



From Everyday Talk to Clinical and Educational Setting: A Review of Speech Fillers

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Abstract

Studies on speech fillers have increased in the last decade. However, no recent article papers to have reviewed these various studies. This paper tries to fill this gap by focusing on latest research on speech fillers types and their functions in language interaction. Selected studies from 2018 to 2025 are reviewed, with various contexts. The review shows that there is a limitation in studies across different languages and cultures and an insufficient exploration of the cognitive and social impact of filler words. In addition, there is a lack of research in digital and clinical contexts. This review aims to provide valuable insights for researchers and educators to better understand speech fillers, improve pedagogical practices, and guide future research.

Key words: speech fillers, pedagogical practices, language interaction, clinical contexts.

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الملخص:

ازدادت الدراسات حول حشوات الكلام في العقد الماضي. ومع ذلك، لم تنشر مقالات حديثة تستعرض هذه الدراسات المتنوعة. تسعى هذه المقالة الى سد هذه الفجوة من خلال التركيز على أحدث الابحاث حول انواع ووظائف حشوات الكلام في التفاعل اللغوي. وتستعرض هذه المقالة دراسات مختارة من 2018 الى 2025، ضمن سياقات متنوعة. بينت هذه المراجعة وجود قلة في الدراسات التي تجري عبر لغات و ثقافات مختلفة وعدم كفاية في استكشاف الأثر المعرفي والاجتماعي لكلمات الحشو. بالإضافة الى ذلك يوجد نقص في الأبحاث في السياقات الرقمية والسريرية. وتهدف هذه المراجعة إلى تقديم رؤى قيمة للباحثين والمتعلمين لفهم أفضل لكلمات الحشو، وتحسين الممارسات التربوية، وتوجيه الدراسات المستقبلية.

الكلمات المفتاحية: حشوات الكلام، الممارسات التربوية، التفاعل اللغوي، السياقات الاكلينيكية.

Introduction

Speech fillers (SFs from now on) also referred to in some studies as filler words, pauses or even discourse markers, are items with uncertain lexical meaning whose primary function is to fill a gap in conversation (Stenstrom,1994). Meaning that they



commonly occur as hesitation markers or holding control of a conversation while the speaker thinks what to utter next. Moreover, SFs are seen as a negative perception in speech because it can decrease the degree of fluency. Dlugan (2011) argues that SFs may weaken the credibility of the speakers and may indicate a lack of preparation. He also suggests that SFs negatively affect speech. In another context, Al-Alami (2025) points out the use of verbal fillers in oral presentations reduces communication efficiency and negatively impacts the clarity of the message. Therefore, students and teachers should work to minimize them to ensure high-quality presentations. However, some experts explain that SFs have a positive perception. The researchers suggested that fillers such as "uh" and "um" are not simply hesitation markers. They are conventional words in English for indicating delays in speech, and are used to let the listener know that they are still thinking about what to say. They help to manage the flow of speech and coordinate the interaction between the speaker and the listener.

In this review, the term **speech fillers (SFs)** will be used as a comprehensive term for all such phenomena, unless a different term is specifically mentioned.

Types and functions of SFs

SFs are often divided into two main types: lexical fillers, such as you know, I mean, you know, like, you see, actually. They are expressions that have linguistic meaning but are used without actual semantic value in context. The other type is non-lexical fillers, such as uh, um, er. They are sounds that do not carry an independent meaning and are often used as substitutes for silence during planning or hesitation. This classification is important because lexical SFs may perform certain pragmatic functions. Non-lexical SFs, on the other hand are related to temporary delays in speaking or maintaining continuity of speech (Kharismawan, 2017).

Although SFs don not have a direct linguistic meaning, they serve important functions in oral communication. They permit for the speaker extra time to think and organize his/her thoughts to complete the idea. They are also used to connect the speech and give the listener the idea that the speaker does not finish yet. Thus, they are elements of natural language activity that help to express oneself clearly and to communicate effectively (Ganmi, 2022). Several researchers have indicated that SFs based on Stenstrom's model (1994) perform at least five basic functions, such as hesitation mark, empathizing, mitigating, editing term, and time-creating devices (Indriyana, Sina, & Bram 2021; Kharismawan, 2017).

The current study is important in examining speech fillers, their types, functions and gaps. It also significant because it synthesizes several recent studies on these fillers. It expected to bring value to researcher and learners by a deep understanding of SFs and their use. Therefore, this study will pave the way for future research investigating the impact of SFs in diverse contexts and languages.

