

# Implementation of Audio MOOC Book on Flipped Classroom to Enhance English Learning

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## ABSTRACT

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Traditionally learning English has limited learning time and learning media. So a Flipped Classroom model is needed that allows students to study anytime and anywhere before learning activities in face-to-face classes. To implement the Flipped Classroom, interactive learning media is needed, therefore it is proposed to integrate the Audio Massive Open Online Course (MOOC) Book in the Flipped Classroom to improve student learning outcomes in English. The integration of audio and quiz-based content in the Flipped Classroom MOOC aims to provide a dynamic and accessible learning experience, encouraging increased language proficiency and increased student engagement. This article describes the design, implementation, and assessment of this innovative pedagogical approach. Preliminary findings indicate a positive correlation between the use of Audio MOOC Books and improved English learning outcomes, thus highlighting the potential benefits of combining online learning resources with the Flipped Classroom model in the context of English education. This research is expected to improve students' ability to pass the TOEFL test with a high score, so that they can qualify for higher education scholarships.

**Keywords:** audio mooc book, flipped classroom, english learning, student engagement, TOEFL preparation

## 1. INTRODUCTION

Scholarships are widely available for individuals who wish to pursue higher education at colleges overseas. But generally speaking, they are limited by their command of the English language, particularly while taking the TOEFL exam. For students to pass the TOEFL exam with a good score, a learning model that may boost their active involvement and independent learning is therefore required. The biggest challenge in learning English is not having enough time to cover everything and figure out how to get students involved in class activities. To address the aforementioned issue, efforts are being made to adopt the flipped classroom model.

The flipped classroom model is a learning approach where traditional teaching methods are reversed. In general, students learn new material in class and then do homework assignments. In the flipped classroom, students are introduced to new material outside of class, usually through video lectures or readings, and class time is spent on applied, interactive, and collaborative learning activities. Each variation and category of flipped classroom models has unique characteristics. According to Kardipah and Wibawa (2020)[1], the problem-based application of the Flipped Classroom is very effective on student performance and can encourage students to learn more. Implementing the Flipped Classroom model can also help individual students and create more opportunities to practice in class [2].

## Research Objectives

This research has the following objectives: 1) Examine the dynamics of a flipped classroom model in the context of English language education; 2) Analyze how the flipped classroom approach enhances student engagement and participation; 3) Compare the outcomes of the flipped classroom approach with the traditional classroom teaching methods; 4) Identify areas where the flipped model excels or falls short in comparison to traditional methods; 5) Contribute insights to the broader field of language education by providing recommendations and implications for pedagogical practices; 6) Offer suggestions for the integration of Audio MOOCs and the flipped classroom model in other language learning contexts.

### A. *Novelty of the Research*

The novelty of this research lies in its combination of innovative technology, a flipped classroom model, and a focus on language learning, which offers a unique contribution to the growing landscape of language education research. These elements contribute to the originality and distinctiveness of studies in the field of language education and technology integration. The following are several aspects that highlight the novelty of this research: 1) Integration of Audio MOOC Books in Language Learning. The use of Audio MOOC Books specially designed for English language learning represents a modern and technologically advanced approach. Although MOOCs are commonly used in various educational fields, their application in language learning, particularly through audio formats, is relatively new; 2) Flipped Classroom Model in English Education. The focus of the research is the application of the Audio MOOC Book in the flipped classroom model for English language learning. The Flipped Classroom approach involves students engaging with instructional content outside of class and using class time for interactive and collaborative activities. Applying this model to language education is a new approach. 3) Incorporation of Technology in Language Teaching. This research explores the integration of technology, specifically MOOCs, in language teaching. This aligns with the broader trend of incorporating digital tools in education, but specifically addresses their application in English language learning, thereby contributing to the evolving landscape of English language education methodologies.

### B. *Massive Open Online Course*

Massive Open Online Course (MOOC) implementation has been studied in several studies [3], [4], [5], [6]. The Massive Open Online Course (MOOC) phenomenon is based on various educational theories and pedagogical principles. The design and delivery of MOOCs are drawn from several learning theories and learning strategies. The following are some of the main theoretical foundations of MOOCs such as Constructivism, Behaviorism and Connectivism.

