Radial blended-collaboration in doctoral education: Insights from an Indonesian higher education institute

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Abstract

This study explored how doctoral educators apply a radial blended collaborative (RBC) strategy to teach EFL speaking. This study used a narrative case study design and a qualitative approach. In doing so, teachers employed eight RBCs’ strategies: raising collaboration awareness, forming groups based on 21st-century skills, using controlled-chosen topics and theme-based prior knowledge, employing snowball questioning techniques, engaging in role-play in different contexts, conducting peer evaluations, and providing oral and written feedback. This study found that technology integration, such as WhatsApp, Zoom Meeting, Google Classroom, and electronic mail, enhanced the learning experience, whereas pooling WhatsApp messages was used to direct the chosen discussion topics. The results demonstrated that RBC significantly improved students’ speaking performance across four instructional dimensions: collaborative awareness, active learning, classroom interaction, and technological integration. Future research should aim to enhance spoken communication by integrating technology in assessments and fostering collaborative learning environments.

Introduction

In particular, non-native speakers (NNs) challenge teaching and learning to speak in an English as a Foreign Language (EFL) context (Chien, 2018; Chun, 2014). Challenges in this work could arise from both teachers (Baleghizadeh & Nasrollahi Shahri, 2014) and students (Jao et al., 2022; Savaşç, 2014), who may occasionally come from the school environment (Malebese & Tlali, 2020; Renties et al., 2018). Orfan (2020) examined the challenges faced by EFL students, such as linguistic deficiencies (Kramsch, 2000), oral language processing (Tsegaye et al., 2011), dialogue (Chien, 2018), and affective (Gan, 2013). Another example, as examined by Butarbutar et al. (2023), is that speaking is more challenging in school, and there is a lack of comprehension of the use of speaking EFL outside instructional contexts (Lising, 2021).

Consequently, teachers are expected to be prepared to address these challenges using various strategies (Yang, 1998). Teachers and educators have uncovered, examined, and explored a wide variety of teaching strategies at both the theoretical and practical levels (Timpe-Laughlin et al., 2022). For instance, Tremblay-Wragg et al. (2021) discovered that variety is a key teaching method for encouraging students’ constructive contributions and
motivation (Bower, 2019; Uztosun, 2020) in the learning process in higher education. To promote and develop students’ speaking skills (Ekoç, 2021), students received authentic learning (Hwang et al., 2022) about familiarization with an art form (Borrie et al., 2012). However, little is known about teaching EFL speaking strategies based on the experience of doctoral educators.

Based on the aforementioned factors, it can be said that the current study is urgently needed because speaking is closely related to other language abilities, including reading, writing, listening, and other language skills (Butarbutar & Leba, 2023). This study offers modest and substantial speaking performance development, both synchronously and asynchronously, to help students learn to talk more actively and collaboratively and overcome the above-mentioned challenges. Additionally, this study intends to react to Ginja and Chen (2023), who requested discussions, implications, and proposals that limited English activity planning and practice are necessary for the effectiveness of English immersion programs.

This study contributes valuable insights into the application of RBC in EFL speaking instruction, offering practical implications for educators and policymakers for enhancing language learning outcomes in diverse educational settings. By addressing technological constraints and leveraging identified instructional dimensions, educators can effectively integrate RBC into their teaching practices, ultimately benefiting EFL learners’ speaking proficiency and overall language acquisition. This study aims to explore, confirm, enlarge, and explain innovative methods for teaching EFL in an Indonesian higher education context through RBC. The investigation also tactfully addressed the obstacles encountered by educators during implementation. The inquiry poses the following research question to initiate and progress the study: “How do doctoral educators employ radial blended collaboration in teaching EFL speaking?”

**Instructional Radial Blended-Collaborative in a Nutshell**

Radial-blended collaboration (RBC) is a novel strategy that draws on the empirical data obtained from doctoral educators. This approach is based on an ontology that incorporates interdependence theory in collaboration. RBC ontology distinguishes between radial strategies that can be separated from one another, whereas interdependence serves as a tactic. According to Deutsch’s (1949) interdependence theory, one person’s goals coincide with those of others. This theory, which clarifies the dynamics between collaborative and competitive individuals in working and learning groups, serves as the foundation for this study. The concept of "social interdependence" describes how pupils try to achieve, develop healthy relationships, make psychological adjustments, and act socially competently. What distinguishes a group from others is the interdependence between its members. Consequently, the group is dynamic, and each member’s success in one group affects the success of the entire group. Shared goals facilitate interdependence among group members (Johnson & Johnson, 1989). Positive social interdependence exists when the actions of others affect a person’s ability to achieve goals (Bruffee, 1984; Johnson, 2003).

