

Utilization of Song-Based Learning to Improve Speech Sound Disorders Student Pronunciation: Shadow Teacher's Experience

Prita Anggina Sari Siregar¹, Benni Ichsanda Rahman Hz²
{prita0304222050@uinsu.ac.id¹, benni.ichsanda@uinsu.ac.id²}

English Education Department, Universitas Islam Negeri Sumatera Utara, Indonesia¹²

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Abstract. This study explores how a shadow teacher utilizes song-based learning to support the pronunciation development of a student with speech sound disorders in an inclusive classroom setting. A descriptive qualitative case study design was employed, with data gathered through semi-structured interviews, classroom observations, and teachers' documents, analyzed through thematic analysis. Three themes were identified: the shadow teacher's strategies in implementing song-based learning, the challenges encountered, and the students' pronunciation development and progress. The findings reveal three principal strategies: aligning song selection with classroom material, applying non-corrective feedback during pronunciation modeling, and delivering input at a deliberate pace. Challenges, including pronunciation regression, limited English proficiency, word repetition patterns, and inconsistent attendance, accompanied the implementation. Despite these obstacles, the student demonstrated discernible progress in vocabulary retention and classroom engagement. These findings suggest that song-based learning, when implemented through an individualized, contextually responsive approach, holds considerable potential as a practical instructional strategy for students with speech-sound disorders in inclusive educational settings.

Keywords: Inclusive education, Pronunciation development, Shadow teacher, Song-based learning, Speech sound disorders

1. INTRODUCTION

Inclusive education in Indonesia is grounded in the growing recognition of the importance of providing equal opportunities for all students, including those with special educational needs. Inclusive education aims to create a learning environment that enables all students to learn together, support each other, and optimally develop their potential [1]. In Indonesia, the commitment to inclusive education is reflected in several government policies. Law No. 20 of 2003 on the National Education System emphasizes that every citizen has the right to a quality education, including individuals with special needs. However, the implementation of inclusive education in the field still faces various challenges, particularly in providing learning strategies tailored to the needs of students [2].

Speaking is an important aspect of a child's language development that progresses with age. The ability to speak is considered one of the most fundamental and difficult skills to acquire, as it requires command of complex speech production sub skills such as vocabulary retrieval, grammatical pattern selection, and sociocultural competence [3]. Speech production is also a complex skill that relies on communicative competence, integrating grammatical, discourse, sociolinguistic, and strategic elements to convey meaning effectively in appropriate contexts [4]. Similarly, speaking can be defined as a productive language skill that directly reflects a speaker's ability to use language for real communication [5]. One of the central aspects of speaking is pronunciation, which plays a significant part in communicative ability and is especially crucial when learning a second language [6]. Teaching English pronunciation helps students gain the confidence to speak English wherever they go. Fraser remarks that "with good pronunciation, a speaker is intelligible despite other errors; with poor pronunciation, a speaker can be very difficult to understand, despite accuracy in other areas"p.7 [7]. However, in some children, the development of pronunciation does not proceed optimally because of speech disorders. Speech disorders can affect many parts involved in speech production, including the vocal cords, articulatory muscles,

nerves, and other oral structures, which may result in challenges in producing clear and comprehensible speech sounds [8].

Speech sound disorders (SSD) are among the most common communication disorders in preschool and elementary school children. The prevalence of SSD is estimated to be between 2 and 9% in preschool children and 2–3% in elementary school children [9]. Children with SSD have difficulty accurately producing speech sounds according to the phonological rules of language, which affects the clarity and acceptability of their speech [10]. The impact of SSD is not limited to articulation alone but also has implications for literacy development, reading and spelling skills, and long term academic achievement [11]. Therefore, effective, adaptive, and engaging learning approaches are needed to support the phonological and vocabulary development of children with SSD in inclusive educational settings.

Language development is an important process in human life that begins in infancy and continues throughout life. Language plays an important role in cognitive and social development and serves as the primary means of communication in humans. Two processes of language development can be identified. First, through the process of learning a language. The second method of development is through language acquisition. The process of acquiring a language involves a youngster picking up the language in a manner comparable to that of developing their native tongue, which allows them to acquire the language implicitly [12]. Understanding second language acquisition is very important. Understanding the process of second language acquisition may be important to educators and enable students in second language acquisition [13]. Human language is characterized by a highly complex system that distinguishes it from other forms of communication used by living beings [14]. This complexity indicates that language development does not occur instantly but through gradual and systematic stages that are in line with a child's developmental process. Through these stages, children build their ability to communicate, understand, and express their thoughts and emotions effectively [15]. Language acquisition enables humans to convey ideas, feelings, and information through spoken, written, or symbolic forms, involving the development of various linguistic components, such as phonology and vocabulary [16]–[18].

