



Lesson Study-based Microteaching Design in Early Reading Instructional for Prospective Elementary School Teachers

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Abstract

This study aimed to develop a lesson study-based micro-teaching design for prospective elementary school teachers in early reading instruction. This study utilized an instructional development method from *Dick* and *Carey*, comprising seven stages of research procedure. Data were collected through questionnaires, field notes, and documentation, and analyzed using descriptive quantitative and qualitative methods. In this study, a product successfully developed a lesson study-based micro-teaching design presented in video tutorials for teaching early reading in elementary school. The result shows that development of this micro-teaching design was successfully implemented and served as a guide for early reading instruction in the Indonesian Language Learning in elementary school course. Micro-teaching was developed as tutorial stages for early reading instruction, based on a process approach encompassing pre-reading phase, reading phase, and post-reading phase, combined with a lesson study approach for collaborative and reflective teaching practices.

Keywords: micro-teaching, lesson study, early reading, elementary school

INTRODUCTION

Reading is the primary language skill whose acquisition is not innate but achieved through instruction. Generally commencing from an early age, especially in elementary schools, teaching reading aims to develop students' skills in pronunciation and understanding of a reading text (Ardhian et al., 2020). However, the reality is that many elementary school students in Indonesia encounter difficulties in early reading. This observation is supported by previous studies indicating that a majority of students struggle with fluency in reading (Nuraniyah et al., 2022; Tahmidaten & Krismanto, 2020; Widyaningrum & Hasanudin, 2019). The lack of fluency suggests an incomplete mastery of reading mechanics so that students experience difficulties in the decoding process, namely in the phonics system and translating words. This deficiency will certainly have an impact on the meaning process which is difficult for students to achieve in capturing information in the text. In this process, teaching reading is still at the early reading stage which can have a continuing impact on students' reading abilities in the next class.

Early reading is intended to establish the mechanical foundation of students' reading skills. The goal is to master the writing system as a visual representation of language at the level of learning-to-read (Ahokas et al., 2024; van den Bosch et al., 2019). These early reading skills significantly influence subsequent reading skills, which focus on information acquisition

(Amendum & Liebfreund, 2019; Amorim et al., 2022). Various teaching methods are available, including the spelling method, syllable method, and Structural Synthetic Analytics (SAS) method, each having its own technical or linguistic teaching pattern. Students' initial reading in elementary schools is focused on teaching correct reading attitudes, reading fluency, and adding new vocabulary. From this initial teaching of reading, students' reading skills are then developed in reading comprehension, critical and creative reading. For this reason, in teaching early reading there are special methods such as the spelling method, syllable method, and SAS method, each having its own technical or linguistic teaching pattern (Amorim et al., 2022; Nordström et al., 2019). Given the persistent issue of students struggling with fluency, teachers and prospective teachers face the challenge of ensuring readiness and competence in early reading.

Mastery of this initial reading teaching method should be a basic pedagogical skill for elementary school teachers. Reading is a basic skill that students must master to support academic activities and is believed to be the main learning method. Reading must be completely mastered by students in elementary school because at the next level, junior high school, learning outcomes have led to the introduction of more specific scientific fields (Hinostrroza et al., 2024). Teachers and prospective teachers must be able to use appropriate methods and media in teaching early reading. Supported by the results of previous studies, teacher intervention greatly influences students' success in reading (Besser-Biron et al., 2024; Ruotsalainen et al., 2022, 2022). In fact, other research also states that students with family backgrounds who are aware of teaching reading from an early age have better literacy levels. Regarding initial reading, a preliminary study was carried out to explore the reading teaching carried out by prospective elementary school teacher students.

The results in the Odd Semester 2022/2023 among prospective elementary school teacher students at Universitas Negeri Malang, enrolled in the Indonesian language learning in elementary school course, indicate that teaching early reading is learned through learning simulation activities. However, during the simulation, students encountered difficulties in practicing the correct method. For instance, when students have not memorized the alphabet, using the SAS method with compound sentences is inappropriate; instead, teaching should initially focus on training students to recognize all the letters of the alphabet (Rini & Cahyanto, 2020). Referring to this condition, teaching early reading using the SAS method or other methods requires more independent practice so that students can determine the appropriate method to use in the situation (Windrawati et al., 2020). For example, to teach the spelling of sentences with the consonant ending "ng" and "ny" or choosing a method for teaching students to start reading using word cards or complete discourse. Referring to the results of the needs analysis, it can be concluded that teaching materials that provide guidance in teaching various methods of early reading are needed.