In implementing RBC, positive social interdependence encourages high-quality group work and collaboration (Chiriac & Granström, 2012). To help students communicate more clearly, competently, and collaboratively, the current study suggests the following eight strategies: (1) raising collaboration awareness, (2) 21st-century skill group formation, (3) controlled-chosen topics, (4) theme-based prior knowledge, (5) snowball-questioning techniques, (6)
role-play in different contexts, (7) teacher and students’ peer evaluation, and (8) oral and written feedback, in which educators use WhatsApp (WAG) (Butarbutar, 2019; Butarbutar et al., 2022) and Zoom Meeting for synchronous collaboration, whereas Google Classroom (GC) and electronic mail (E-mail) are used for asynchronous tasks. In addition, pooling WAG was used to control or guide the chosen discussion topics (Figure 1 and Table 1).

Method

Research Design

In line with the objectives of this study, a narrative case study design with a qualitative approach was adopted. This approach involved the involvement of three doctoral educators. The purpose of this design was to gain insight into how the participants interpreted their experiences, constructed their knowledge, and attributed meaning to their experiences when using RBC in EFL-speaking classes. To achieve this goal, we followed the recommendations of Miles and Huberman (1994) and Tellis (1997), who argued that a case study design was more suitable because it was grounded in reality, contextually relevant, and based on the participants’ experiences.

Research Context

Research conducted at the University of Musamus Merauke, situated in South Papua, Indonesia, specifically within the English Education Department, offers a distinctive context for investigating English language education. This department likely functions as a center for preparing future English language educators and professionals in the region. Considering that this study focuses on English as a Foreign Language (EFL), it implies that English is not the primary language spoken in the local community. This emphasizes the significance of effective language instruction in enabling students to communicate proficiently in English, which is often a requirement for academic and professional advancement in a globalized world. Moreover, concentration in the English Education Department indicates a focus on pedagogical approaches and methodologies specifically designed for teaching English. Three EFL teachers with doctoral degrees instruct this. This might involve curriculum development, language assessment, teacher training, and research aimed at enhancing English language instruction within the university and potentially in the broader educational context of South Papua.

Participants

The researchers employed a purposive sampling strategy (Campbell et al., 2020) to select participants based on their educational background, specifically their possession of a doctoral degree and their extensive experience as EFL teachers, which demonstrates their proficiency in conducting radial blended collaboration. To familiarize themselves with the study’s purpose, three doctoral students were employed as participants: two female and one male. Their age was under 50 years, and they had more than 15 years of experience as EFL teachers. Participant 1 was labeled E1, Participant 2 was labeled E2, and the last participant was labeled E3.
To know more about them, E1 has been teaching English since 1992, according to data gathered at one of the border state universities in Indonesia. She was an active lecturer who encouraged her students to learn EFL integrated with technology. For example, using blended learning to avoid monotony and boredom in classes; if she taught them in the classroom, she would make an effort to trigger them through video. This is expected to energize students' interest in and motivation to learn English.

Meanwhile, E2 has been a professional lecturer and has held an English proficiency certification since 2012. He has attended many national and international conferences. In addition, he has a few publications indexed in reputable journals. To help students become more involved in speaking EFL, he often used project-based learning. Uniquely, to motivate students to learn to speak EFL, he always declared the motivated clause, "The more you speak, the more you are fluent; Bravo and Proficiat." This means that one should not worry, and regardless of the problem, it is important to remember that one must try as much as possible.

E3 is an EFL lecturer at a private college. She holds an English proficiency certification. In addition, she has always used the blended learning method when teaching speaking classes. Interestingly, she often gave extra classes to students in the evening, even on holidays. In this vein, she wanted all her students to be fluent in speaking EFL. Moreover, she suggests that her students attend many more seminars and workshops to enrich and enhance their global knowledge. Therefore, all participants used English as a Foreign Language (FL). However, to make speaking fluently easier, they used bilingualism to force a habit.

