Synergizing Classroom Communication: Analysing IRF Patterns and Turn-Taking through Language Translator Devices for Holistic Learning Transformations

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Abstract:

This study examines interaction patterns and turn-taking in classroom learning through a classroom discourse analysis approach. It aims to explore the communication dynamics between teachers and students using Language translator devices, identifying dominant patterns during the learning process. The research employs a qualitative method, with data collected through classroom observations using Language Translator Devices in the Class XI setting at Alagar Public School. Participants included one teacher and 28 students, making up 29 participants. The findings reveal the sequences that emerge from teacher-student interactions, via the Language translator devices particularly highlighting the importance of the Feedback sequence within the IRF (Initiation-Response-Feedback) framework in fostering dialogue between teachers and students. The study shows that the teacher dominates classroom communication 62.5% of the time, while students contribute 37.5%. since the teachers are talking in their regional language in the classroom, learners won't be able to gain more knowledge of English. As we live in the era of technology, this study explores how technology tools

like language translator devices help students learn English. The results of this research paper suggest that ineffective communication may contribute to students' misunderstandings, limited critical thinking skills, and reduced responsiveness. It also proves that using technology in the classroom would foster students' curiosity in learning language skills. The study's insights can inform the development of more inclusive and effective teaching strategies that promote a balanced distribution of real-time translation and interaction through language translator devices, as it can translate into any regional language according to convenience. This research adds to the literature on Classroom Discourse Analysis through language translator devices by addressing gaps in understanding classroom interaction patterns and their implications for teaching practices, particularly regarding feedback in the IRF sequence. The findings offer valuable guidance for educational practitioners seeking to enhance students' critical communication skills using technology tools like language translator devices. These patterns help bridge language gaps and support effective communication in diverse classroom settings, enhancing the learning experience for both teachers and students.

Keywords:

Language Translator Devices; Translation; Communication Patterns; Interaction; IRF; Turn-Taking

Introduction:

Language is considered the medium of expressing one's thoughts and ideas to another in either spoken or written format in our daily lives. Language can be described as a normal, natural, and enduring method of expressing the human mind. Though many people are not convinced with the usefulness of language, great thinkers and poets believe it can be the porter of all kinds of truths. During the British regime, there was a well-established Indian system of education; Sanskrit took its lead among the Hindu people and the Muslims patronized Arabic education. Education was given the most importance in the British regime. There were hardly any villages without a school and in those schools, Indian children were taught to read and write. The schools were running short of teachers even though the schools were open. In many schools, a single teacher was handling almost all the subjects. English language education evolved for various reasons but the British government acceded and English education came to India by 1813. Early teachers of English were not professionally trained teachers but they were native speakers from Britain. After independence, many fields were developed among them the English medium of education was predominant. They expanded the educational opportunities such as free and compulsory education to eligible children. But now English plays a major role in all fields. If one looks back to history, learning English from teachers to technology is highly evocative. The evolution of technology in English learning has been significant, beginning with the introduction of Computer-Assisted Language Learning (CALL) in the 1960s and 1970s, where early programs like PLATO provided language practice exercises. (Tynan, Belinda, et al., 2015). By the 1980s and 1990s, advancements in multimedia, including audio and video, made language learning more interactive and engaging. The advent of the internet in the 1990s further revolutionized access to English resources, enabling learners to engage with native speakers through online platforms and forums. (Godwin-Jones, et al., 2011) The 2000s saw the rise of mobile learning, with apps like Duolingo and Babbel leveraging gamification and personalized learning paths to enhance engagement. These apps increasingly used adaptive learning algorithms to tailor content to individual progress. (Herh, et al., 2020). Artificial intelligence further advanced English learning with AI tutors providing real-time feedback and tools like Grammarly enhancing writing skills. Speech recognition technology has also become crucial for improving pronunciation and listening, as it is the case with apps like Elsa Speak. Additionally, virtual and augmented reality (VR and AR) introduced immersive learning environments where learners could practice English in simulated real-world contexts. Finally, online learning platforms like Coursera and edX offered structured, accessible English courses with interactive content and community support (Levy, 1997). Though many methodologies have been emerging in learning English, recent 21st-century people are about to seek Language Translator Devices for communication. The purpose of any language is communication. To converse in English is the only thing that people in India want. Developing conversation through a Language Translator device is easy to do when English is given so much hype.