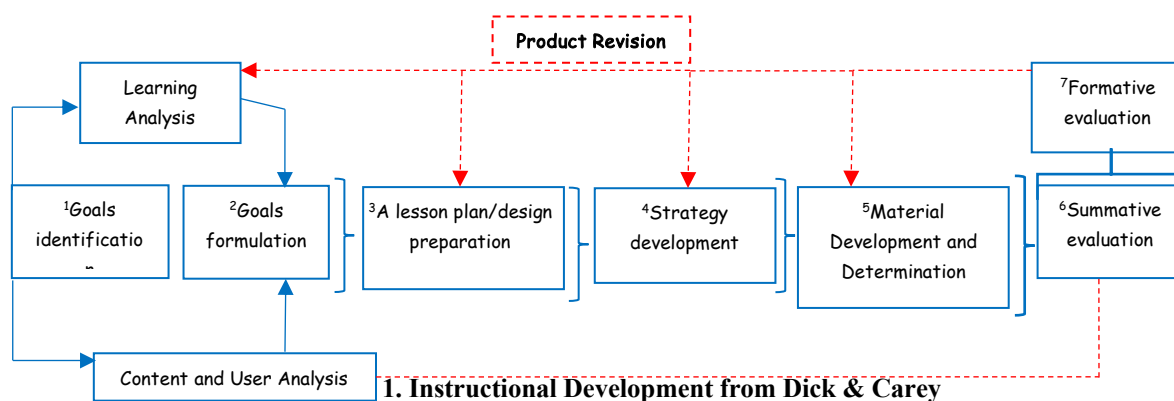
These materials should encourage students to practice various methods (Rini & Nur Irwina, 2022). Based on these conditions and needs, a study was conducted to explore the best formulation of teaching materials for teaching early reading. Consequently, this study developed a lesson study-based early reading micro-teaching instructional design aimed at innovating teaching specifically for prospective teachers in elementary schools. Micro-teaching is widely applied in teacher education, especially in teaching practice or simulations, by incorporating various basic teaching skills (Alias & Razak, 2024; Díaz Redondo et al., 2021). In this study, micro-teaching was combined with a lesson study, a method extensively used in teacher professional development. This approach involves implementing and evaluating learning practices through

collaborative and reflective activities, applying the principles of collegiality, mutual learning, and community learning (Handayani, 2022; Jiménez Sierra et al., 2023; Slingerland et al., 2021). This combination aims to make the practice of teaching early reading more effective and efficient. This study hopes to provide guidance for students in teaching early reading, offering a contextual picture of the implementation of each teaching method during lectures (Chyl et al., 2023; Díaz Redondo et al., 2021).

METHOD

This study utilized an instructional development method from Dick and Carey, comprising seven stages. This model was selected based on the integrity of its stages and the incremental improvement process that can be undertaken in stages, as illustrated in Figure 1. The following provides a description of the research procedures:

- The first stage involves identifying learning objectives by analyzing course outcomes in the Indonesian Language Learning in elementary school course, specifically focusing on the reading skills subtopic within the elementary school teacher education study program.
- In the second stage, general and specific objectives are formulated for developing micro-teaching instructional as teaching material for students, particularly in teaching reading with an emphasis on early reading in elementary schools.
- The third stage involves developing products in alignment with the objectives and results of the needs analysis, specifically addressing the selection of an instructional design based on the characteristics of students as users and the practical nature of the Indonesian Language Learning in elementary school courses.
- The fourth stage involves formulating the learning strategy to be implemented, namely lesson study in micro-teaching instructional design, adapting to the process approach used for teaching early reading.
- The fifth stage focuses on designing materials for implementing micro-teaching instructional, presented in the form of video teaching early reading. Prior to implementation for user trial, this product undergoes validation by experts.
- The sixth stage involves conducting a summative evaluation by implementing the product in the Indonesian Language Learning in elementary school course, conducting user trials and providing an assessment of the product's suitability.
- The seventh stage involves conducting a formative evaluation of the overall results of the research implementation, assessing the achievement of learning objectives and the quality of the developed product. At this stage, a thorough product revision is undertaken until the final product is produced in this research.