**Data Collection**

To obtain information, extensive online interviews were conducted with the participants through video conferences on WhatsApp. These interviews were unstructured in nature (Berry, 1999; Guest et al., 2013; Morris, 2015) and served the purpose of gaining a deeper understanding of instructional RBC, including implementation, as it pertains to the tasks used and students' responses.

The following is an example of the interview used in this study: "Would you kindly share your teaching experience after obtaining a doctoral degree? Additionally, how do you incorporate radial blended collaborative learning in EFL speaking?" The interviews lasted approximately 60 minutes on average, with interviewees preferring a relaxed and flexible setting for the conversation. The researchers conducted interviews with participants on their personal mobile phones.

To guarantee the dependability of the interview results, the researchers administered an open-ended questionnaire (Husain et al., 2012) to the participants. This questionnaire aimed to verify and confirm what had been explored through online interviews. Furthermore, the researchers scrutinized the documents (lesson plans, task-based projects, evaluation lists, students' evaluation control cards, and faculty curriculum) that participants utilized during collaborative activities. This document analysis was used to provide evidence of students' speaking achievements and prevent bias in the interview results.
Data Analysis

Thematic analysis, which entails the process of identifying, analyzing, and reporting patterns (themes) within the data, was employed to analyze the data. This method involves systematically organizing and interpreting textual or visual data to uncover underlying meanings, concepts, and patterns. Braun & Clarke (2006) provided a comprehensive guide for thematic analysis that included familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing a final analysis. Data on instructional dimensions were divided into four dimensions for analysis: (1) learning motivation, (2) active learning, (3) classroom interaction, and (4) technology venue.

Results and Discussion

Relevant to the inquiry of the study, as mentioned previously, is "How do doctoral educators apply radial blended collaborative teaching of EFL speaking?" As shown in Table 1 and Figure 1, the interview findings revealed that educators gave eight RBC instructions.

Table 1. Instructional RBC

<table>
<thead>
<tr>
<th>Instructional dimensions</th>
<th>Sub-instructions</th>
<th>Narration</th>
<th>Student’s progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning motivation</td>
<td>Raising collaboration awareness</td>
<td>The dependency on collaboration is a measure of success.</td>
<td>Collaboration skills</td>
</tr>
<tr>
<td>Active learning</td>
<td>21st century skills group formation</td>
<td>communicative, collaborative, thinking critically, and creative</td>
<td>21st-century skills</td>
</tr>
<tr>
<td></td>
<td>Controlled-chosen topics</td>
<td>Students were restricted or assisted by teachers in selecting discussion topics.</td>
<td>Boosting speaking motivation, confidence, reducing anxiety, socio-linguistic competence</td>
</tr>
<tr>
<td></td>
<td>Role-play different contexts</td>
<td>Give each group-specific character a role-play with.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Theme-based prior knowledge</td>
<td>Students were asked to select discussion topics that matched their knowledge or experience at the time.</td>
<td></td>
</tr>
<tr>
<td>Classroom interaction</td>
<td>Snowball questioning technique</td>
<td>Warm-up questions were first asked of one student, then of two or more, and finally of the entire class.</td>
<td>Fluency, accuracy, and presentation skills</td>
</tr>
<tr>
<td></td>
<td>Reflective Journal</td>
<td>&quot; During the discussion, I consistently observed each student's development.&quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Teacher and peer evaluation</td>
<td>&quot; I asked students to evaluate their peers when other groups led discussions; I called this peer evaluation.</td>
<td></td>
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</tbody>
</table>
Oral and written feedback
“The chat room’s panacea was "Speak up, speak up anymore, whatever you know," and I frequently used the phrases "You are smart, Bravo, and Proficiat.”