Communication is a fundamental aspect of human life that enables individuals to socialize and build relationships within their environment [19]. Prolonged communication barriers can interfere with various aspects of an individual's daily life. According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR) published by the American Psychiatric Association, disorders involving difficulties in communication, speech, or language are classified as communication disorders. Speech sound disorder (SSD) is a type of communication disorder. Speech sound disorders refer to difficulties in accurately producing speech sounds during oral communication [20]. Individuals with SSD generally exhibit characteristics such as sound omissions or additions, inappropriate sound substitutions, and sound distortions [21][22]. Although individuals with SSD generally demonstrate adequate language comprehension, they often experience challenges in articulation and expressive speech [23].

In teaching students with speech sound disorders, innovative, multisensory approaches are often used to facilitate speech sound production. Music-based interventions positively contribute to children's language skills, including speaking and pronunciation [24]–[25]. Music and language are structured means of communication that are interconnected through various components, including acoustic parameters, hierarchical syntactic structures, and rhythm [26]. Music is not only enjoyable for students with speech sound disorders (SSD), but it can also be used as a structured music-based intervention to help overcome speech sound production difficulties in a structured way. Research shows that the use of music and music based interventions contributes to improved clarity and accuracy of speech production in students with SSD, especially when songs are combined with targeted sound correction techniques [27]. Additionally, songs present speech sounds in rhythmic and repetitive patterns, which can support the phonological processes of students with SSD in learning and producing sounds consistently.

Students with speech sound disorders often experience reduced speech intelligibility, which can affect their participation and interaction in classroom activities. In the school context, teachers play a crucial role in supporting these students. They often face challenges due to limited knowledge, confidence, and resources related to speech sound disorders. This situation highlights the need for practical and structured teaching approaches that can be implemented in everyday classroom learning [11]. Therefore, understanding teachers' experiences and perceptions in implementing song-based learning is essential, as exploring their lived experiences in utilizing song-based approaches can provide valuable insights into practical strategies and barriers encountered in real classroom settings, ultimately supporting more effective teaching for students with SSD in inclusive education.

Pronunciation is one of the most challenging yet crucial aspects of language learning, especially for non-native English speakers [28]. Pronunciation is a component of language and communication that operates at two levels: the segmental level, which involves the production of individual phonemes such as

consonants and vowels, and the suprasegmental level, which encompasses intonation, stress, rhythm, and voice quality in connected speech [29]. Accurate pronunciation is crucial for successful communication in a second or foreign language since these two levels combine to determine a speaker's speech's clarity and intelligibility. However, for students with speech sound disorders (SSD), achieving accurate pronunciation is particularly difficult, as they tend to substitute, omit, or distort sounds during speech production, which significantly affects the clarity of their communication [21]. Furthermore, students with SSD often experience reduced self-confidence and tend to withdraw from verbal activities in the classroom, which limits their overall participation in learning [11].

One effective approach to language learning is the use of music, especially songs. Songs combine repeated exposure to sounds and vocabulary in meaningful and enjoyable contexts. The rhythmic, repetitive, and memorable structure of songs helps children distinguish and produce sound patterns, stress, and speech rhythms, which are key components of phonological awareness [30]. In addition, song lyrics introduce new vocabulary in themes that are close to everyday life, making it easier for children to understand and associate words with their contexts of use. Various studies have shown that song-based language learning is more effective than traditional approaches, particularly in improving vocabulary mastery, pronunciation accuracy, and listening skills, as songs provide meaningful language input and enhance learners' engagement and comprehension [31]-[32].

Teaching pronunciation to students with SSD requires approaches that are structured, targeted, and engaging to meet their specific phonological needs. One approach that has shown promise is the use of music-based interventions, as musical elements such as rhythm, melody, and singing have been found to positively support speech production in children with SSD [27]. In particular, song-based learning offers a meaningful way to practice pronunciation, since singing songs with familiar melodies has been shown to significantly improve segmental accuracy, suprasegmental accuracy, fluency, and overall speech comprehensibility in language learners [30]. Furthermore, the enjoyable and repetitive nature of songs can help reduce anxiety and increase motivation, creating a supportive learning environment where students with SSD feel encouraged to practice and develop their pronunciation skills.