Methodology

This study aims to conduct a critical systematic review of peer-reviewed studied on SFs published between 2018 and 2025. Researchers focus on studies that address SFs in oral communication and provide empirical or qualitative data. On the other hand, studies those



are not peer-reviewed or those that focus on written language are excluded. SFs are divided into two types: lexical and non-lexical ones. The functions are identified and gaps are determined in order to note common research gaps across studies. The researchers purposely choose the period from 2018 to 2025 because it represents the most recent research. It also provides significant basis for conducting a comprehensive review. This time period shows the growing academic interest in studying SFs and the impact they leave on language fluency and teaching strategies.

Review of Recent Studies on Speech Fillers

The concept of SFs has become more widespread and we mostly do not notice them. This is due to their natural and common nature. So, they have been widely examined by different researchers for different cases. The studies in this review are presented in a chronological way and arranged according to their publication years to demonstrate the changes and developments in this research field.

Stevani, Sudarsono, and Supardi (2018) investigate the use of filler words by students in academic papers presentation. It explores each word and its function. The data are taken from sixth year students in the English department taking the research design course for the academic year 2017/ 2018. It finds that students use 12 filler words, with "Ehm" being the most common, while "correct" and "how to say" are the least commonly used. The study conclude that filler words have several functions, such as the optimal solution to a thought, rephrasing or correcting something, and starting a conversation, emphasizing the conclusion, and emphasizing the main points of the topic. Despite the young students' learning of English, their use of filler words indicates challenges in oral fluency. For this reason, the study is important in understanding the role of these words in developing conceptual skills, as it can subsequently help design a large number of key reliance on them for Students' oral fluency. These findings may also form the foundation for subsequent studies on the relationship between the use of filler words and different fluency levels.

The study gap: The study is limited to sixth-grade students in a specific course. It does not explore the effect of these words on oral fluency in a quantitatively manner. The study also does not examine strategies for reducing their use which leaves space for future research.

Words like "uh" and "um" are often treated as noise and are usually ignored, despite their linking with the speaker's confidence. Dinkar, Vasilescu, and Clavel's (2020) address this case. The study focuses on developing an automated model to predict this perception using empty words. The researchers rely on designing linguistic and acoustic features of empty words, incorporating implicit meanings. They incorporate the implicit meanings of these words with the model then analyze their diverse functions. The findings demonstrate that incorporating this information improved the accuracy of confidence prediction. The findings also indicate that different functions of empty words are related to speaker confidence in different way.



The study gap: Although, the study contributes in understanding the use of empty words it does not directly address the impact of different conversational contexts or differences in speaker types on the use of these words. It also does not address the psychological and social impact of empty words on the human recipient. This represents a gap for future research.

Expanding the study of SFs in academic setting, Lomotey (2021) examines the use of these words in lectures at a public university in Ghana. Where he records and analyses the lessons of 24 lecturers. The results show 51 filler words, including non-lexical ones such as um, er, and uh, and lexical ones such as interjections, repetitions, and single words. Regarding communicative functions, SFs perform cognitive functions such as stalling and hesitation, social functions related to the importance of focus and feedback. In addition, organizational functions as editing term and closing discourse. It becomes clear that SFs are not mere noise in communication or daily life but they are playing active role in forming discourse.

The study gap: The study does not highlight the effect of SFs on students' comprehension. It also does not address variations of the filler words usage between lecturers or across disciplines. From the researchers' point of view, these gaps provide a space for future studies to explore deeper into their relationship to the educational process in academic communication.

Despite extensive studies on SFs for their role in oral communication, and their pragmatic functions have also been widely examined. However, very few research have addressed the use of computational methods for their automatic detection and classification. To address this gap, Zhu, Caceres, and Salamon (2022) conduct a quantitative study. In their study they present podcast SFs, a dataset containing 35,000 annotated SFs and 50,000 labels for other non-lexical sounds such as breathing, laughter, and repetition. They propose a processing pipeline that combines vocal activity detection (VAD), automatic speech recognition (ASR), and a classifier to automatically detect and classify filler words. Their results demonstrate that leveraging ASR achieves state-of-the-art performance, significantly outperforming non-text-based methods. So, their results show that leveraging ASR achieves state-of-the-art performance, significantly outperforming non-text-based approaches.

The study gap: However, the study is limited to English podcast speech. It leaves unaddressed the question of its applicability to other languages or in spontaneous conversational situations.