Data collection in this study employed several techniques, including a questionnaire, field note, and documentation. The questionnaire was utilized for needs analysis, validity testing with experts, and product trial with users. Assessment indicators encompassed aspects of content, targets, language, presentation, and practicality. Subsequently, data collection continued with field note sheets during the implementation of a lesson study-based micro-teaching instructional video product in the trial. These sheets were supplemented with documentation of the research process and results. The data results were processed using quantitative and qualitative descriptive techniques. Quantitative descriptive analysis was employed to process assessment data derived from expert validation and user trial, using percentage formulas and product feasibility interpretation criteria in Formula 1 and Table 1.

$$P=f/N \times 100\% \text{ (Formula 1)}$$

Table 1. Product Eligibility Qualifications

Scale	Percentage	Qualification
5	91-100	Very feasible, no revisions
4	81-90	Feasible, without revision
3	71-80	Sufficient, minor revisions
2	61-70	Poor, major revision
1	<61	Not feasible, major revision

RESULT AND DISCUSSION

Referring to the background, the development of this product was based on needs related to instructional guidance in teaching early reading for student teachers. Additionally, a user analysis was conducted to adjust product development to the reading learning outcomes in elementary schools and course learning outcomes in the Indonesian Language Learning in elementary school course. Adapting further to the Learning Management System (LMS)-based learning used by student teachers, the developed product is presented in electronic form as lesson study materials, namely video and e-book, to facilitate easier access for them (student teachers). The primary focus of this study is on early reading learning in elementary schools, particularly in Phase A for grades 1 and 2 of elementary school, according to the Independent Curriculum. Phase A serves as the foundation for developing reading skills in subsequent phases and is combined with viewing skills in elementary school.

Phase A (Grades 1 and 2: “Students can act as readers and viewers who express interest in the text they read or view. They can read familiar words fluently on a daily basis. They can comprehend information from the texts they read or the shows they watch related to themselves and the environment, imaginative narratives, and children's poetry. They can also interpret new vocabulary from the texts they read or the shows they watch, aided by illustrations.”

In Phase A, the intended early reading is described in terms of indicators such as reading attitude, reading fluency, and information acquisition. Building upon Phase A, students' reading skills are then developed for advanced reading, including reading comprehension in Phase B and Phase C. Based on the study of this material, the objective used in product development is formulated as follows: "student teachers can simulate early reading learning through a micro-teaching instructional design video by paying attention to students' reading attitudes, fluency, and information acquisition." From this objective, the learning scenario outlined in Table 2 was developed.

Table 2. Scenarios for Teaching Early Reading in Elementary School

Main Material	Learning Experience			Learning Resources
	Offline	Online		
		Syn	Asyn	
6.1 Concept of reading learning in elementary schools	1. Exploration of the concept of reading learning in elementary schools	Discussion of group simulation results for early reading in elementary schools	1. Collecting video of group simulation results	Micro-teaching instructional design video of early reading
6.2 Design and practice of reading learning in elementary schools	2. Examine the content of reading learning in elementary schools		2. Design analysis assignments and advanced reading practice in elementary schools	
	3. Classification of types of reading learning in elementary schools based on the results of content analysis			
	4. Analysis of reading learning design in elementary schools			
	5. Simulation of early reading learning using various methods			
Evaluation				
Process: Student activities in exploration, analysis, and simulation				
Results: Early reading simulation video				
Attitude: Cooperation, thoroughness, discipline				

In this study, the focus is on the development of a teaching material for early reading in elementary schools. Early reading serves as the foundational skill for the advancement of students' skills in advanced reading (Amendum & Liebfreund, 2019; Wagner & Lonigan, 2023). Early reading emphasizes the mechanical aspects, such as pronunciation, arrangement, and interpretation of letters into words, words into sentences, and the formation of complex discourse or text (Stutchbury et al., 2020; van den Bosch et al., 2019). In elementary schools, early reading learning occurs in phase A of the Independent Curriculum, aiming for students to become proficient readers. Proficient readers, in this context, encompass reading attitudes, including sitting position and reading fluency, whether with or without spelling. This has an impact on teaching which teachers need to pay attention to not only focus on the results of reading but also

the process because it will form reading habits in the future (Huseynova, 2023; Vansteelandt et al., 2020). Reading habits have a big impact on developing interest in reading in the next grade, supported by the results of previous research which shows a positive correlation between reading habits and interest in reading. Students with good reading habits and interest will tend to have strong literacy skills.

