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Effect of Reverse Learning on EFL Learning Demand Speech Acts: Acceptance and Achievement

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Abstract

Innovation and affordances of technology-based digital platforms offer ample opportunities to enhance the efficacy of language learning. Drawing on this issue, this study sheds light on the impact of reverse learning on developing EFL learners' pragmatic competence. To reach the objective, 64 Indonesian EFL learners were divided into flipped and control groups. In the reverse group, the participants learned course materials posted through WhatsApp prior to the class. The in-class learning activities were mostly emphasized to enhance the participants' communicative ability. This study employed pre-test and post-test on Discourse Completion Test (DCT). Moreover, a written self-report survey and a Technology Acceptance Model (TAM) questionnaire were administered to depict the participants' perception and acceptance of reverse learning. The results portrayed that the participants in the reverse group were more actively engaged in the learning activities and got higher scores in the post-test. The results of the self-report survey and TAM questionnaire revealed that most of the participants of the reverse group appreciated the practice of reverse learning and voluntarily acknowledged WhatsApp as a satisfactory digital platform to facilitate learning.

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1. Introduction

About decades ago, we surely remembered that our language teaching and learning mostly devoted to learning about language structure in more teacher-centered classroom activities. The communicative goals of learning a target language seemed to be put aside. Students were simply becoming passive receptors who received course materials from their teachers. However, with the advanced growth of technology and its integration into education in recent years, the language teaching-learning paradigm has been shifting to more communicative student-centered learning activities (Al Asmari, 2015; Teh, 2021). A new approach to learning called blended learning, which emphasizes collaborative activities and a student-centered learning environment, has emerged (Momtaz & Garner, 2010). Reverse learning, which is one of the models of blended learning instruction, offers learning time and collaboration for learners before, during, and after the class due to its inverted learning process (Bergmann & Sams, 2012). In reverse learning, teachers create pre-class course materials in the forms of videos, websites, case studies, or other tasks as inputs of materials for students before attending the class. Thus, students have a lot of exposure to the course materials, and the classroom hours are mostly devoted to collaborative activities, practices, presentations, and projects (Birgili et al., 2021).

The main goal of reverse learning is allocating more time for students to engage in learning activities about a particular course material (Eppard & Rochdi, 2017). The advantages of this technology-based instruction for language learning have been acknowledged by many scholars. Safiyeh and Farrah (2020) revealed that reverse learning was empirically proven as an effective approach to enhancing EFL learners' language skills (e.g., speaking, reading, writing, and listening). Alsowat (2016), Huang et al. (2022), and Hwang et al. (2019) stated that reverse learning could enhance students' higher-order thinking skills (e.g., application, analysis, synthesis, and evaluation), learning engagement, achievement, and satisfaction. Moreover, Wulandari (2017) and Xiao et al. (2018) found reverse learning as a promising instruction to foster college students' autonomous learning. Furthermore, Chen Hsieh et al. (2017) successfully demonstrated that reverse learning enhanced not only EFL students' motivation but also significantly improved language skills and idiomatic knowledge. Most of the previous studies spotlight that reverse learning instruction goes beyond physical constraints (e.g., space, time) and allows learners to study course materials outside class hours anytime and anywhere in their spare time as long as they are connected to the internet.

Research on reverse learning has experienced massive growth at the time of the COVID-19 pandemic. Plenty of studies have shown that reverse learning played a crucial role in facilitating blended learning in various contexts amidst the global pandemic. Tang et al. (2020) disclosed that the combined model of online learning and reverse instruction successfully boosted students' performance, motivation, and attention to engage in the learning activities. Lo et al. (2021) stated that secondary school students demand open access to reverse learning resources such as instructional videos, recommended websites, and dynamic courseware. In a similar direction, Nerantzi (2020) explored the efficacy of reverse instruction on technology-based learning to support flexible blended learning during and after the COVID-19 pandemic. The finding disclosed that reverse learning could stimulate learning and create active engagement in the whole learning process in a blended model. These studies provide an alluded picture of the efficacy of reverse learning to facilitate blended learning activities during and in the post-COVID-19 era. So far, studies on reverse learning show positive results as a promising modern learning instruction to enhance students' learning outcomes.