Media comes in many forms, so it can be applied in teaching in various ways[33]. In general, there are three types of media: audio, visual, and audio-visual. First, audio media can be heard (e.g., digital recordings, radio, cassettes, multitrack recordings, and audio recordings)[34]. In music education, audio media is usually used to enhance students' emotional intelligence [35]. Second, visual media can be seen (e.g., real objects, pictures, photos, sketches, charts, graphs, boards, posters, cartoons, maps, and globes), has the potential to help students develop their visual memory, creativity, and imagination. Finally, audio-visual media are media that involve the senses of hearing and sight, such as field trips, interactive whiteboards, videos, video games, films, tablets, smartphones, and television[36]-[38]. By using these media, students can learn various skills and develop their personalities. Songs can be positioned as an effective medium for language learning, as they create a fun learning atmosphere and support core aspects of language development. Previous studies have shown that, compared to traditional teaching methods, integrating music and songs into second or foreign language learning can improve vocabulary mastery, pronunciation, and student engagement[32].

In the context of foreign language teaching, singing has been widely recognized as a meaningful classroom activity that increases students' motivation and attention. The use of popular songs, in particular, can foster a positive learning environment and facilitate student engagement with authentic language inputs. Through songs, students are exposed to repetitive language patterns that support the development of various language skills, including listening, speaking, reading, and writing. Songs and music serve a variety of educational purposes rather than just being a source of entertainment[39]. In addition, songs serve as a medium for introducing new vocabulary and as an effective tool for reinforcing previously learned vocabulary[40].

In the 21st century, technological advances have significantly changed the world of education, particularly language learning. Currently, the most tempting approach to meeting the needs of digital natives is technology-based language learning[41]. Digital tools are pedagogical resources that encourage students to actively participate in learning, encourage them to learn independently, and provide an interactive learning environment that improves learning outcomes[42]. In this context, the use of songs as an audio medium in the classroom has gained increasing attention as an effective tool for supporting pronunciation and vocabulary learning, particularly through the use of children's songs that provide simple, repetitive, and familiar language input. Repeated listening to songs helps students recognize new words and understand their meanings in context [43]-[45]. Furthermore, the use of song-based learning in the classroom still requires teacher guidance, especially in selecting appropriate songs and supporting students in understanding pronunciation patterns and vocabulary in context.

However, most previous studies have explored the use of songs in teaching children with speech sound disorders, but none have specifically utilized song-based learning to improve pronunciation in students with SSD[46][24][27]. Studies examining teachers' experiences in implementing song-based learning for children with SSD remain very limited. To address this research gap, this study offers a qualitative exploration of a teacher's experience in utilizing song-based learning to improve the pronunciation of a student with speech sound disorders in an inclusive classroom setting.

1. How does the shadow teacher utilize song-based learning to improve the pronunciation of a student with speech sound disorders in an inclusive classroom?
2. What challenges and strategies does the shadow teacher experience in implementing song-based learning to improve pronunciation in a student with speech sound disorders?

2. METHOD

Design and Participant

This research employed a descriptive qualitative case study design to gain an in-depth understanding of a shadow teacher's experience in utilizing song-based learning to improve the pronunciation of a student with speech sound disorders in an inclusive classroom setting. A qualitative case study approach was chosen because it allows for rich and detailed exploration of the experiences, perceptions, and practices of individuals involved in a specific real-life context [47]. This approach was particularly appropriate for examining the teacher's lived experiences, strategies, and challenges in implementing song-based learning for a student with SSD, as it enabled the researcher to capture nuanced insights into the teacher's real classroom experiences and practices.

The participant in this study was a shadow teacher at an elementary school who provided individualized support to one elementary school student with speech sound disorders (SSD). The shadow teacher was selected as the primary participant because she had direct and ongoing knowledge of the student's pronunciation development and learning progress. The student was not considered a research participant but was observed. The participant was selected using purposive sampling based on her direct involvement in supporting the student with SSD in the inclusive classroom setting.

