motivation to learn, sparks their curiosity, nurtures their creativity, facilitates the acquisition of both factual information and an in-depth understanding of grammar analysis, and boosts students' self-confidence. Based on [Hasanah](#)

(2023), discovery learning instructional approach can serve as an educational innovation for post-Covid-19 teaching. The findings from the literature review indicate that following the Covid-19 pandemic in Indonesia, the application of the Discovery Learning model as a teaching and learning strategy proved to be notably effective in enhancing students' educational achievements, as observed in the literature. Yerimadesi et al., (2023) assessed how e-modules utilizing guided discovery learning techniques impact the enhancement of higher-order thinking skills among senior high school students. The outcomes reveal a noteworthy disparity in the higher-order thinking skills of students between the experimental and control classes. A majority of students successfully completed the e-module worksheets, which were designed in accordance with higher-order thinking skill criteria. The incorporation of multiple representations within the e-modules facilitated students' comprehension of chemistry concepts.

CONCLUSION

Discovery learning model could solve the problem of grammar competence of Islamic student program in STIT Ibnu Rusyd Tanah Grogot. It is showed from the significant result from the pre-test and post-test from the cycle 1 and cycle 2. This research applied two cycles. From the pre-test, the mean score got 60.45. The first cycle, the mean score got 70.5 and second cycle got 80.1. It showed the significant improvement from pre-test and post-test. The discovery learning model comprises a sequence of educational activities that prioritize the development of critical thinking and analytical skills, enabling students to independently arrive at solutions for the questions posed. At its core, discovery learning aims to provide students with lessons that equip them to address real-world challenges they may encounter.

This study complements the findings of prior research and is centered on addressing grammar learning challenges among students in the context of Islamic education. It introduces novelty insights within the realm of discovery learning. Discovery learning is an educational model in which students actively explore and investigate subject matter under the guidance of a teacher. This model initially provides students with a well-organized experience, enabling them to uncover the definitions, concepts, and underlying structures related to the subject. It empowers students to independently gather information, identify, and resolve problems on their own. In this learning model, students construct their own knowledge by conducting experiments aimed at uncovering fundamental principles. This research is still not perfect in revealing the effectiveness of discovery learning more perfectly. Further studies are still needed to complete the conclusions in this research. The development of teaching materials in adapting this teaching model is very necessary to add to the repertoire in developing grammar teaching materials.

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