From the previous studies, we are well-informed about the significant role of reverse instruction in enhancing students' learning outcomes (e.g., Alsowat, 2016; Chen Hsieh et al., 2017; Haghighi et al., 2019; Hung, 2015). However, it appears that only Haghighi et al.'s (2019) research examines the impact of reverse learning on pragmatic competence (speech acts of refusal). Hence, exploring the aspect of interlanguage pragmatics of other speech acts is a worthy inquiry. Studies on the development of EFL learners' pragmatic competence still require more paucity of evidence. Considering the promising results of reverse learning in

improving language learning outcome, it is worth inquiry to scrutinize its effectiveness in the field of pragmatics which is a crucial part of communicative competence. More specifically, this study is different in two ways from the work of Haghighi et al. (2019). First, Haghighi et al. (2019) examined the impact of reverse learning on the appropriate use of refusal acts, while this study explores its effectiveness on the EFL learners' speech acts of requests. What else sets this study different is the use of the WhatsApp application to assist the reverse learning practices, whereas previous studies used the Line application (Chen Hsieh et al., 2017) and Telegram (Haghighi et al., 2019). A punctilious inquiry of WhatsApp application in developing EFL learners' pragmatic competence through reverse learning instruction still seems to scare. Hence, this study is to address the current gap in reverse learning by employing WhatsApp, the most frequently-used instant messenger in Indonesia, to enhance EFL learners' pragmatic competence.

The in-hand study aims to scrutinize the significant impact of reverse learning instruction on EFL learners' pragmatic competence in requesting acts. It further examines the EFL learners' perception of the practice of reverse learning environments. Furthermore, their acceptance of the use of WhatsApp to assist the reverse classroom is also explored. Therefore, this study is guided by the following research questions:

(1) Does reverse learning instruction have a significant impact on Indonesian EFL learners' appropriate use of speech acts of request?
(2) What is the perception of Indonesian EFL learners toward the practice of reverse learning instruction?
(3) To what extent do Indonesian EFL learners accept the use of WhatsApp application to assist reverse learning instruction?

2. Theoretical Framework

2.1. Reverse Learning

Reverse instruction changes the focus of learning from class hours to outside a formal classroom by assigning learners to pre-class activities; thereby, the class hours are more allocated for communication (Bauer-Ramazani et al., 2016). With more time allocation for interaction, a reverse learning environment provides ample opportunities for learners to gain learning exposure and achieve a better language performance (Bergmann & Sams, 2012). The administration of reverse learning highly depends on the availability of digital technology platforms as a learning tool to facilitate content presentation of course materials beyond the classroom. In reverse learning instruction, technology has a crucial role in delivering materials, mostly in the form of videos, in pre-class activities (Chung & Lee, 2018). Moreover, the success of reverse learning instruction relies on learners' active participation in pre-class tasks and vigorous engagement in in-class activities. Hence, plenty of time allocated for the learning process in a reverse classroom may allow learners to improve their understandings to reach a deeper level of cognitive ability (Lee & Lai, 2017).

Reverse learning is closely associated with the urgency of pre-class activities. However, it is actually more than tasks and assignments posted on a digital learning platform before class (Bergmann & Sams, 2012). Lee and Lai (2017) emphasized that the crucial part of reverse instruction highly depended on teachers' and learners active engagement in in-class learning experiences. It is proportional to argue that rigorous preparatory tasks are required to foster learners' readiness prior to the class to prepare learners for such in-class active learning experiences (Kassaie et al., 2021). In other words, the authors would say that an ideal combination of pre-class and in-class learning activities is the primary key to the success of a reverse classroom. Therefore, the crucial aspects of reverse instruction are perfect combination of pre-class tasks using video clips, recommended websites, material notes, and interactive online practices, and in-class learning experiences through group projects, presentation, conversation, discussions, scaffolding, and teacher-student feedbacks.

2.2. Pragmatic Competence and Speech Acts of Request

Pragmatic competence, which is a key element of communicative competence, is defined as learners' ability to use a target language in the appropriate context of communication (Celce-Murcia, 2008). For long years, English language teaching had been devoted to structural aspects and vocabulary memorization of the target language before the emergence of communicative

language teaching (CLT) (Thamarana, 2015). However, the mastery of grammatical knowledge and vocabulary acquisition was not enough to be a successful language learner (Güneş & Ortaçtepe, 2019; Mashudi et al., 2022). To be communicatively competent, a language learner needs to pay attention to the ability to speak the target language appropriately based on the real context of communication (Estaji & Jahanshiri, 2022; Yazdanfar & Bonyadi, 2016), which is called pragmatic competence.

The idea of pragmatic competence is closely associated with the concept of language speech acts (Levinson, 2017). Speech acts are acts referring to an action produced by speakers through utterances (Petrey, 2016). The most frequently-used speech acts in daily communication is requesting acts. A request is a directive speech act whose intention is to obtain the interlocutors' attention to do something in the circumstances (Levinson, 2017). The structure of a request may consist of two parts, the head act (the actual request) and modifications of the request (Jalilifar, 2009). In conveying a request, a speaker uses a particular strategy to ensure the clarity of her/his request. According to the Cross-Cultural Speech Acts Realization Project (CCSARP) initiated by Blum-kulka and Olshtain (1984), request strategies are classified into three: direct, indirect, and conventionally indirect. As request is the most common speech acts, the speakers' appropriate use of requesting acts reflects the level of pragmatic acquisition (Daskalovska et al., 2016). Therefore, this study explores the EFL learners' appropriate use of requests and its significant association with reverse learning instruction.