Technique of Collecting Data

Data were collected through three main techniques: semi-structured interviews, classroom observation, and teachers' documents. The first data source was the shadow teacher, who served as the principal informant by providing direct and nuanced accounts of her instructional experiences, pedagogical strategies, and observations pertaining to the student's pronunciation development throughout the implementation of song-based learning. The second data source was the inclusive classroom setting, which functioned as the natural site of observation over an approximately five-week period, enabling the researcher to document the student's communicative responses, pronunciation attempts, and behavioral engagement within authentic learning contexts. The third data source comprised teachers' documents, including lesson notes and written records related to the student's learning progress, which served as supplementary evidence to corroborate and enrich the data gathered through interviews and direct observation.

The convergence of these three data sources facilitated a rigorous triangulation process, thereby strengthening the credibility and analytical depth of the overall findings. First, a semi-structured interview was conducted with the shadow teacher to explore her experiences and perceptions in utilizing song-based learning to support the student's pronunciation development. The interview was audio recorded with the participant's consent and subsequently transcribed for analysis. The use of semi-structured interviews enabled the researcher to elicit in-depth, flexible responses from the shadow teacher regarding her strategies, challenges, and observations related to the student's pronunciation progress. Second, observational data were collected during classroom learning sessions in which the classroom teacher incorporated song-based learning activities for the student with SSD. The researcher observed and took field notes during the sessions to document the student's responses, pronunciation attempts, and interactions during song-based learning activities. The observation sessions were also recorded to ensure the accuracy and completeness of the data collected. Third, teachers' documents were collected as a supplementary data source to complement the interview and observation data. These documents included lesson notes and any written records related to the student's pronunciation development. The collection of teacher documentation provided supporting evidence of the instructional strategies employed and the student's developmental progress, thereby reinforcing the credibility and depth of the overall data analysis.

Technique of Data Analysis

Qualitative data analysis in this study followed a descriptive qualitative approach using thematic analysis. Thematic analysis is a method for identifying, analyzing, and reporting patterns or themes within data, which is particularly suitable for exploring the lived experiences and perceptions of participants [47][48]. The analysis was conducted through six phases proposed [48], namely familiarizing with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. Data obtained from semi-structured interviews with the shadow teacher, classroom observations, and teachers' documents were transcribed and coded systematically. The codes were then organized into thematic categories related to the shadow teacher's experiences in utilizing song-based learning to improve the student's pronunciation, such as teaching strategies, challenges encountered, and observed progress in the student's pronunciation development. The findings were interpreted descriptively to provide a comprehensive understanding of the shadow teacher's experiences and practices in supporting a student with speech sound disorders through song-based learning in an inclusive classroom setting.

Trustworthiness

To ensure the trustworthiness of this study, four criteria were applied, namely credibility, transferability, dependability, and confirmability [49]. First, credibility was established through data triangulation and member checking. Triangulation was achieved by collecting data from multiple sources semi-structured interviews, classroom observations, and teachers' documents while member checking was conducted by sharing interview transcripts and preliminary findings with the shadow teacher to verify accuracy and authenticity. Second, transferability was ensured by providing detailed descriptions of the research context, participants, and findings, enabling readers to assess the extent to which the findings may be applicable to similar inclusive educational contexts. Third, dependability was maintained by documenting the entire research process systematically, including data collection procedures, analysis steps, and decision-making processes, with audio recordings of interviews and observation sessions kept to ensure consistency and reliability. Fourth, confirmability was achieved through an audit trail documenting all research decisions, analytical processes, and reflexivity notes, ensuring that the findings reflect the shadow teacher's experiences and perspectives rather than the researcher's personal interpretations.

3. FINDINGS

This section presents the findings derived from thematic analysis of the semi-structured interviews with the shadow teacher, classroom observations, and teachers' documents. Thematic analysis is a technique for finding, examining, and summarising patterns or themes in data that is especially useful for examining participants' perspectives and lived experiences [48], resulting in three titles:

The Shadow Teacher's Strategies in Utilizing Song-Based Learning

This section presents the shadow teacher's strategies in utilizing song-based learning to support the pronunciation development of a student with speech sound disorders in an inclusive classroom setting. Four themes emerged from the data: the role of the classroom teacher and shadow teacher in song-based learning, content-aligned song selection, non-corrective feedback and pronunciation modeling, and individualized and adaptive support.

The Role of the Classroom Teacher and Shadow Teacher in Song-Based Learning

Each learning session was initiated by the classroom teacher through a structured routine opening that included Iqro recitation and the memorization of Quranic verses, after which students were directed to sit properly before the lesson commenced. The shadow teacher confirmed this routine, stating,

"They read Iqro and memorize Quranic verses in class every day."