Conversation skills involve conveying a message that reflects a mutual understanding of the contexts in which the conversation takes place (Bambara et al., 2018; Croucher & Cronn-Mills, 2014). Effective communication skills are crucial for teachers to successfully impart knowledge to students (Jhoni et al., 2023; Munohsamy & Muniandy, 2023; Tottie, 2014). To communicate effectively, one must possess both mental and physical resilience to confidently interact with others and deliver their message clearly (Morgan, 2023; Padmanabhanunni & Pretorius, 2023; Ryff, 2013). A teacher's ability to communicate is vital for providing instruction, managing the classroom, and engaging with students (Dzulkifli et al., 2020; Doqaruni, 2017). Using language Translator Devices in the classroom is an enhancing method to learn English in a better way. These devices can now accurately convert spoken or written English into various languages in real-time, providing immediate translations that maintain the meaning and context of the original text. Teachers must employ various cognitive strategies and cultivate strong communication skills that motivate students and tailor instruction to each student's unique talents and abilities (Stronge, 2018). If the teacher is speaking in regional languages, that won't be trouble for students if a teacher has a language translator device. According to Khan et al. (2017), teachers with strong communication skills significantly contribute to their students' academic success. So, the communication skills would be enhanced if students learn English through a language translator device. Therefore, mastering effective pedagogy, particularly in communication, is crucial for teachers (Zhu, 2023). Gordon Pask's conversation theory, as explained by Scott (2001), suggests that the teacher-student relationship functions as a cause-and-effect system with feedback loops in communication, where the teacher can use non-verbal demonstrations to model the subject matter (Scott, 2001). Effective classroom learning relies heavily on the interactions between teachers and students, including turn-taking, which is crucial for enhancing learning outcomes (Fenyi & Nyarkoh, 2022; Wiemann & Knapp, 2017). Walsh (2006), in his book *Investigating Classroom Discourse*, argues that understanding communication patterns in the classroom provides valuable insights into interaction dynamics and can significantly contribute to improving teaching quality (Walsh, 2014). Classroom Discourse Analysis is a method for investigating communication interactions within the classroom (Alsoraihi, 2019). This approach involves observing how teachers and students interact, how speaking turns are allocated, and how student participation manifests in daily classroom communication. Understanding these patterns is vital for enhancing teaching and learning quality. Analyzing turn-taking in discourse reveals insights into the experiences of participants, including who answers questions, who poses them, and who remains silent (Ryan & Forrest, 2021). Effective turn-taking in the classroom fosters student critique, critical thinking, and accountability (Ingram & Elliott, 2014).

Zaswita's study (2022) found that classroom interactions predominantly adhered to an IRF pattern rather than an IRE pattern, based on conversational data. The research also observed that turn-taking in the classroom incorporated both IRF and IRE sequences, with a notable emphasis on teacher-initiating interactions. Engaging in turn-taking, posing and responding to questions, and providing feedback are key elements in contemporary discourse analysis research (Okata, 2016). This study aims to examine interaction and turn-taking patterns in classroom learning through a classroom discourse analysis approach. This research seeks to understand the communication dynamics between teachers and students and identify prevalent patterns during the learning process. The unique contribution of this study lies in its focus on analyzing these interactions and turn-taking patterns within the classroom context using this specific analytical approach.

Methodology:

The study utilized a qualitative research design (McLeod, 2019), which enables a deep understanding of classroom interactions and communication patterns. The research focused on an English class, specifically involving teachers and students from Class XI at SMK Muhammadiyah Mertoyudan. Participants were selected to reflect a range of learning experiences and levels of engagement in classroom interactions (Shadiev & Li, 2023). Data was gathered through direct observation and video recordings of classroom interactions, capturing real-time patterns between teachers and students. This data was analyzed using the Classroom Discourse Analysis approach with an IRF pattern (Khaliyah & Rachman, 2019). This method helps to identify and examine interaction patterns, communication strategies, turn-taking, speaking time distribution, dominant conversation types, and communication styles. The analysis process involved transcribing video-recorded interactions into text documents, assigning speaker codes to differentiate between teacher and student

contributions (e.g., T for teacher and S followed by numbers like S1, S2, S3 for students). The research calculated the frequency of Language Translator devices' utterances and then converted this frequency into percentages by multiplying the frequency value by 100, using the formula Percentage = Frequency × 100%.

Results and Discussion:

Transcript 1: Clarifying Instructions (regional language is Tamil)

Teacher: (In English) Please write a summary of the article we discussed.   I

Device: (Translates to Student's native language) Please write a summary of the article we discussed.

Student 1: (In their native language) summary explain pannunga?   R

Device: (Translates to English) Can you explain what a summary should include?   I

Teacher: (In English) A summary should include the main points and key details of the article.R

Transcript 2. Asking and Answering Questions

Student: (In their native language) story theme enna?   I

Device: (Translates to English) What is the main theme of the story?   R

Teacher: (In English) The main theme is friendship.   I

Device: (Translates back to Student's native language) The main theme is friendship.   R

Transcript 3. Providing Feedback

Teacher: (In English) Your essay needs more detail in the conclusion.   I

Device: (Translates to Student's native language) Your essay needs more detail in the conclusion.
                                                                I

Student: (In their native language) example kudukka mudiyuma?   R

Device: (Translates to English) Could you give an example of what detail I should add?   R

Teacher: (In English) For instance, you could summarize the key points you made earlier. F