3. Methodology

3.1. Participants

The in-hand study aims to examine the impact of a reverse learning environment on the development of EFL learners' pragmatic competence. To this end, this study involved 64 EFL learners (41 females and 23 males) from a public university in Central Java province, Indonesia. Their ages ranged from 17 to 20, with 18 on average. They were taking a compulsory course called Speaking II, which is a suitable place to develop students' pragmatic competence. They had experienced studying English for five years on average. They were randomly divided into reverse (N=32; called S1-S32) and control groups (N=32).

3.2. Instruments

Three types of instruments were utilized to collect the required data: a Discourse Completion Test (DCT), a written self-report survey, and a Technology Acceptance Model (TAM) questionnaire. First, the DCT was used to measure EFL learners' development of pragmatic competence through pre-tests and post-tests. In this study, the DCT examined the EFL learners' appropriate use of requesting acts in English. The DCT was the modified version of Nugroho and Rekha (2020), consisting of 12 situations and scenarios in which the participants' were assigned to produce speech acts of requests accordingly (for the detail, see Appendix 1). Each scenario took into account the degree of politeness, imposition, and social statuses of higher, lower, and equal. To ensure the scoring validity and reliability, two native speakers were assigned as raters to examine the participants' responses according to the appropriateness scale developed by Hudson (2001). Each scenario was measured by a 5-scale score ranging from 5 (completely appropriate), 4 (mostly appropriate), 3 (generally appropriate), 2 (not very appropriate but acceptable), and 1 (not appropriate and not acceptable). With 12 scenarios (in each test), the score was between 12 (the lowest) and 60 (the highest) for each participant. Each participant obtained two scores from the two raters, and the participants' final score on DCT was based on the mean score of the two raters. Before performing their jobs, the two raters were trained on how to score the participants' responses according to Hudson's (2001) rating criteria. To ensure the inter-raters' reliability, Pearson correlation was administered, indicating a strong correlation of two raters in pre- and post-tests (r=0.82 & 0.84), respectively.

Second, a written self-report survey was administered to reveal the participants' perception of the reverse learning practice to enhance pragmatic competence. It comprised five open-ended questions scrutinizing (1) the participants' perception of the comparison between reverse and regular learning, (2) the problems encountered by the participants during reverse learning, and (3) the participants' suggestions to improve the practice of reverse learning, (4) the role of reverse learning to

enhance the participants' production of requesting acts in English, and (5) the participants' favorite part in the reverse learning (see Appendix 2). The written self-report survey was only given to the participants in the reverse group after they had experienced the reverse learning environment. They wrote their feelings and ideas on the provided spaces and submitted the survey to the researchers, who also acted as the raters of the self-report survey. To ensure the reliability, before administration, the question list was checked by two experts in the field of English language teaching and was revised according to their comments and improvements.

Third, a Technology Acceptance Model (TAM) questionnaire was further employed to examine the participants' acceptance of the use of the WhatsApp mobile application to assist in the practice of reverse learning activities. In this study, TAM is a perception questionnaire to explore whether this digital-based mobile platform is acceptable for EFL learners to improve their appropriate use of speech acts of requests. This study adopted the TAM questionnaire developed by Davis (1989). The constructs of the questionnaire comprise perceived ease of use (PEU), perceived usefulness (PU), attitude toward use (ATU), and behavioral intention (BI). In the development of TAM, Huang et al. (2012) added material characteristics (MC) and system characteristics (SC) to the constructs of the questionnaire. Hence, this study made use of the six constructs (PEU, PU, ATU, BI, MC, and SC) to explore the participants' acceptance of the use of WhatsApp-enhanced reverse learning activities (see Appendix 3 for more detail). The TAM questionnaire in this study consisted of 24 statements (4 items of each construct) which were measured using 5-point Likert scale ranging from 5 (strongly agree) to 1 (strongly disagree). To ensure the validity, two experts in the area of technology in English language teaching were invited to review the TAM statements. In addition, the reliability was examined using Cronbach's coefficient alpha for each construct and resulted in the consistency of 0.81.

3.3. Procedure

3.3.1. Data Collection

After grouping the participants into reverse and control, pre-tests on DCT were conducted for both groups. The reverse group was given a learning orientation about the reverse classroom environment after taking the DCT. WhatsApp application was utilized as the digital platform to assist learning activities prior to the class. WhatsApp is the most frequently used mobile communication tool in Indonesia; hence, the participants had already familiar and did not need special training on how to use it. After the administration of pre-test, the participants of the reverse group were taught in a reverse learning environment for eight meetings. Prior to the class, they were required to watch videos given by the lecturer, analyze English content about cross-cultural understanding on YouTube, visit particular websites provided by the lecturer, and read several English materials. The videos and materials could be easily accessed through the WhatsApp group, so the participants could replay them in any of their spare time before or after the class. Meanwhile, the participants in the control group were given similar instruction but in a conventional manner inside the class.