Based on the prepared scenario design, we developed an early reading micro-teaching instructional design using a lesson study approach. This design was then presented in the form of a video. The purpose of presenting this instructional content in the form of video is to offer explanations and illustrations that guide the implementation of micro-teaching for early reading instruction, particularly emphasizing the use of specific methods. The detailed instructional design is outlined and the appearance of the product is illustrated in Figure 2, which includes a link to the video.

- **Stages: Plan**

At this stage, instructional design for early reading learning is undertaken by preparing a lesson plan. During this stage, students can collaborate and engage in discussions to decide on the instructional design for early reading learning. They have the option to form small or large study groups to determine learning designs by exchanging information and experiences.

Micro-teaching Activity Design

- (a) Formulating learning outcomes into learning objectives and their flow
- (b) Determining learning materials
- (c) Determining methods, models, and media
- (d) Designing learning scenarios
- (e) Preparing teaching materials
- (f) Developing assessment instruments

- **Stages: Do**

At this stage, students will demonstrate their pedagogical skills, particularly those related to basic teaching skills. This includes tasks such as explaining concepts, posing questions, managing the class, and other essential aspects, especially in the context of early reading learning. In this stage: first, the practitioner prepares for early reading learning, then the observer is ready to observe and assess.

Micro-teaching Activity Design

Core Activity: Pre-Reading

- (a) Ensuring correct reading attitudes and gestures of students.
- (b) Conveying the reading learning activities that will be carried out.
- (c) Inviting students to recall their mastery of the letters of the alphabet.
- (d) Directing students to observe and concentrate on the reading material used.

Core Activity: While Reading

- (a) Students observe the teacher reading
- (b) Students are guided to identify words, syllables, and sentences
- (c) Students are guided to read with the teacher
- (d) Students learn to read independently

Core Activities: Post-Reading

- (a) Giving reading tests to students to read words or sentences
 - (b) Guiding students to identify words or letters that are still difficult to read
 - (c) Providing remedial training in the form of independent reading practice to students
- **Stages: See**
At this stage, evaluation and reflection on results and findings in the planning and implementation of learning are conducted.

Micro-teaching Activity Design

- (a) Reviewing and discussing together regarding the results of early reading learning
- (b) Formulating best and worst practices for learning activities as joint learning.
- (c) Discussing problem findings during micro-teaching for reflection
- (d) Making improvement plans for future micro-teaching



Figure 2. Results of Development of Early Reading Micro-teaching Design Video

Based on the results of the needs analysis and study conducted, the micro-teaching design formulation was employed in developing teaching materials for this study. Micro-teaching is a widely practiced method for developing basic teaching skills in prospective teachers. The term "micro" refers to the limited scope of materials, teaching materials, time, participants, and skills practiced (Park, 2021). The skills taught are isolated and intense, specific to the teaching of certain skills, such as early reading in this study. Through micro-teaching, prospective teachers can practice and enhance their performance and mentality in more contextual situations (Leong et al., 2021; Vigh, 2024). Micro-teaching itself is an approach that has long been studied and applied in teacher education to train teachers' pedagogical abilities. One of the fundamental things that differentiates pure science is through micro-teaching as an indicator of teacher professional development (Sezaki et al., 2023). The micro-teaching applied in this research is in the form of simulative practice emphasizing teaching skills specified in beginning reading instruction.

Next, the developed product underwent validation by two experts in Indonesian Language Learning in elementary schools. The evaluation covered various aspects, including content, targets (objectives), language usage, presentation, and practicality. The results are presented in Table 3, revealing an average score of 4.25 (85%). This score indicates that the product is valid and suitable for use in educational settings. Following the expert validation, valuable suggestions and inputs were gathered.