While most studies have focused on SFs in educational and professional contexts, Kirjavainen, Crible, and Beeching (2022) use a different paradigm. They use electronically generated spontaneous speech. In this way they able to control filler location, speech rate, and fundamental frequency (f0). They then examine their effect on the perception of speaker confidence. The results show that all three characteristics affect each other. Sentences without SFs sound confident and clear. Sentences containing filler words, or spoken slowly or loudly appear less confident. The presence



of filler words is more influential, while pitch and speech rate allow for uncertainty signals.

The study gap: However, the study is limited to synthetic speech only. It does not address the impact of SFs in ordinary human conversations or in educational and professional settings.

In 2022, Kirkland, Lameris, Székely, and Gustafson conduct a study to explore the effect of filled pauses on how to perceive the speaker's confidence. It aims to understand the effect of prosodic features on the perceptions of the speaker confidence. The study relies on an innovative method of tone control within synthesized automated speech. The results show that the presence of filled pauses in a sentence reduces confidence perceptions. While a high speech rate and low fundamental frequency increase confidence, the effect of filler words is the largest.

The study gap: However, the study does not address the influence of individual speaker factors or contextual variation in natural speech. This leaves a gap for future research to study the interaction between SFs and individual or social characteristics of speakers in more natural contexts.

In addition to studies that have examined the use of SFs in educational and professional contexts, recent academic study has asserted that SFs are not merely hesitation markers. They also interact with cognitive load and general speech behavior. For example, Betz, Bryhadyr, Turk, and Wagner (2023) in their study claim that the frequency of SFs, verbal hesitations, and gestures rises with increasing cognitive load, in speech and accompanying gestures. This suggests that SFs may reflect cognitive effort during speech.

The study gap: The study focuses only on the cognitive aspect. It overlooks the social and professional dimensions of SFs in natural settings.

In the study conducted by Abdullah and Mohammed (2023), they examine the use of SFs among 80 students in the English at Zakho university. The study highlights that there is a clear relationship between these words and oral fluency. Rose (1998) classifies SFs into:

- Non-lexical fillers as "uh" and "um."
- Lexical fillers as "and," "so," and "yes."

The researchers utilize discourse analysis to analyze the successes of Potter and Wetherell (1987), Fairclough (1995), and Van Dijk (1997). The oral fluency scale is also used to measure the relationship between filler word use and fluency level. The results show that students use lexical SFs three times more often than non-lexical SFs. The most common words being "and," "so," "yeah," and "yes." "Uh" and "um" are the non-lexical SFs used most frequently. The study also show that the use of filler words is often associated with average or low fluency and decreases as students' fluency increases. Although SFs help in organizing ideas, they usually indicate bad fluency. The study recommended that it is necessary to train students to reduce their reliance on using SFs in order to improve their oral fluency.

The study gap: It does not investigate the influence of individual factors among participants such as gender and educational level. It also does not clarify the role of the



context of the oral task or the psychological and cognitive reasons which may stimulate speakers to use these words. In addition, it does not address practical aspects, such as educational interventions to reduce reliance on these words.

Gandeza (2023) examines the role of SFs in improving students' communication skills. The sample of the study consists of 18 students from the College of Education, studying in Filipino/English. The researcher uses a thematic approach in coding and characterizing the responses to identify key educational needs. The study finds that using SFs can increase students' self-confidence and fluency. They help students to improve their speaking skills. Also, their use gives them an opportunity to express what they think and what have experienced. Thus, this makes students' communication stronger.

The study gap: Despite of the importance of the study, it suffers from many things. It ignores the factors that influence SFs use or their variations across different educational contexts. It does not examine SFs impact in evaluating linguistic performance.

Recently, Böttcher and Zellers' (2024) explore using filler words like (uh, um, ahm) among native speakers of the languages (English, German, and Russian). The data comes from the RUEG corpus. An increase of these fillers is observed in formal situations and among older or bilingual speakers. English and German utilize the nasal vowel forms (um/ahm), but Russian tend to use the (uh) form only. The study also highlights that nasal forms are common among women. The nasal form pattern is also repeated among native speakers. This means that these particles play cognitive functions.

The study gap: The study by Böttcher and Zeller's (2024) suffers from some limitations. It is limited for three languages only. It relies on data from a specific point in time, so it does not illustrate developments of this phenomenon over time. The study ignores the impact of individual factors and practical aspects.

Soleimani, Guo, Haley, Jacks, and Lobaton (2024) explain that SFs and pauses contribute in shaping conversation and improving text analysis; they are not merely empty words. The study aims to analyze the effect of encoding pauses and filler words such as "uh" and "um" on the efficiency of language models in the diagnosis of dementia. text-based language models are used by the researchers. They use texts from two groups: normal individuals and those with dementia. The results reveal that encoding fillers improve the model's performance, achieving 87% accuracy and an F1 of 86%. The study fills a significant gap in the literature. It focuses on the importance of SFs and pauses in detecting dementia.