MOOCs adhere to constructivist principles by providing opportunities for learners to actively construct their own knowledge. Learners engage in discussions, collaborative projects, and problem-solving activities, fostering a deeper understanding of the content. Knowledge construction is often facilitated through interactive elements such as forums, peer assessment, and collaborative projects.

Although MOOCs often emphasize learner autonomy and self-directed learning, elements of behaviorism can emerge in the form of structured assessments, quizzes, and automated feedback. These elements provide opportunities for students to strengthen and practice newly acquired knowledge.

Connectivism is a learning theory that emphasizes the role of networks and connections in the learning process. MOOCs, with their emphasis on online connectivity, collaborative learning, and integration of diverse resources, align with the principles of connectivism. Learners in MOOCs often engage in networked learning, connecting with peers, instructors, and external resources.

MOOCs, as a flexible and scalable form of online education, integrate these theories to create learning environments that can serve a wide range of learners, encourage active engagement, and harness the potential of digital technology for global educational reach. The combination of these theoretical foundations contributes to the ever-evolving landscape of online education.

### C. *Flipped Classroom*

Numerous research have examined the use of flipped classrooms [7], [1], [2], [8], [9]. This study will use blended learning, namely the Flipped Classroom paradigm, to apply learning. A teaching strategy known as the Flipped

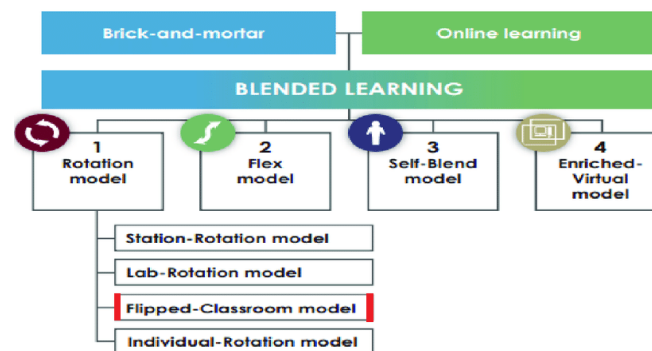
Classroom transforms the traditional learning environment by delivering course material outside of the classroom, usually through online videos. However, in this study, Audio Mooc Books were used to move activities such as homework and discussions into the classroom. This method is based on constructivism, active learning, Bloom's taxonomy, and technology integration.

Constructivist learning theory supports the Flipped Classroom, which emphasizes that students must participate in the process of developing their own knowledge. Students are better prepared to participate in collaborative and problem-solving activities during class time if they engage with instructional materials independently before class.

Flipped classrooms allow students to participate in active learning because they change passive learning habits to active learning of concepts. This method encourages students to apply their knowledge, engage in discussions, and participate in problem-solving activities. This will help them understand the material better.

Bloom's Taxonomy, a hierarchical model of learning objectives, aligns with the Flipped Classroom. In-class activities aim to improve high-level cognitive skills, such as applying, analyzing, and evaluating, while pre-class activities usually concentrate on lower-level cognitive skills.

The Flipped Classroom uses technology to deliver educational material outside of traditional class time. This is in line with Technology Integration Theory, which emphasizes the strategic use of technology to improve learning experiences and learning outcomes.



**Figure 1.** Blended Learning Model

(Source: <https://www.researchgate.net>)