The key feature of reverse learning is the activities before the class and the instructions inside the classroom. The course materials of each meeting were created according to short lecture videos in about three minutes, followed by YouTube videos containing request strategies, recommended websites, and reading materials about the topic of the lesson. These contents were delivered to the participants through the WhatsApp group two days before the in-class schedule. The participants were assigned to watch and study the course materials related to speech acts of requests prior to the class. They were also permitted to have a discussion, feedback, or question with their classmates in the WhatsApp group. The in-class activities were then used to have a lot of practice and exposure to communication and conversation. The in-class activities included practicing dialogues, performing role-play, and having feedback and discussions among lecturers and students on the course materials about speech acts of requests. On the other side, the participants of the control group were taught with the same course materials inside the classroom. They also watched and studied the videos and YouTube video clips about cross-cultural understanding and requesting acts. However, they were not given the instructions prior to the class using the WhatsApp application like in the reverse group.

The participants' pragmatic competence in both reverse and control groups was tested using the same pre-test and post-test on DCT. The DCT was a role-play scenario comprising 12 situations with a provided blank space on each scenario where the participants put their request responses. They were given 45 minutes to provide responses on DCT, and if they found an ambiguous question or scenario, they could ask the lecturer. Two sets of DCT were administered in pre-tests and post-tests for both reverse and control groups at the same time. After the administration of pre-tests, reverse learning instructions, and post-tests, a written self-report survey containing five open-ended questions was further employed to examine the participants' perception of studying English requests via reverse learning instructions. In the end, a TAM questionnaire was utilized to portray the participants' attitudes and acceptance toward the use of the WhatsApp application as the digital platform to assist the reverse classroom environment.

3.2.2. Data Analysis

The data obtained through the aforementioned instruments were further analyzed with the assistance of statistical software SPSS version 24. With regard to the first research question to see the participants' improvement in the level of pragmatic competence in both reverse and control groups, Two Paired sample t-tests were conducted. Moreover, an independent sample t-test was administered to look at the comparison of post-tests of reverse and control groups. As for the second research question about the participants' perceptions of reverse learning, a qualitative analysis of the written self-report survey was conducted. The analysis was performed independently by each research comprising reviewing, coding, thematic analysis, and concluding. Then, stages of discussion were conducted to achieve a consensus about the qualitative findings related to the second research question. Finally, for the third research question about the participants' acceptance of WhatsApp application in reverse learning, descriptive statistics were used to depict the mean scores of each construct in the TAM questionnaire performed by the participants in the reverse group. Figure 1 presents the procedures of instructions and data collection of this study.