<table>
<thead>
<tr>
<th>Technology venue/integration</th>
<th>WhatsApp (WAG) and Zoom Meeting</th>
<th>Synchronous discussion</th>
<th>Collaboration skills: responsibility &amp; punctuality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Google Classroom (GC) and electronic mail (E-mail)</td>
<td>Asynchronous instruction, tasks, assignment, and evaluation</td>
<td>Using it for controlling or guiding chosen discussion topics</td>
<td></td>
</tr>
<tr>
<td>Pooling WAG</td>
<td></td>
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</table>

**Figure 1.** Instructional RBC strategies

To answer the research question, ‘How do doctoral educators utilize radial blended collaborative teaching EFL speaking?’ In line with the findings in the previous section, this study confirmed eight instructional RBCs that help students improve their speaking skills. These RBC can be divided into four instructional dimensions: (1) making students more aware of collaboration, (2) active learning, (3) classroom interaction, and (4) technology venues. The following is a detailed discussion.

1. **Raising Collaboration Awareness**

The research uncovered the fact that instructors cultivate collaboration from the outset of class sessions, as per the insights gleaned from interviews and document analysis. The intention is to deter free riders and avoid leader-centric monopolies by fostering mutual
understanding and recognizing the worth of collaboration. Furthermore, it encourages students to work together in order to attain group objectives.

Therefore, fostering collaboration can be viewed as constructive interdependence (Laal, 2013) rather than competition. Other themes covered include effective time management, conflict resolution, taking ownership or accountability (Beth et al., 2015; Siqin & Chu, 2021), peer scaffolding behaviors (Ardiningtiyas et al., 2023), and qualities that contribute to group success. These skills are relevant to the notion of "negotiated interaction ability" as introduced by Ellis (1990). In a similar vein, promoting collaboration awareness aligns with Carter and McCarthy’s (1997) educational awareness-raising initiatives. They posited that teaching and enhancing spoken language skills can be accomplished through awareness-raising activities.

2. The 21st-Century Skills Group Formation

The level of student engagement in classroom activities is a form of active learning. This situation has had an impact on both educators and students. It is important to continue the teaching process for an extended period, as it benefits students' acquisition of knowledge, attitudes, and skills (Hurd, 2000). This aligns with our findings, which indicate that educators group students based on their proficiency in 21st-century skills, including communication, collaboration, critical thinking, and creativity, as each student is unique (Hasyim et al., 2024). The objective of this instruction was to motivate students to participate actively in speaking group activities. Additionally, it is important to encourage them to collaborate with group members with diverse backgrounds, genders, and learning styles (Butarbutar, 2021). Dugas (2017) also suggests that various interventions can help students understand their individual responsibilities and contribute to group performance. Kanika et al. (2022) highlighted the impact of varying group arrangements on students' experiences and collaborative success.

Furthermore, it is important to note that the development of 21st-century skills is often concurrent with the enhancement of teachers' abilities (Burns, 1998). According to this perspective, educators and instructors can assess language performance by discussing the responsibilities and rights of speakers in various situations. This emphasizes the role of the students, as group dynamics depend on their leadership in conversations. This indicates that assigning students to appropriate discussion roles can help them acquire commonly used vocabulary. In this context, we agree that engaging students in negotiations about effective classroom strategies can improve their communication skills. Dornyei and Thurrell (1991) identified several such strategies, including initiating, responding, challenging, and concluding discussions.

3. Controlled-Chosen Topics

The results of the study found that the notion of controlled-chosen topics acquires added significance as it relates to the manner in which groups of learners select, concentrate on, and interact with specific subject matter. Collaborative learning accentuates cooperative efforts among individuals to attain shared learning objectives, and making prudent choices regarding topics is essential for promoting productive collaboration. Hence, the more productively students collaborate in the chosen topic discussion, the more actively they
Our findings are consistent with those of Richards (1990), who found that direct (controlled), indirect (controlled), and mixed techniques and activities can enhance oral communication. Practically, teachers achieve this by utilizing the pooled WAG feature to direct or manage the conversation topics that they have selected. They discussed some of the themes provided in this setting, but at times, the educators took direct charge and facilitated effective classroom interactions. In addition, the instructors limited the themes that students could choose for RBC lessons. This was done to ensure that the learning objectives in the lesson plans aligned with the curriculum and themes selected by the students. This also helps maintain the chronological order of the teacher assessment list.