#### D. Audio MOOC Book

Audio MOOC Book is a development of Flipbook, where much research has been carried out regarding Flipbooks [10], [11], [12]. The term Audio MOOC Book does not refer to any particular, established educational theory. However, I can provide insight into how various educational theories and principles can be applied to the Audio MOOC Book concept. The following are several theories used in the Audio MOOC Book: 1) Multimodal Learning. The use of audio in Massive Open Online Course (MOOC) Books implies a multimodal approach to learning. This is in line with theories that emphasize the benefits of presenting information through various sensory channels. Multimodal learning accommodates diverse learning styles and enhances the overall learning experience; 2) Audio-Based Learning, focus on audio shows an emphasis on auditory learning. Auditory learning theory states that some individuals learn more effectively through listening. Utilizing audio content in MOOC Books can serve students who benefit from auditory stimulation and improve their understanding and retention of information; 3) Flipped Classroom, the Flipped Classroom model involves learners engaging with instructional content outside of the traditional classroom, often through pre-recorded materials. While the Audio MOOC Book is designed for pre-learning before interactive sessions, it aligns with the principles of the flipped classroom, encouraging active engagement during class time; 4) Independent Learning, the concept of Audio MOOC Book implies a level of independent learning. Self-determined learning theory states that individuals will be more motivated and engaged when they have autonomy in their learning. Learners can navigate and review audio content at their own pace, contributing to a self-paced learning experience.

### E. Test of English as a Foreign Language

The TOEFL comprises four essential components: reading, listening, speaking, and writing. Reading is a tool used to assess comprehension and analysis of textual passages. Listening to evaluates the ability to comprehend spoken English in academic situations. Speaking with assesses one's capacity for verbal reasoning and opinion expression. Writing to measures the ability to write responses to academic tasks.

## 2. RESEARCH METHOD

The research method for the study “Implementation of MOOC Audiobooks in a Flipped Classroom to Improve English Language Learning” will involve a systematic approach in collecting and analyzing data to achieve the research objectives. Below are the main components of the research methodology: 1) The Research Design used is a Mixed Methods Design, which utilizes a mixed methods approach that combines quantitative and qualitative data collection and analysis. This allows for a comprehensive understanding of the impact of the intervention; 2) Participants by sampling. Select a representative sample of participants, for example students enrolled in an English course. Ensure diversity in terms of language proficiency levels, learning styles, and other relevant factors; 3) Data Collection in the form of quantitative data consisting of Pre- and Post-Tests, and Surveys/Questionnaires by collecting quantitative data about students' perceptions, attitudes and satisfaction with the Audio MOOC Book and the flipped classroom approach. Furthermore, qualitative data in the form of interviews and observations; 3) Data analysis on quantitative data and qualitative data. Quantitative Analysis uses statistical methods to analyze quantitative data, including descriptive statistics, t-tests, and other relevant analyzes to measure its impact on language proficiency. Meanwhile, Qualitative Analysis uses thematic analysis for qualitative data, identifying patterns, themes and categories related to participants' experiences, challenges and perceptions.

Using a mixed methods research design, this approach allows for a comprehensive exploration of the impact of an Audio MOOC Book in a flipped classroom setting on English language learning outcomes and student experiences.

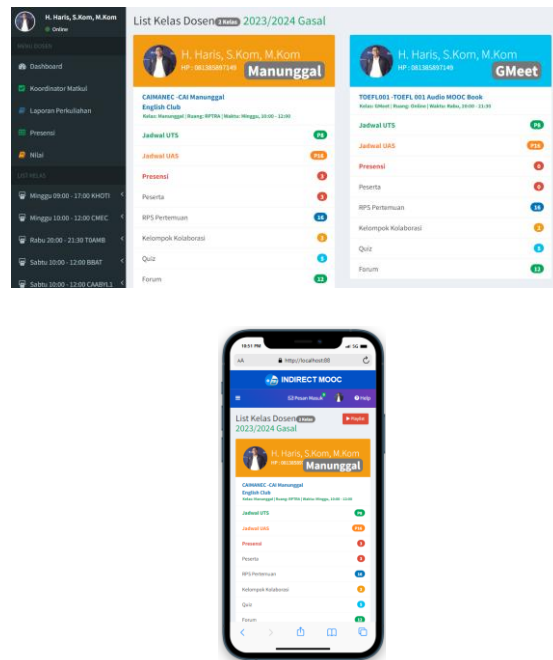
## 3. RESULT AND DISCUSSION

Audio MOOC Books which are integrated with Flipped Classroom which uses the Massive Open Online Course platform will make learning more enjoyable and can improve learning outcomes, where learning can be done anytime and anywhere before face-to-face classes in class. So that learning in face-to-face classes will be more meaningful and effective for practicing learning outcomes in online classes via Flipped Classroom.