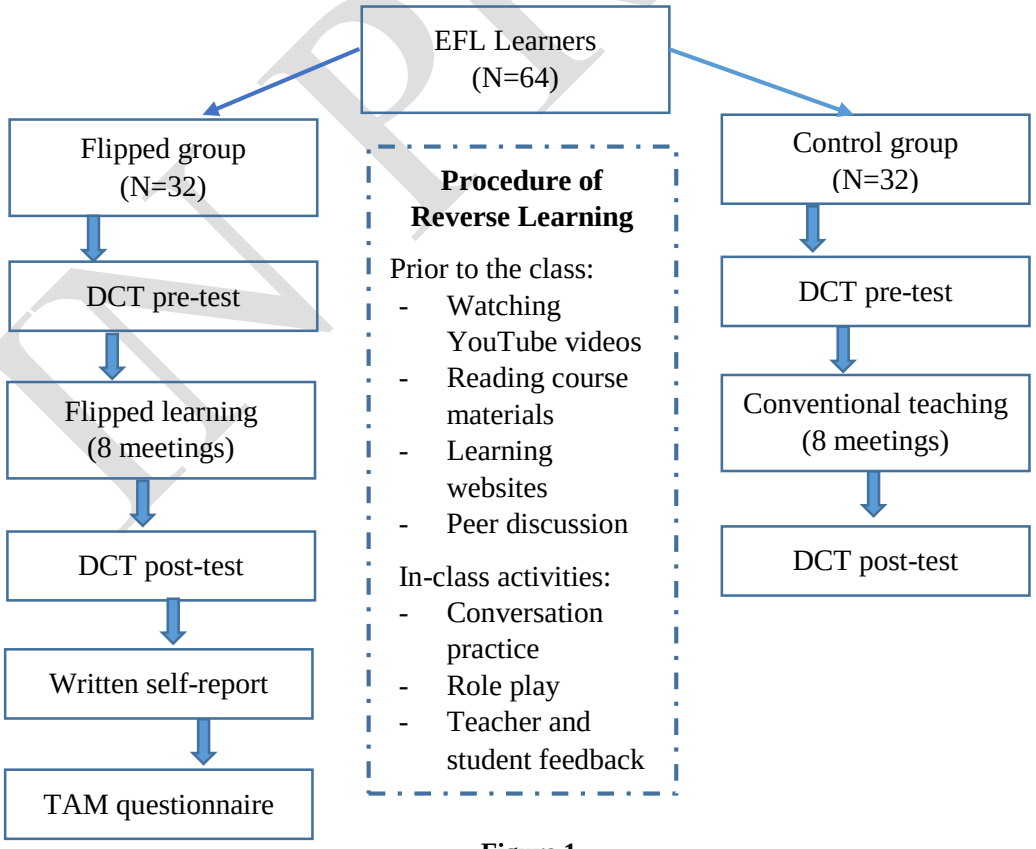

Figure 1
The Procedure of This Study

4. Results

4.1. Impact of Reverse Learning on EFL Learners' Speech Acts of Requests

Regarding the first research question, descriptive statistics comparing the participants' scores on DCT pre-tests and post-tests for both reverse and control groups were conducted (see Table 1). Table 1 depicted that, in both reverse and control groups, the mean score of the post-test was higher than that of the pre-tests. More specifically, both participants in the reverse and control groups had an improvement in the post-tests (reverse: 44.70 from 26.80 in pre-test; control: 35.27 from 27.30 in pre-test). Looking at more detailed information on the post-test, the mean score of the participants in the reverse group (M=44.70) was much higher than the mean score in the control group (M=35.27).

Table 1
Descriptive Statistics on the Pre-Tests and Post-Tests of Reverse and Control Groups

	Modes	N	Mean	SD	Std. Error Mean
Pre-test	Reverse	32	26.80	3.76	0.74
	Control	32	27.30	4.67	0.78
Post-test	Reverse	32	44.70	4.81	0.82
	Control	32	35.27	5.31	0.875

Moreover, Table 2 shows the result of paired sample t-test of pre-tests and post-tests of both reverse and control groups. The result portrayed that the participants' mean scores of DCT in post-tests (reverse and control groups) were statistically significantly higher ($p<0.05$) than the mean scores in the pre-tests. The mean scores differences between pre-tests and post-tests of reverse and control groups were 17.90 and 7.97, respectively.

Table 2
Result of Paired Sample T-Test of Reverse and Control Groups

Paired differences				95% Confidence interval of the difference				
	Mean	SD	Std. Error Mean	Lower	Upper	*t*	df	Sig. (2-tailed)
Post-test – Pre-test	17.90	3.314	.671	16.620	19.180	21.190	28	.000
Post-test – Pre-test	7.97	3.603	.654	6.690	9.250	12.782	28	.000

Furthermore, an independent sample t-test was run to look into the significant difference between the participants' mean scores of the post-tests in reverse and control groups. The result of this analysis is presented in Table 3. Table 3 demonstrated that the participants' mean score for the post-test in the reverse group was significantly higher than those in the control group ($p<0.05$). This finding suggests that both models of learning (reverse and conventional) have statistically been proven effective in promoting the participants' development of pragmatic competence. However, the finding also indicated that the reverse learning instruction contributed to better learning outcomes with a 17.90 difference of improvement in the participants' mean scores from 26.80 in the pre-test to 44.70 in the post-test; while the control group only resulted in 7.97 improvements from 27.30 in the pre-test to 35.27 in the post-test. In a nutshell, the reverse learning environment is a promising method and seems to be more effective in promoting EFL learners' appropriate use of requesting acts in English.

Table 3
Result of Independent Sample T-Test of Post-Tests of Reverse and Control Groups

Mode	N	M	SD	*t*-test for equality of means		
				t	df	Sig.
Reverse	32	44.70	4.61	4.78	30	.000
Control	32	35.27	5.82			

4.2. EFL Learners' Perception of Reverse Learning

The second research question of this study revealed EFL learners' perception of reverse learning practice to enhance pragmatic competence. The majority of the participants argued that a reverse learning environment was a promising alternative to foster English speech acts of requests and led to more active engagement. The below quotes are pieces of the participants' responses to each of the questions in the written self-report survey. About the first self-written question related to their perception of the use of reverse learning, the participants mostly provided positive answers:

S11: It was a very interesting experience for me to learn the English language in the reverse learning activity. I could watch videos, read course materials, and share with friends before attending the class. These activities help me to promote my understanding of the learning materials.

S23: I think reverse learning is more fascinating than a regular class. We often feel boring in the regular class, but prior to class activities in reverse learning, I rather enjoy it because we have a lot of exposure to discuss, practice, and make conversation with friends and the lecturer.

In response to the second question about problems that might be encountered, some participants pointed out that reverse learning activities required a larger amount of time and effort than the conventional learning mode. Consequently, it is sometimes hard to follow. Some responses from the participants (S1 and S10) showed that they were often late to join pre-class activities due to other daily routines. Moreover, slow internet connection also became a problem for some participants (S13 & S24).