This consistent opening routine established an orderly and conducive learning atmosphere prior to instructional activities. Within this setting, song-based activities were planned and facilitated by the classroom teacher as an integral component of the regular curriculum, while the shadow teacher assumed a supportive rather than instructional role in relation to these activities. Nevertheless, the shadow teacher deliberately used these song-based moments to deliver individualized pronunciation support to the student.

Throughout the activity, she positioned herself beside the student, reinforcing target vocabulary and providing guided pronunciation practice on a one-to-one basis. Occasional instances of classroom noise were observed as some students became restless during the session, prompting the classroom teacher to restore order before proceeding with the lesson. Notwithstanding these intermittent disruptions, the shadow teacher sustained her focus on the student, ensuring that the learning process remained uninterrupted. These

complementary roles reflected a collaborative dynamic in which the classroom teacher was responsible for designing and managing the overall learning environment, while the shadow teacher capitalized on those shared instructional moments to reinforce the student's individual language development. This pattern was further corroborated by teacher's documentation, which confirmed that song-based activities were consistently integrated into classroom lessons, thereby providing the shadow teacher with regular and recurring opportunities to deliver targeted pronunciation support.

Content-Aligned Song Selection

Songs were selected in accordance with the lessons being taught in class. Rather than treating songs as mere entertainment, the shadow teacher ensured that the songs used were directly connected to the vocabulary being learned. The shadow teacher clarified,

"In English classes, we often use songs that are appropriate to the material, such as the names of the days".

This approach kept the student engaged with the lesson content while simultaneously providing a meaningful context for pronunciation practice. In terms of difficulty level, songs were deliberately chosen at a very basic level to ensure accessibility for all students in the class. The simplicity of the songs allowed the student with SSD to follow along without feeling overwhelmed, while still supporting vocabulary acquisition aligned with the current lesson material. By embedding vocabulary within familiar, repetitive song structures, the student was given repeated exposure to the same words in a way that felt natural and enjoyable rather than forced.

Non-Corrective Feedback and Pronunciation Modeling

The shadow teacher consistently avoided explicitly telling the student that his pronunciation was wrong. Instead, she immediately modeled the correct form in a calm and supportive manner. She explained her approach as follows:

"When a student makes a mistake when pronouncing 'terbang' as 'berbang', we must not say 'wrong,' so we say 'terbang' and directly show the correct form, then teach by spelling it out: ter-bang."

This was repeated patiently until the student could produce the correct pronunciation. For English specifically, a slower rhythm was needed. The shadow teacher noted that when given the phrase "I am fine" the student could only follow the last word "fine" which led her to adopt a clear and slow delivery. As she stated,

"We must employ a clear, slow beat."

Breaking sentences down this way gave the student a better opportunity to process and attempt the full vocabulary.

Individualized and Adaptive Support

The shadow teacher recognized that a single approach was not sufficient for all words and adjusted her strategies according to each specific difficulty the student encountered. As she stated,

"The strategy differs according to what is difficult for him to pronounce."

This shows that the shadow teacher paid close attention to each specific error pattern rather than applying a one-size-fits-all correction method. During classroom observations, the student frequently struggled to keep up when the lesson progressed too quickly. Rather than interrupting the class, the shadow teacher would quietly sit beside the student and repeat the material individually, modeling the vocabulary again at a slower pace until the student could follow. The student appeared noticeably more enthusiastic during song-based activities compared to other learning activities. He sat up straighter, made more eye contact, and responded more quickly when the song began. Although he could often only produce words at the end of each lyric line, his willingness to keep trying was consistent. He did not give up when he missed a word or got it wrong, instead he would listen again and attempt it on the next round.

Challenges Encountered in Implementing Song-Based Learning

This section presents the challenges encountered by the shadow teacher in implementing song-based learning to support the pronunciation development of a student with speech sound disorders. Four themes emerged from the data: difficulty remembering and retaining correct pronunciations, pronunciation errors and sound substitution, word repetition pattern, and the student's inconsistent physical and emotional condition.

Difficulty Remembering and Retaining Correct Pronunciations

One of the most prominent challenges encountered throughout the implementation of song-based learning was the student's tendency to acquire pronunciation patterns rapidly yet revert to inaccurate forms with equal speed. The shadow teacher identified this as the most demanding aspect of her role, stating,

"The biggest challenge is that he easily remembers but easily gets confused again when pronouncing, for example, with abcd when pointed to 'a' he says 'b'".