The study gap: However, it does not address the functions of SFs in everyday communication. Nor does it address individual speakers or even diverse contexts and languages. These gaps reduce the possibility of generalizing the results to different communicative contexts

By Focusing on real teaching contexts, Aliyah, Farikah, and Yosintha (2025), conduct a study analyzing the use of SFs in a live 320YouTube video by English teacher Aga Murdoch. The focus is on English grammar, specifically tenses. Aim of the study is to conduct qualitative and content analysis. The researchers utilize different techniques



such as electronic data reduction and the use of triangulation as a validation measure. The outcome of the study show that the speaker utilizes 147 SFs, 67 are non-lexical and 80 lexical SFs. The study illustrates the important role of filler words to keep the continuity of the dialogue and enhance verbal interaction.

The study gap: It does not compare between different platforms or cultural contexts. It also does not use modern analytical tools. This opens the opportunities for future studies that can help better understand the role of SFs in audience engagement and interaction in social media.

Cui, in 2025 explores the use of SFs and hesitations in spontaneous speech by Chinese learners of English. A mixed-method approach is used in analysing data utilizing questionnaires, corpus analysis, and semi-structured interviews. The sample of the study includes 30 participants. The results indicate that pauses are the most common phenomenon, while SFs and hesitations play an important role in keeping turn conversation, and facilitating interaction. SFs phrases are influenced by native language transfer, difficulty of the tasks, and stress or anxiety. The study gives us a clear idea of second language fluency and suggests ways to handle interruptions in teaching advanced English.

The study gap: The findings of the study cannot be generalized because of the small number of participants. The speech spontaneity seems to have influenced by the method by which the data are collected. The study places a heavy reliance on quantitative modes only and it does not provide clear practical educational recommendations. This suggests the need for future research.

The study by Al-Alami 2025 investigates the impact of SFs usage among higher education students. The study sample consists of 204 participants belonging to three main categories: teachers, Toastmasters members, and undergraduate students. The researcher relies on interviews, questionnaires, and classroom observations to collect the data. Major findings show that frequent reliance on the use of SFs may lead to reduce the message clarity. This negativity impacts students' ability to communicate. Therefore, the study recommends reducing the use of SFs by students in oral presentations.

The study gap: Yet, it remains limited because it does not study how the use of SFs affects the psychological and behavioral aspects of participants. It does not investigate personal variations among students, the effectiveness of strategies in different contexts.

Common Research Gaps

Despite the progress made in research on SFs, several general gaps emerge that need future exploration:

- Limited samples and contexts: Most studies have addressed specific groups of participants or limited contexts. So, this limits the possibility of generalization.
- There is a Lack of cross-linguistic and cross-cultural studies: Most research have focused on English, with few studies which address other languages or other cultures.
- Insufficient researches that address the influence of SFs on hearers and social interaction: Few studies have explored the influence of filler words on listeners comprehension or the quality of speakers-listeners interaction.



- Inadequacy of studies in digital contexts or new media: There is a need to study the use of SFs in digital education, educational videos, and online platforms.
- Scarcity of cognitive, psychological, and behavioural analysis: Most researches have addressed the linguistic functions of filler words, with finite interest to the psychological or cognitive aspects of employees.

Recommendations

In the light of common research gaps, the following points are recommended:

1. It is important to conduct larger studies with diverse samples and contexts to enhance the generalizability of the findings and not to be for specific community.
2. The researchers can be expanded across multiple languages and cultures to understand linguistic and social differences in the use of filler words and how they vary in communication.
3. It is useful to study the impact of filler words on listener comprehension and the quality of social interaction in real-life situations and not only in labs or theoretical studies.
4. It is necessary to analyse the use of SFs in digital and online educational contexts and modern media platforms because the contexts differ from face-to-face conversation.
5. It can be explored the psychological, cognitive, and behavioural aspects of SF use. This aims to enhance the understanding of their functions and their impact on fluency and communication.

Conclusion

This review brings a comprehensive overview of the latest studies on SFs. It outlines their types, functions, and existing research gaps. Despite the cognitive, social, and organizational benefits of SFs, common gaps point to the need for further cross-contextual and cross-linguistic research. It is better to conduct studies analysing the impact of SFs on listeners and social interaction, and exploring psychological and cognitive dimensions. This review is expected to guide both researchers and educators towards improving their understanding and use of SFs in effective education and communication. It also opens new prospects for future research.

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