S1: I think reverse learning is good, but it needs a lot of time to follow. I am often late in joining pre-class activities through the WhatsApp group because I do another agenda.

S10: The problem with reverse activities is that it takes too much time and effort because we have to prepare course materials even since the class has not yet begun.

S13: Since I lived in a disadvantaged area, my problem is with the internet connection. I often have to go to a public space (with a good internet connection) to download videos or course materials sent by the lecturer.

As for the third question about suggestions on how reverse learning could be improved, a few of the participants (S16 and S4) provided an insight that all students were more active when having a discussion in the WhatsApp group. Moreover, the lecturer also suggested designing more communicative tasks and activities.

S4: My suggestion to improve reverse learning is that other students should be more active in the discussion and dialogue activities, particularly in pre-class activities through the WhatsApp group.

S16: The activities are good enough, but I think the lecturer could design more communicative tasks and learning activities so the students are more actively engaged in the activities.

With regard to the fourth question about the effectiveness of reverse learning in enhancing pragmatic competence, the participants' answers were mostly positive. The model of reverse learning environment offered them ample opportunities to practice and gain a lot of exposure to the appropriate use of requesting acts in English. Reverse learning activities further provided them a large amount of time to do rehearsal both prior to the class and inside the class.

S32: It [reverse learning] is effective according to my learning experience. It gives me opportunities to do a lot of practice on giving and refusing speech acts of requests. What makes it even more effective is that we can see the example in the real context of communication through videos.

S27: I like the activities before the class. They give me the motivation to learn more and engage in the activities given by the lecturer. The pre-class activities in the WhatsApp group facilitate me to do some kind of practice and rehearsal as a preparation for in-class activities.

In terms of the last question about the favorite part of the reverse learning activities, most of the participants acknowledged that the freshness, design, and communicative aspects of the reverse learning were the key reason why they positively perceived this blended learning model.

S25: The most favorite part of the reverse learning activity is that I can watch videos and learn other course materials before class. It gives me the motivation to engage in learning activities.

S16: I like it [reverse learning] because it is relatively new for me. It gives me a different learning experience.

S19: My favorite part is when having discussion and dialogue practices about delivering requests in English with my classmates.

4.3. EFL Learners' Acceptance of the use of WhatsApp in Reverse Learning

The third research question of this study explores the participants' acceptance of the use of WhatsApp to facilitate reverse learning in developing pragmatic competence. The TAM questionnaire was used to measure the participants' acceptance. Overall, the participants were in a positive attitude toward using WhatsApp for language learning, including for enhancing the appropriate use of requesting acts. The result of descriptive statistics of the TAM questionnaire is presented in Table 4.

Table 4
Descriptive Statistics of the TAM Questionnaire

Construct	Mean	SD	Min.	Max.	N of Items
Perceived ease of use	4.15	.51	3	5	4
Behavioral intention	3.95	.46	2	5	4
Attitude about use	3.92	.43	2	5	4
System characteristics	3.43	.41	2	5	4
Perceived usefulness	4.24	.56	3	5	4
Material characteristics	3.51	.47	2	5	4

Notes: The mean score was the average value of the 5-point Likert scale in the TAM questionnaire.

The result presented that, among the six constructs of TAM used in this study, perceived usefulness (M=4.24) was in the first place, followed by perceived ease of use (M=4.15), behavioral intention (M=3.95), attitude about the use (M=3.92), material characteristics (M= 3.51), and system characteristics (M=3.43). Regarding the construct's perceived usefulness, the result indicated that the participants' acknowledged the advantaged aspects of the WhatsApp application in facilitating a reverse learning environment. The finding of the construct perceived ease of use implied that the participants were already familiar with the use of WhatsApp as a digital learning platform. With respect to the construct behavioral intention, most of the participants agreed that they continuously engage in learning a language through the WhatsApp application. As for the construct attitude of use, the participants mostly stated that WhatsApp was a promising digital medium to assist language learning, and it was highly possible to incorporate WhatsApp in the design of a language curriculum. Moreover, the construct material characteristics indicated that the course materials (mostly in the forms of video lectures and websites) posted by the lecturer improved their language proficiency and pragmatic competence, particularly in the appropriate use of speech acts of requests. Finally, in terms of the construct system characteristics, the participants accepted that the WhatsApp application made them possible to actively engage in highly interactive learning both prior to and in-class activities as well as develop their production of speech acts of requests.

5. Discussion

The in-hand study sheds some light on the impact of reverse learning on EFL learners' appropriate use of requesting acts in English, their perception of the reverse learning practice, and their acceptance of the WhatsApp

application to assist their language learning in a reverse classroom. The primary findings of this study are (1) the EFL learners in the reverse learning achieved a better score of DCT on the post-test than on the pre-test, as well as outperformed the EFL learners in the control group, (2) the EFL learners in the reverse classroom positively acknowledge the practice of reverse learning, and (3) majority of the EFL learners accept that WhatsApp application is a convenient mobile-based platform for developing speech acts of requests through reverse learning.