This recurring pattern necessitated continuous corrective modeling across sessions, as gains achieved in one session were not consistently sustained in subsequent ones. The cyclical nature of this challenge precluded the shadow teacher from assuming retention of previously introduced material, requiring her to reintroduce and reinforce the same content on an ongoing basis. Compounding this difficulty was the student's tendency to register only the final word of a sentence or lyric line rather than the complete phrase, which further constrained his capacity to internalize full pronunciation patterns. The shadow teacher observed that the student's proficiency in English remained considerably limited, necessitating a highly gradual and patient approach in every session.

Pronunciation Errors and Sound Substitution

A further challenge involved the student's persistent pattern of sound substitution errors, which in certain instances compromised not only pronunciation accuracy but also communicative intelligibility. As she stated,

"I get confused when he says 'berbang,' I would not know what he means without seeing what he is pointing at".

This statement illustrates that particular substitution errors were sufficiently pronounced to obscure intended meaning, rendering the student's utterances difficult to interpret without the aid of contextual cues. These observations were corroborated by classroom data, in which the student was documented pronouncing "three" as "fi," "four" as "foy," and "five" as "fais," reflecting persistent difficulty in producing English phonemes that have no direct equivalent in his first language. These substitution patterns were not isolated occurrences but rather consistent features of the student's speech, underscoring the pervasive influence of his speech sound disorder on his ability to produce target-language sounds accurately.

Word Repetition Pattern

An additional dimension of complexity in the student's speech sound profile was his tendency to produce involuntary word repetitions beyond what the communicative context required. This pattern manifested across a range of situations and was not confined to any particular word class or sentence type. As she stated,

"Sometimes just one word, sometimes repeated up to 2 or 3 times".

With documented instances including the production of "betul betul lah" as "betul betul betul lah" and "jangan marah la miss" as "jangan marah marah marah la miss". The student exhibited no apparent awareness of this behavior, suggesting that the repetition constituted an involuntary feature of his speech rather than a deliberate communicative strategy. Given the unpredictable frequency of these repetitions, the shadow teacher was required to exercise heightened attentiveness in order to accurately interpret the student's intended utterances. In conjunction with his sound substitution errors, this repetition pattern added an additional layer of complexity to his overall speech profile, further demanding close and sustained attention from the shadow teacher throughout each interaction.

The Student's Inconsistent Physical and Emotional Condition

The student's fluctuating physical and emotional state presented a considerable challenge to the continuity and effectiveness of learning sessions. Teacher's documentation indicated that the student was absent on multiple occasions due to illness, including an extended absence spanning an entire week during the observation period. On days when the student was present, his level of engagement was variable, he was at times observed to be inattentive and lethargic. Documentation further noted that the student had been frequently observed daydreaming and had on occasion briefly fallen asleep during class, behaviors that had not been previously documented. These physical and emotional fluctuations disrupted the sequential progression of learning sessions and required the shadow teacher to continually recalibrate her instructional approach in response to the student's varying levels of readiness. The unpredictable nature of his condition precluded consistent incremental development across sessions, as the student's capacity for active participation differed considerably from one meeting to the next.

Student's Pronunciation Development and Progress

This section presents the findings related to the student's pronunciation development and overall progress as observed throughout the implementation of song-based learning. Four themes emerged from the data: increased engagement and motivation through songs, vocabulary retention and partial pronunciation improvement, flexible and self-regulated participation, and social development and overall progress in the inclusive classroom.

Increased Engagement and Motivation Through Songs

A notable indicator of the student's development was the marked increase in his engagement and motivation during song-based learning activities. Classroom observations revealed that the student exhibited considerably greater enthusiasm during these sessions in comparison to other instructional activities. He was observed to sit up straighter, maintain more consistent eye contact, and respond more promptly upon the commencement of a song. The shadow teacher further affirmed that the student was inherently inclined toward song-based learning, stating,

"In class, they often use songs, and He is the type of student who likes using songs."

This sustained engagement suggested that song-based learning created a motivating and psychologically comfortable environment in which the student felt encouraged to participate actively. The repetitive and rhythmic structure of songs appeared to provide a predictable framework that reduced the student's anxiety, affording him a supportive space in which to attempt pronunciation without the immediate pressure of producing accurate output.