Table 3. Product Validation Results

No	Aspect	Indicator	V1	V2
1.	Content	The developed lesson study-based “Early Reading” micro-teaching instructional video aligns with the CPMK course	4	4
		The developed lesson study-based “Early Reading” micro-teaching instructional video includes early reading instruction	5	4
2.	Target	The developed lesson study-based “Early Reading” micro-teaching instructional video is suitable for use by PGSD undergraduate students	4	3
		The developed lesson study-based “Early Reading” micro-teaching instructional video is in the form of a device for student teaching simulation practice	5	4
3.	Language usage	The developed lesson study-based “Early Reading” micro-teaching instructional video is concise and uses communicative language	4	4
		The developed lesson study-based “Early Reading” micro-teaching instructional video meet EYD (The Indonesian Enhanced Spelling) standards	4	4
4.	Presentation	The developed lesson study-based “Early Reading” micro-teaching instructional video consists of various digital lecture content and teaching materials	5	5
		The developed lesson study-based “Early Reading” micro-teaching instructional video is presented in a format compatible with the LMS system	5	4
5.	Practicality	The developed lesson study-based “Early Reading” micro-teaching instructional video offers flexibility in access time and devices	5	5
		The developed lesson study-based “Early Reading” micro-teaching instructional video is appropriately sized and has a suitable duration	4	3
<i>Mean</i>			4.5	4
<i>Qualification</i>			<i>feasible</i>	

The first expert recommended incorporating simulation examples with illustrations of word and sentence spelling in micro-teaching instructional video. This addition aims to ensure that the practitioner focuses on mastering the method when teaching early reading. The second expert suggested enhancing the textbook by including structured assignments as enrichment for students during the learning process. After obtaining the feasible criteria, the results of product development were implemented in the Indonesian Language Learning in elementary school course on reading learning for elementary school materials to be embedded in the learning management system, as shown in Figure 3.

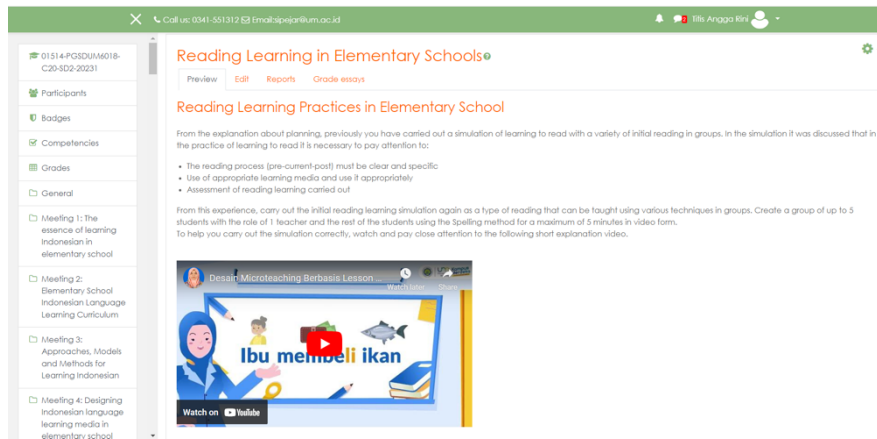


Figure 3. Product Implementation in Indonesian Language Learning Courses

Despite being presented in a limited way, the implementation of micro-teaching is ideally supported by the availability of micro-teaching laboratory facilities. The micro-teaching laboratory consists of a practice room and an observation area. To facilitate observation, micro-teaching is increasingly presented in learning videos (Holstein et al., 2022a). Even in the form of video, the essence of micro-teaching must be preserved for instructional, coaching, integralistic, and experimental functions in contextual situations (Perumalla et al., 2023; Xiao et al., 2024). Therefore, the assessment of the developed product focuses on indicators such as content, targets (objectives), language usage, presentation, and practicality as teaching materials. Furthermore, in this study, the instructional design for teaching early reading integrates the lesson study stage. Lesson study involves three stages of planning-implementing-observing, including the roles of the model teacher, teacher as observer, and students forming a learning community (Slingerland et al., 2021; Vigh, 2024). Widely applied and researched for its positive impact on Continuing Professional Development (CPD) in teacher practice, lesson study requires students to practice teaching in a continuous cycle of three stages, especially at the "observation" stage, where evaluation and reflection occur to identify teaching difficulties and find solutions (Fox & Poultney, 2020; ÖZDEMİR, 2019; Slingerland et al., 2021).