First, the finding of the current study reveals that a reverse learning environment significantly improves the level of EFL learners' pragmatic competence through speech acts of requests. This finding could be explained with regard to the nature of reverse learning activities. The course materials provided to the EFL learners prior to the class offer a good learning opportunity for them to strengthen their understanding of the materials. The pre-class activities such as watching videos, learning through websites, reading related materials, and discussing with classmates are fertile grounds for EFL learners to obtain a lot of exposure to language learning. They could perform practices and rehearsals on the appropriate use of speech acts of requests in English. Moreover, the in-class activities in reverse learning are full of production and interaction to foster their pragmatic competence. The significant impact of reverse learning on the development of EFL learners' appropriate use of requests in this study depends on whether the learners actively engage in both pre and in-class activities. Considering the significant finding, the EFL learners who participated in this study were successfully performing pre-class and in-class activities in the reverse learning environment through the assistance of the WhatsApp application.

This finding is notably consistent with previous studies conducted by Brewer and Movahed-azarhouligh (2018), Chen Hsieh et al. (2017), Pardosi and Ming (2021), and van Alten et al. (2021) that English students in the reverse group performed better than those in the non-reverse group. The preceding studies were undertaken to examine the impact of reverse learning on EFL learning, higher-order thinking skills (HOTS), and language skills such as writing, reading, and speaking. However, we hardly found previous studies that measure the impact of reverse learning on interlanguage pragmatics. The study of Haghighi et al. (2019) was the first to explore the effect of reverse learning on the appropriate use of refusal in English. While the study of Haghighi et al. (2019) depicted a significant contribution of reverse learning on refusal, this study seems to reveal a similar finding. The difference lies in the target variable in which this study measured the impact of reverse learning on speech acts of requests. In terms of the learning platform, the study of Haghighi et al. (2019) made use of Telegram, while this study employed WhatsApp mobile-based application. Despite the differences, the studies of Haghighi et al. (2019) and the present study resulted in a similar finding that reverse learning was still statistically proven to be an effective instruction for developing speech acts of refusal and requests.

Second, regarding the EFL learners' perception of the practice of reverse learning, the finding portrays that they positively perceive the learning environment in both pre-class and in-class activities conducted in the reverse learning instruction. The EFL learners acknowledge that reverse learning was effective in enhancing the appropriate use of speech acts of requests in English. They were quite satisfied with the reverse learning instruction. This finding suggests that the reverse model of instruction, although it is relatively new in the Indonesian EFL learning context, has successfully attracted the learners' engagement in the language learning activities. This finding is in accordance with the results of Afrilyasanti et al. (2017), Fauzan and Ngabut (2018), Makruf et al. (2021), and Wu et al. (2017) that EFL learners recognize reverse learning as an interactive and promising instruction model for language learning.

This finding provides a literature enrichment to the use of reverse learning for enhancing EFL learners' interlanguage pragmatics. The study on the impact of reverse learning on learners' interlanguage pragmatics was only previously conducted by Haghighi et al. (2019) with regard to developing EFL learners' appropriate use of speech acts of refusal. Now, this study's findings validated the role of reverse learning in promoting interlanguage pragmatics of EFL

learners' requesting acts in English. The results of these two studies confirm the urgency of today's teaching paradigm that language learning should be more student-centered. The idea of traditional teachings that consider students as empty glass and need to be filled out with knowledge and understanding must have been shifting to a more innovative model of instruction such as reverse learning which engages learners in their autonomous learning. Traditionally, conventional teaching and learning had been limited to formal classroom hours. With the emergence of reverse learning with the assistance of technology, teachers and students are not restricted by the class hours and become free to have learning activities without time and space constraints. As depicted in this study, reverse learning provides more opportunities for the learners to engage in out-of-class course practices. The design of reverse learning activities specifically works well in the EFL learning context, where EFL learners possess a lot of exposure and a chance to have practice in developing language skills. Considering the results of this study, the researchers highly recommend reverse learning design to be integrated into the EFL syllabus and curriculum of universities to promote the efficacy of language learning both inside and outside class hours.

Third, the finding of the TAM questionnaire depicts that the EFL learners' highly acknowledge the use of WhatsApp application in the reverse learning activities to enhance pragmatic competence. This finding indicates that the EFL learners found WhatsApp as a digital platform offering a convenient and realistic English learning environment; hence, it leads to effective learning. The potential reason to validate this finding is that the Indonesian EFL learners have already become familiar with WhatsApp as the most frequently-used daily instant messaging in Indonesia. It was reflected by the high mean score of perceived ease of use (M=4.15) in the TAM questionnaire. This finding suggests that the Indonesian EFL learners consider WhatsApp as an easy-to-use digital platform to assist language learning through reverse classroom instruction.