Transcript 4. Correcting Mistakes

Student: (In their native language) 'well' term bathilaga good use paniten.   I

Device: (Translates to English) I used 'good' instead of 'well' in my sentence.   R

Teacher: (In English) You should use 'well' in this context. 'Good' is used for describing nouns.R

Device: (Translates back to Student's native language) You should use 'well' in this context. 'Good' is used for describing nouns.   F

Transcript 5. Discussing Homework

Teacher: (In English) Please read Chapter 3 for tomorrow.   I

Device: (Translates to Student's native language) Please read Chapter 3 for tomorrow.   R

Student: (In their native language) Chapter 3 romba neelama?   I

Device: (Translates to English) How long is Chapter 3?   R

Teacher: (In English) It's about 20 pages long.   R

Transcript 6. Providing Additional Examples

Student: (In their native language) vera example past tenseku enna?   I

Device: (Translates to English) Can you give another example of using the past tense?   I

Teacher: (In English) Sure. For example, 'She walked to school yesterday.'   R

Device: (Translates back to Student's native language) Sure. For example, 'She walked to school yesterday.'
                                                        F

Transcript 7. Checking Understanding

Teacher: (In English) Do you understand how to form questions in English?   I

Device: (Translates to Student's native language) Do you understand how to form questions in English?
                                                        R

Student: (In their native language) Mulusa illa. Explain panunga?   F

Device: (Translates to English) Not completely. Could you explain more?   R

Teacher: (In English) Questions often start with words like 'what,' 'where,' or 'how.' For example, 'What time does the class start?'   I

Transcript 8. Scheduling and Appointments

Student: (In their native language) our next exam eppo?   I

Device: (Translates to English) When is our next exam?   R

Teacher: (In English) The next exam is next Friday.   F

Device: (Translates back to Student's native language) The next exam is next Friday.   I

Transcript 9. Discussing Classroom Behaviour

Teacher: (In English) Please remember to raise your hand before speaking.   I

Device: (Translates to Student's native language) Please remember to raise your hand before speaking.
                                                        R

Student: (In their native language) evalavu neram wait pananum?   I

Device: (Translates to English) How long should we wait before speaking?   R

Teacher: (In English) Wait until the teacher calls on you.   F

Transcript 10. Reviewing Learning Objectives

Teacher: (In English) Today we will learn about comparative adjectives.   I

Device: (Translates to Student's native language) Today we will learn about comparative adjectives.

                                                                                            R

Student: (In their native language) what a comparative adjective explain pannunga?   F

Device: (Translates to English) Can you explain what a comparative adjective is?   I

Teacher: (In English) A comparative adjective compares two things, like 'bigger' or 'smarter.' F

Table 1: IRF communication pattern frequencies

Pattern	Frequencies
Initiation	24
Response	34
Feedback/Evaluation	28
Total	86

Table 2: The Result of the Study

speakers	percentage
Translator device	63.4
student	36.6
total	100

The teacher's methodical approach involves assessing students' well-being and readiness, as well as reviewing previous lessons. Incorporating video as a multimedia tool enriches the learning experience by stimulating critical thinking and facilitating discussions about specific learning goals (Carmichael et al., 2018). By prompting students to reflect on their learning and engage with real-time translation content, the teacher creates a dynamic and interactive environment that enhances students' understanding and application of new concepts. Additionally, the teacher's focus on using clear English communication while minimizing the use of Bahasa Indonesia fosters an immersive language learning environment. This method encourages students to communicate in English, boosting their fluency and confidence. The teacher employs close-ended questions as an assessment tool, which helps verify students' understanding and stimulates critical thinking by necessitating specific answers. The integration of interactive learning methods, multimedia resources, and language immersion creates a dynamic and engaging classroom atmosphere that enhances student participation, comprehension, and language development (Mahdi, 2022).

CONCLUSION

In conclusion, the turn-taking method, when combined with the use of a language translator device, significantly enhances communication skills among school students. This approach not only facilitates smoother interactions between teachers and students but also encourages active participation and engagement in the learning process. By allowing students to express themselves confidently in English, even when their proficiency is limited, the turn-taking method supports the development of both language and critical thinking skills. The structured nature of turn-taking, reinforced by the translator device, ensures that students receive timely feedback and can respond effectively, leading to improved comprehension

and application of new concepts. Ultimately, this method fosters a more inclusive and dynamic classroom environment, where all students can actively contribute and develop their communication skills. The findings from this study offer valuable insights for educators aiming to enhance classroom communication and student interactions. By incorporating these insights, teachers can modify their instructional methods to foster active learning, boost student participation, and improve the effectiveness of knowledge transfer (McConnell et al., 2017). Suggested strategies include using a variety of questioning techniques, promoting student-led discussions, and creating a classroom environment that supports and encourages open dialogue. Future research could explore the effects of specific communication strategies on student motivation, comprehension, and academic performance, providing evidence-based guidance to refine teaching practices and further engage students in the learning process.

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