The following is the user interface developed to implement Audio MOOC Book in Flipped Classroom. When a user logs in to the Massive Open Online Course application, the user needs to enter a username and password followed by clicking the login button as in Figure 2. After that, the system will carry out the process of authenticating user rights, whether the user who logs in is a lecturer or as a Student. If you log in successfully, the MOOC application Dashboard page will be displayed (figure 3).

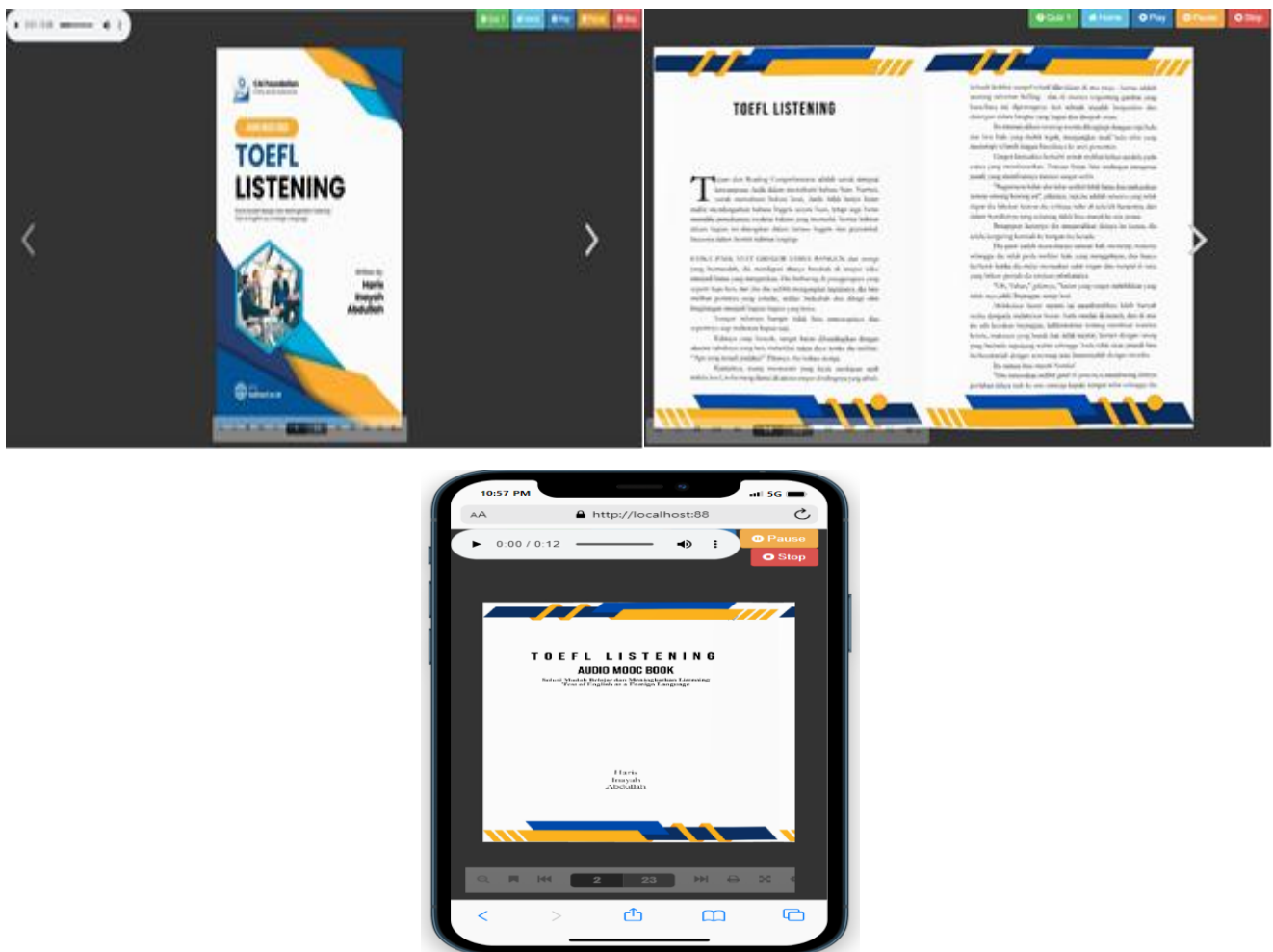
The screenshot shows a login interface for 'BLISMa 1st Knowledge'. It features a logo at the top, followed by input fields for 'Username' and 'Password'. Below the password field is a red warning message: 'Lupa? Tidak ada di daftar? domain yang didaftarkan untuk login ini'. There is a 'Remember me' checkbox and a blue 'Log In' button. At the bottom, there is a 'Sign in with' section with a Google login button.