This finding is in line with the argumentation of Alshammari et al. (2017), Bensalem (2018), and Khan et al. (2021) that WhatsApp, originally a social media platform, offers a less-threatening environment for learning and provide more chances to create more communicative learning tasks. This finding further pointed out that WhatsApp fulfills the criteria of social media selection used as a digital learning platform, including facilitating plenty of communicative interaction, assisting learners' autonomy, developing learning awareness outside the class, and gaining perceived ease of use (Slim & Hafedh, 2019). In terms of EFL acceptance toward the use of social media as a digital learning platform, the finding of this study is also consistent with what has been found by Haghighi et al. (2019), who utilized Telegram as the online learning platform in reverse learning instruction. However, this study resulted in higher mean scores on most of the elements of the TAM questionnaire, particularly in the aspects of perceived ease of use and perceived usefulness. It might be due to the popularity of WhatsApp among Indonesian EFL learners who have already been using this mobile-based instant messaging in their daily life.

Overall, previous studies' results on reverse learning have demonstrated that EFL learners usually show a positive perception toward the use of digital technology for learning activities when they also use it in their daily life (Abeysekera & Dawson, 2015; Chen Hsieh et al., 2017b). From the results of this study, it can be inferred that most of the EFL learners were well-prepared in the reverse learning environment because of pre-class activities. However, the results of this study also present that workload and a large amount of time became the main challenges encountered by the learners in reverse learning activities. The difficulty might be it is hard to convince the EFL learners to perform autonomous learning and to deal with the workload as well as the large time consumption. Therefore, the role of teachers is crucial here. They must be able to find ways to design an effective reverse learning activity to enhance the EFL learners' interlanguage pragmatics. Teachers are required to regularly monitor the whole process of reverse learning activities to provide feedback and assistance, as well as to solve problems that might be occurred.

In conclusion, this study is at the cutting edge of examining the impact of reverse learning

instruction on the EFL learners' appropriate use of speech acts of requests in English. This study made use of the WhatsApp application as the digital learning platform to assist the practice of reverse learning. Drawing on the DCT, self-written survey, and TAM questionnaire, the results depict that reverse learning is statistically proven as an effective instruction to enhance the EFL learners' speech acts of requests in English. The results of the self-written survey and TAM further reveal that the EFL learners show a positive attitude toward the implementation of reverse learning, as well as consider WhatsApp as an effective digital platform to facilitate reverse learning.

This study has several limitations. The participants of this experimental research were the researchers' own students since, at the time of this study, it was not feasible to involve other students from different teachers. Hence, a similar study should be carried out to ensure that the results of this study are not influenced by the bias of the researchers. Moreover, this study, along with the Haghighi et al. (2019) research, is the initial inquiry to examine the impact of reverse learning on EFL learners' interlanguage pragmatics. Although the two studies offer promising empirical evidence of the significant role of reverse learning on EFL learners' pragmatic competence, replication research involving a greater number of samples is required to generalize the current findings. Therefore, future studies are suggested to conduct research on reverse learning and interlanguage pragmatics by recruiting a greater number of participants.

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Appendices

Appendix 1: Sample of DCT

Situation 1:

It is about 9 PM. You are working on homework and it must be submitted tomorrow. A new neighbor about your age whom you do not already know is playing music very loudly. You are disturbed since you cannot concentrate on your work, and you want him to turn down the music volume. *What will you say?*

Situation 2:

You are having dinner at a restaurant. You want a waiter to give you more sugar. *What will you say to the waiter?*

Appendix 2: Questions of the Self-Written Survey

1. What do you think of flipped learning instruction in comparison with your regular classes?
2. Did you encounter problems/challenges during the flipped classroom? If yes, mention them.
3. In your opinion, what improvements can we make to enhance the efficacy of flipped classrooms?
4. Do you think reverse learning makes a better contribution to the development of your appropriate use of speech acts of requests?
5. What was your favorite part of the flipped classroom activities?

Appendix 3: Sample of the TAM Questionnaire

All items were measured using a 5-point Likert scale starting from 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree), and 5 (strongly disagree).

System Characteristics (SC)

SC 1: I think WhatsApp gives a realistic learning environment for doing learning activities.

Material Characteristics (MC)

MC 1: I think the course materials in pre-class made me learn better how to deliver speech acts of requests in English.

Perceived Ease of Use (PEU)

PEU 1: WhatsApp offers clear guidance on how to get the course materials (open, download, share)

Perceived Usefulness (PU)

PU 1: Learning through WhatsApp helped me to speak English fluently, particularly in delivering requests.

Attitude toward Use (ATU)

ATU 1: I like using WhatsApp to learn English

Behavioral Intention (BI)

BI 1: If I access WhatsApp, I will continue using it to learn and practice English.