4. Theme-based Prior Knowledge

According to Vygotsky (1978), learning is a social process that unfolds through interaction with others, particularly with more knowledgeable peers and adults. In learning environments inspired by Vygotsky’s theory, learners engage in joint activities and discussions and collaborate to solve problems, share ideas, and construct new knowledge. The theme-based prior knowledge alluded to in the sentence pertains to the shared understanding and background knowledge that the participants brought to the collaborative learning experience. In learning environments based on Vygotsky’s theory, learners draw upon their existing knowledge, experiences, and perspectives, thereby contributing to the collective construction of meaning and understanding. This prior knowledge serves as a foundation for collaboration, allowing participants to engage in meaningful dialogue, scaffold each other’s learning, and collaboratively co-construct their knowledge.

This study demonstrated that educators provide support to their students in selecting themes that draw upon their own prior knowledge and experiences, both positive and negative, in a collaborative manner. In line with the findings of Chen & Goh (2011), using activities that are familiar to students is an effective technique for teaching oral English skills to higher education students. Moreover, this aligns with Johnson & Johnson’s (1989) principles of positive interdependence and promotional interaction, which emphasize the importance of group discussion in promoting increased speaking drive and confidence while reducing stress and anxiety levels. By employing theme-based prior knowledge pedagogy, group members are encouraged to engage in active participation and exchange ideas, leading to a more effective learning experience.

5. Snowball Technique Question for Guiding Discussion

The educators randomly selected a group member for a warm-up discussion session based on the interview results. Subsequently, they proceeded to the second and third students and, finally, to the entire group and the entire class. According to McCroskey and Richmond (1990), the goal of this strategy is to involve every student and contribute to group discussions. In accordance with this, Kalantari (2009) emphasized that one method of classroom engagement strategy is the use of questions. However, the results of this study sometimes showed that students responded to the question by summarizing or reformulating what their peers had said. For instance, a student may have said, “I agree with my friend 'A' and would like to add...” Similarly, Burns (1998) suggests that the snowball technique, which involves asking questions, is an application of the following discussion strategies: summarizing, rebutting, and reinforcing positions.
6. Role-play in Different Contexts

The results of the current study demonstrated that individuals appear more active and motivated to participate in group conversations when they perform their roles in diverse environments. They felt that playing in various settings effectively improved their capacity to express their personal experience. Ladousse (1989) offered a similar training method: educators might create role-play as a means of fostering classroom interactions. Additionally, our findings are related to Eggins & Slade’s (1997) description of causal discussion in a multicultural setting, which is advised during speaking instruction. With regard to this instruction, we concur with Burns (1998), who discussed classroom activities for teaching spoken language and emphasized the cultural and social significance of various spoken genres. Burns (1998) noted that teachers and educators should provide students with the opportunity to act in accordance with their own cultures and first languages before inviting them to discuss and compare in other circumstances. The second focuses on improving fluency through communicative tasks, which in turn create possibilities for growing functional language use through unstructured activities. This appears to be parallel to Nunan’s (1989) role-playing in diverse contexts. Nevertheless, our results are consistent with those of Burns (1989), who claimed that information exchange and bargaining are effective speaking teaching methods. She described these strategies as indirect or transfer procedures designed to boost learner autonomy and promote more realistic language use.

7. Teacher and students’ peer evaluation

To consolidate and reinforce students' speaking skills, instructors provide mini-guided book evaluations that students can use to evaluate their peers. It attempts to enhance the way students display group projects. Educators believe that peer review is one way to guarantee the success of synchronous and asynchronous collaborative learning. Students were graded verbally and in writing by their peers after giving presentations to groups. Individuals who employed these strategies were more likely to speak clearly after repeating or rephrasing their errors. Consequently, their peers can serve as scaffolds (Ardiningtiyas et al., 2023). A brief snippet clarifies the following points.

To help me deliver a thoughtful and objective rating, I requested that every one of my students review and make some helpful suggestions. Students should do better in meetings after peer evaluation (E2, January 15, 2023).