**Figure 2.** Login Form



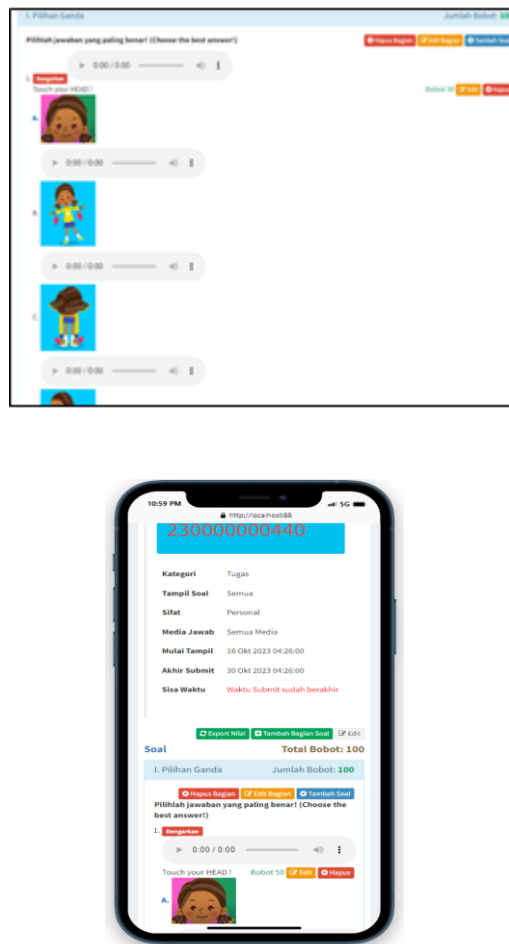
**Figure 3.** Dashboard Application

As for the Audio MOOC Book, it is as shown in the example below:



**Figure 4.** Audio MOOC Book

In figure 4 there are several buttons used. The Play button is used to start reading the text in the Audio MOOC Book starting from the cover page, and when one page has been read, it will automatically move to the next page until the end of the book has been read by the system. The Pause button is used to temporarily stop reading the contents of the book by the system, while the Stop button will stop reading the text on that page and if you click the Play button, it will be read again starting from the beginning of the page. The Quiz button is used to take quizzes that are integrated with the Massive Open Online Course application, where the grades produced after taking the quiz will be saved by the MOOC system as the student's grades.



**Figure 5.** Quiz

Figure 5 is an example of a quiz integrated with the Audio MOOC Book in figure 4 above. Quizzes can be multiple choice questions or essay questions.