After that, a user trial was conducted involving one class of students taking the Indonesian Language Learning in elementary school course in the Odd semester 2023/2024. Students accessed the product at the sixth meeting according to the scenario described previously. From the results of this implementation, students as users were asked to provide an assessment of the content, targets (objectives), language usage, presentation, and practicality of the developed product, as shown in Table 4. From the assessment results, it was found that the product in this study was very suitable for use as teaching material. This lesson study-based micro-teaching instructional design, presented in the form of video, is used as a guide for students in conducting a simulation of teaching early reading. From the illustration provided, students gain clarity on concepts and then practice them in micro-teaching through the assignments given.

Table 4. User Assessment Results

No	Aspect	Indicator	Score
1.	Content	The developed lesson study-based “Early Reading” micro-teaching instructional video is suitable for material the Indonesian Language Learning in elementary school course, especially for early reading	4.9
2.	Target	The developed lesson study-based “Early Reading” micro-teaching instructional video serves as a valuable guide for implementing early reading learning simulation	4.6
3.	Language usage	The developed lesson study-based “Early Reading” micro-teaching instructional video is presented in the form of an explanatory video, using communicative and easily understandable language	4.4
4.	Presentation	The developed lesson study-based “Early Reading” micro-teaching instructional video is presented in the form of video and other e-material appropriately (duration, illustrations, format)	4.3
5.	Practicality	The developed lesson study-based “Early Reading” micro-teaching instructional video is presented in the form of learning materials that is easily accessible and user-friendly	4.7
			<i>Mean 4.5</i>
			<i>Very feasible</i>

The intention of incorporating lesson study into the early reading micro-teaching instructional design is to enable students to learn from each other, applying the principle of mutual learning. With this rationale, a lesson study-based micro-teaching instructional design was developed in the form of a video explaining the early reading method and micro-teaching design. This development aims to provide a tutorial for students in using the correct early reading method (Handayani, 2022). Therefore, it is essential to develop comprehensive teaching materials in a form that can be studied carefully at the student's pace, making repetition of the material more practical. Videos, widely used as media and complex teaching materials, facilitate various student learning styles, particularly as study guides (Holstein et al., 2022). The assessment results indicate that the product is suitable for use, although several revisions were made, particularly regarding product content. The content was further enhanced by incorporating quizzes and exercises for students to elaborate on the material. This elaboration activity provides space for students to practice more and apply the information obtained from exploration activities (Pires et al., 2020). Similar advice was given by users, student teachers, who suggested that more practice would make it easier to master the early reading method.

These video guides or tutorials have been widely adopted in learning due to their positive influence in helping students recognize the correct way or procedure through examples, demonstrations, and imitative practice. However, it should be noted that the content really contains adequate guidance, as in previous studies, in terms of video content it must have proper qualifications. The combination of appropriate video content and micro-teaching in teaching beginning reading makes student teachers better understand the planning and implementation of proper reading learning (Perumalla et al., 2023; Wahyuni et al., 2021). Mastering teaching techniques itself does require a lot of practice time, especially for prospective teachers before working in the field, so that repeated micro-teaching has been widely researched for its positive influence in improving teaching skills (Holstein et al., 2022b; Vigh, 2024). Apart from that, the findings in this development also show the importance of developing teaching materials that are able to provide a more methodical teaching experience. Experience during study can also provide

positive affirmation for ideal teaching modeling for prospective teachers themselves to apply in teaching (Hendry, 2020; Vigh, 2024).

Conclusion

In this study, a lesson study-based micro-teaching instructional design was successfully developed. The outcome of this development is presented in the form of a video guide for the practice of teaching early reading in a lesson study-based micro-teaching design. This product was implemented in the Indonesian language learning in elementary school course, and the results have been validated by experts and assessed by users with criteria indicating its suitability for use. It was improved based on input suggestions provided. The findings for the development of this product indicate that the lesson study-based micro-teaching instructional design, presented as a video guide for teaching early reading, effectively offers guidance to students in teaching early reading by more comprehensively addressing the pre-, while-, and post-reading processes. Moreover, the utilization of this product can serve as teaching material for student teachers and elementary school teachers, facilitating a more systematic and precise approach in terms of content and targets. This is particularly beneficial in teaching students who encounter challenges in reading in the early grades of elementary school. From the results of this research, it is highly recommended to develop instructional design and supporting materials to provide teaching training experience for student teachers in reading and other basic competencies.

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