Teachers also conducted synchronous and asynchronous observations throughout the discussion session to support the students’ peer evaluations. Additionally, both individuals and groups were assessed. These assessments must be considered and examined when the conversation ends. The evaluation results are references that must be entered into students’ control cards. There was obvious agreement between the study and the students’ control cards, particularly in terms of fluency, correctness, and presentation abilities. In conclusion, the results of this study provide verifiable evidence for RBC in the subject matter. Murphy (2022) contends that self-and peer assessment can be used in conjunction with this training to ensure that it is a crucial component of pedagogical practice both in person and online. Our results support Johnson & Johnson’s (1989) findings on the beneficial interaction of beneficial interdependence, particularly helping and assisting each group member. Peer evaluation is strongly advised for students, both individually and as members of groups.
8. Oral and Written Feedback

The findings of the study included statements such as feedback tokens in addition to the feedback itself, such as "practice anymore; the more you practice, the more confident you become," and similar expressions. While written feedback was provided in the chat room of the WAG venue, oral input was provided in the synchronous venue. Through empirical research, educators have realized that vocal feedback motivates students to speak with greater fluency, assurance, and accuracy. Their performance improved, which is in line with this result. They were encouraged to be more accountable and prompt in their responses to each group project through written feedback, which was visible in the chat room and Google Classroom environment (Ardiningtiyas et al., 2023; Butarbutar et al., 2023). Hence, collaborative skills are developed simultaneously. We agree with Ebadijalal and Yousofi (2023), who stated that oral proficiency, self-confidence, openness to communication, risk-taking, engagement, and self-directed speaking could improve speaking performance in the presence of oral peer feedback (Nur & Butarbutar, 2022; Nur et al., 2022).

Conclusion and Implications

The results show that radial collaborative blended learning (RBC) is a good way to teach speaking skills in English as a Foreign Language (EFL) because it encourages students to work together and can be used with either synchronous or asynchronous blended learning. To implement this approach, teachers employed eight radial collaborative strategies: raising collaboration awareness, forming groups based on 21st-century skills, using controlled-chosen topics and theme-based prior knowledge, employing snowball questioning techniques, engaging in role-play in different contexts, conducting peer evaluations, and providing oral and written feedback. The study found that the use of WhatsApp (Butarbutar, 2019; Butarbutar et al., 2022), Zoom Meeting, Google Classroom, and electronic mail enhanced the learning experience, whereas pooling WhatsApp messages was used to direct the chosen discussion topics. The results demonstrated that RCL significantly improved students’ speaking performance across four instructional dimensions: collaborative awareness, active learning, classroom interaction, and technology integration.

In summary, this study highlights the effectiveness of the RBC in enhancing speaking skills in EFL settings and offers practical recommendations for educators who wish to implement this innovative approach in their instruction. With the implementation of collaborative strategies, utilization of technological resources, and emphasis on assessment and feedback, educators can cultivate engaging and effective learning experiences that foster collaborative speaking competence in students. Furthermore, this study suggests that curricula, instructional materials, and assessment methods should be developed based on students' prior knowledge and experience. The goal was to foster interdependence in group work by enabling students to make informed topic choices while still benefiting from teacher guidance. This approach is referred to as "free-controlled."

Syllabi, tasks, methods, approaches, strategies, and models should be developed based on the student’s prior experiences. This has implications for anyone who aspires to engage in and contribute to EFL teaching and learning, especially non-native speakers. This is why we challenge students to be independent in their chosen subjects while still being under the direction of teachers; we call this “free-controlled.”
This study is limited by the fact that technology-assisted peer learning assessments hold promise in enhancing collaborative learning experiences. Limitations related to access to technology, internet connectivity issues, and digital literacy among students may affect the effectiveness and equity of such approaches. Apart from this RBC in teaching English as a Foreign Language (EFL), this study did not investigate the challenges encountered by doctoral EFL teachers in implementing RBC. This is considered a limitation of this study, and it is recommended that future studies address this gap. Furthermore, to enhance the application of RBC, it is suggested that future research should focus on the following areas: (1) incorporating fluency-oriented speaking tasks and open-ended speaking diagnostic tasks, (2) designing for online assessment and evaluation of speaking rubrics, (3) employing technology-assisted peer learning assessments, (4) examining gender disparities in collaborative abilities, (5) implementing projects based on collaboration using pre- and post-group models, and (6) exploring projects based on classroom interaction-based trending topics.

**Declarations**

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