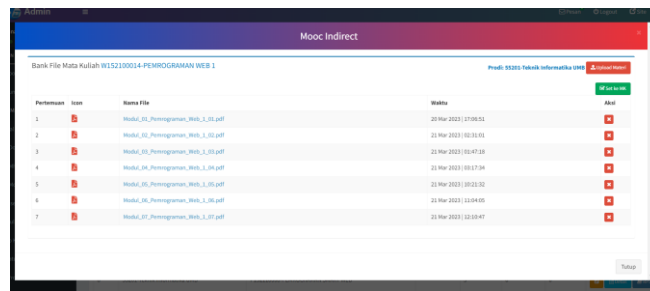
Master Mata Kuliah									
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Teknik Informatika UMB		Kode matakuliah		Cari		Reset		Export Data CSV	
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No	Prodi	Matakuliah	UPM	SKS	Sem	Jud	Action		
1	SI2001 Teknik Informatika UMB	WIS2000004 PEMROGRAMAN WEB 1		3	4	0	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Delete</a>
2	SI2001 Teknik Informatika UMB	PI2000001 ALGORITMA LANJUT		3	3	0	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Delete</a>
3	SI2001 Teknik Informatika UMB	AB1001 Analisis Riset Narkotika		3	1	0	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Delete</a>
4	SI2001 Teknik Informatika UMB	EN20001 Direct English Level 1		3	3	0	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Delete</a>
5	SI2001 Teknik Informatika UMB	ANDRO001 ANDROID JAWA		3	3	0	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Delete</a>
6	SI2001 Teknik Informatika UMB	EN20002 Direct English Level 2		3	4	0	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Delete</a>
7	SI2001 Teknik Informatika UMB	AP1000002 AP1000002 Ford		3	3	0	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Delete</a>
8	SI2001 Teknik Informatika UMB	PI2000008 PEMROGRAMAN SMART WEB		3	6	0	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Delete</a>
9	SI2001 Teknik Informatika UMB	WIS2000000 ALJABAR LINIER		3	1	0	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Delete</a>

**Figure 6.** List of Courses

(Source: <https://mooc.indirect.or.id>)

The Course List menu functions to manage courses managed by educational institutions. For each course, the RPS

and list of modules that will be used in all open classes are also stored.



No	Nama	Nama File	Waktu
1		Modul_01_PengantarWeb_1_01.pdf	20 Mar 2023 07:00:00
2		Modul_02_PengantarWeb_1_02.pdf	20 Mar 2023 08:00:00
3		Modul_03_PengantarWeb_1_03.pdf	20 Mar 2023 09:00:00
4		Modul_04_PengantarWeb_1_04.pdf	20 Mar 2023 10:00:00
5		Modul_05_PengantarWeb_1_05.pdf	20 Mar 2023 11:00:00
6		Modul_06_PengantarWeb_1_06.pdf	20 Mar 2023 12:00:00
7		Modul_07_PengantarWeb_1_07.pdf	20 Mar 2023 13:00:00

**Figure 7.** List of Course Modules

(Source: <https://mooc.indirect.or.id>)

Each course has standard modules used. To add material, click the Upload Material button, while to implement it in all class schedules that use this course, click the Set to MK button.

#### 4.CONCLUSION

In this study, we investigate the impact of implementing an Audio MOOC Book within the Flipped Classroom framework to enhance English language learning. This research used a mixed methods approach, combining quantitative measures such as pre- and post-test scores as well as qualitative insights from participant interviews and classroom observations.

As shown by the pre- and post-test scores, our analysis showed a statistically significant increase in English proficiency. This shows how Audio MOOC BOOK can help measurable progress in language skills.

Qualitative data collected through observations and interviews provide a broad picture of participants' experiences. Themes such as increased engagement, collaborative learning, and positive attitudes toward the flipped classroom model emerged to demonstrate the mixed impact of the intervention.

This research helps the development of literature on creative methods for teaching languages. A promising path towards improving language learning outcomes opens up with the incorporation of MOOC audiobooks in the flipped classroom.

This research will help educators and institutions change teaching practices. The positive changes in students' attitudes and the observed increase in language proficiency suggest that enhanced use of technology in language classrooms can be implemented effectively.

Based on our findings, we recommend that educators consider integrating MOOC Audiobooks in a flipped classroom format to create a more dynamic and engaging learning experience for English language learners.

In conclusion, the application of MOOC Audiobooks in the flipped classroom model shows positive results in the realm of English language learning. The combination of quantitative and qualitative data provides a nuanced picture of the impact of interventions, providing valuable insights for educators, researchers, and policymakers. As technology continues to play an integral role in education, further exploration and refinement of innovative approaches, such as the integration of MOOC Audiobooks, promises continued advancement in language education practice.

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