Vocabulary Retention and Partial Pronunciation Improvement

In terms of measurable progress, the shadow teacher estimated that song-based learning contributed approximately 60% to the student's overall development. She elaborated,

"Probably yes, around 60%, because he still sometimes reverses or substitutes sounds even after listening to songs, but it partially helps him pick up new vocabulary and recollect what he previously could speak".

This assessment indicated that while song-based learning did not constitute a comprehensive solution to the student's pronunciation difficulties, it served as a meaningful contributor to his vocabulary acquisition and the partial consolidation of previously learned pronunciation patterns. Although the student frequently could only produce the final word of each lyric line rather than the complete phrase, his consistent effort to follow along and his willingness to reattempt words he had missed demonstrated a gradual and sustained engagement with the pronunciation process.

Flexible and Self-Regulated Participation

The student's participation in song-based learning activities was further characterized by a degree of self-regulation that facilitated sustained engagement over time. Observations indicated that the student responded most effectively when instructions were delivered slowly and in a step-by-step manner. When the student began to experience fatigue or disengagement, he would independently request a brief pause before voluntarily resuming the activity. The shadow teacher respected this self-regulatory behavior, as she stated,

"Every day from 7.30 AM to 4.00 PM. In class, he cannot be forced to write or read, because he gets bored easily, so when he finishes one worksheet, he is allowed to play, then he works again and plays again. So he is not forced if he is not ready yet".

This flexible approach preserved the student's willingness to participate and ensured that learning proceeded at a pace commensurate with his individual capacity and attention span, thereby reducing the risk of frustration or withdrawal from the learning process.

Social Development and Overall Progress in the Inclusive Classroom

Beyond pronunciation development, the student demonstrated meaningful progress in his social participation within the inclusive classroom setting. Throughout the observation period, he was consistently observed engaging with his peers through play, laughter, and general interaction, indicating that his speech sound disorder did not constitute a barrier to social inclusion. This pattern of social engagement reflected a level of comfort and belonging within the classroom environment. Teacher's documentation corroborated these observations, noting that while the student's academic concentration and emotional stability continued to require sustained attention and support, he demonstrated reasonably consistent growth in his adherence to school routines and his capacity for social interaction. These developments, taken together, suggested

that the inclusive classroom setting, supported by the shadow teacher's individualized approach, contributed positively to the student's broader educational and social progress.

4. DISCUSSION

This discussion draws on the three themes identified in the results to examine how song-based learning was utilized by the shadow teacher, what challenges emerged in the process, and how the student developed over the observation period. The findings are discussed in relation to existing literature on song-based learning, speech sound disorders, and inclusive education.

The Shadow Teacher's Strategies in Utilizing Song-Based Learning

Based on the first topic, the shadow teacher used three crucial strategies: selecting songs aligned with classroom material, providing non-corrective feedback, and modeling pronunciation at a slow, clear speed. These strategies reflect a responsive, individualized approach to supporting a student with speech sound disorders. Singing songs with familiar melodies significantly improves segmental and suprasegmental accuracy in language learners[30]. By connecting songs to vocabulary being taught in class, the shadow teacher ensured that musical exposure was purposeful rather than incidental. This aligns with the view that song-based learning is most effective when it is integrated meaningfully into the curriculum rather than used as a supplementary activity [32].

The non-corrective feedback approach used by the shadow teacher, where she modeled the correct pronunciation without explicitly labeling the student's attempt as wrong, is supported by research on positive corrective feedback in inclusive settings. [11] highlight that students with SSD often experience reduced confidence and tend to withdraw from verbal activities when they feel publicly corrected or judged. The shadow teacher created a low-pressure environment that motivated the learner to keep trying by avoiding negative evaluation and providing a positive model right away. This approach also reflects what [27] describes as the importance of supportive interaction in music-based interventions for children with SSD, where the emotional climate of the session plays a significant role in the student's willingness to participate. The slow rhythmic modeling strategy is particularly relevant for students with SSD who struggle with unfamiliar phoneme sequences. The shadow teacher's observation that the student could only follow the last word of a phrase such as "I am fine" unless it was delivered at a slower pace reflects the processing challenges typical of children with SSD [21]. The shadow teacher's role in this context was not to lead the lesson but to act as an individual bridge, quietly repeating and modeling language for the student while the classroom lesson continued at its natural pace.

Challenges Encountered in Implementing Song-Based Learning

The second theme highlighted three categories of challenges: pronunciation difficulties, limited English proficiency, and inconsistent attendance and emotional stability. The most prominent challenge was pronunciation regression, where the student would correctly produce a sound in one session but revert to an incorrect form shortly after. Further demonstrating the communicative impact of SSD beyond simple articulation errors is the unpredictable nature of the student's sound substitutions, where mistakes like saying "berbang" instead of "terbang" could make his speech impossible to understand without contextual cues.

The word repetition pattern observed in the student's speech adds another dimension to his speech sound profile. Individuals with SSD generally exhibit characteristics such as sound omissions or additions, inappropriate sound substitutions, and sound distortions [21]. However, the repetition pattern observed in this student went beyond these typical characteristics. Students with SSD often experience reduced self-confidence and tend to withdraw from verbal activities in the classroom [11], which made the shadow teacher's patient and non-corrective approach particularly important in keeping the student willing to participate. The student's inconsistent attendance and fluctuating emotional and physical condition during the observation period posed additional challenges to the continuity of song-based learning. When the student was present but lethargic or inattentive, the shadow teacher had to continually adjust her approach. This reflects the broader challenge of inclusive education in Indonesia, which aims to create a learning environment that enables all students to learn together and optimally develop their potential, yet in practice requires teachers to remain flexible and adaptive in responding to each student's individual condition [1].

Student's Pronunciation Development and Progress

The third theme showed that despite these challenges, the student demonstrated meaningful progress in vocabulary retention and classroom engagement. The shadow teacher estimated that song-based learning

contributed approximately 60% to the student's progress, particularly in helping him pick up new vocabulary and recall words he had previously learned. This is consistent with studies showing that song-based language learning is more effective than traditional approaches in improving vocabulary mastery, pronunciation, and student engagement, as songs provide meaningful language input and enhance learners' comprehension [31],[32].

The student's increased enthusiasm and participation during song-based activities suggests that the rhythmic, repetitive, and memorable structure of songs helped him distinguish and produce sound patterns more easily, and can significantly improve segmental accuracy, fluency, and overall speech comprehensibility in language learners [30]. The fact that the student consistently attempted to follow song lyrics even when his English proficiency was limited is particularly significant given that the implementation of inclusive education in the field still faces various challenges, particularly in providing learning strategies tailored to the needs of students [2].

The student's positive social engagement throughout the observation period suggests that his speech sound disorder, while presenting clear communicative challenges in accurately producing speech sounds according to the phonological rules of language[10], did not prevent him from participating in peer interactions in the inclusive classroom. The shadow teacher's patient, non-pressuring approach appears to have contributed to this, creating a sense of safety and acceptance that allowed the student to remain an active, comfortable participant in the inclusive classroom setting.

5. CONCLUSION

The study examined the strategies employed by a shadow teacher in leveraging song-based learning opportunities to support the pronunciation development of a student with speech sound disorders within an inclusive elementary classroom. Thematic analysis of semi-structured interviews, classroom observations, and teachers' documents yielded three overarching themes: the shadow teacher's utilization of song-based activities initiated by the classroom teacher, the challenges encountered throughout the instructional process, and the students' overall pronunciation development and progress. The shadow teacher's approach was characterized by non-corrective feedback, deliberate instructional pacing, and contextually aligned song selection, reflecting a responsive and individualized pedagogical orientation. Notwithstanding persistent challenges, including pronunciation regression, inconsistent attendance, and fluctuating emotional stability, the student demonstrated discernible progress in vocabulary retention and sustained classroom engagement. These findings bear significant practical implications for inclusive educators, particularly shadow teachers. The adoption of a non-corrective, song-based approach that is pedagogically aligned with classroom content and responsive to individual phonological and emotional needs may enable shadow teachers to scaffold pronunciation development more effectively, while preserving student confidence and active participation. Song-based learning thus emerges as an accessible, low-pressure instructional tool with meaningful applicability to the daily practice of shadow teachers supporting students with speech sound disorders.

This study is subject to certain limitations that warrant consideration. Being confined to a single inclusive elementary school and encompassing only one shadow teacher and one student with speech sound disorders, the scope of the research inherently limits the transferability of its findings to wider educational contexts. The single case design, compounded by a relatively constrained observation period, further delimits the extent to which the conclusions drawn may be considered generalizable. Accordingly, future research is warranted to examine the systematic implementation of song-based learning across a more heterogeneous participant base, diverse school settings, and a prolonged observation period, with a view to yielding more robust and generalizable empirical evidence regarding its efficacy as a pedagogical intervention for students with speech sound disorders in inclusive educational settings.

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