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SPONTANEOUS SPEECH CHARACTERISTIC IN UNIVERSITY STUDENTS ACCORDING TO LEVELT'S LANGUAGE PRODUCTION MODEL

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ABSTRACT

This study investigates spontaneous speech characteristics in university students through Levelt's language production model. By analyzing transcripts from unscripted English podcasts and interviews, the research identifies pauses, repetitions, and repairs. These elements are then mapped to the conceptualization, formulation, articulation, and self-monitoring stages. Findings emphasize how spontaneous speech reflects real-time cognitive processing.

INTRODUCTION

In everyday communication, spontaneous speech is a natural form of language use that reveals the mental operations behind speech production. In everyday experience we find that communication is something that makes connections. The connections are made between one person and another, or between one group of people and another. Sometimes the connection is immediate, as when we talk face to face. Sometimes it is 'delayed', as when advertisers communicate with us through street posters (Dimbleby, R., & Burton, G., 2020). University students, often engaged in interactive discussions, debates, or casual

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conversations, demonstrate various features such as pauses, repetitions, and self-corrections. These features are not merely signs of dis-fluency but indicate ongoing cognitive processing during speech. As Levelt (1989) points out, the production of spontaneous speech involves several stages, including conceptualization, formulation, and articulation, all of which are cognitively demanding. Clark and Fox Tree (2002) also argue that so-called disfluencies, such as “uh” and “um”, serve communication functions by signaling upcoming delays or difficulties in speech planning. Understanding these markers allows researchers to uncover the mechanisms of language formulation and delivery.

Understanding the cognitive processes underlying spontaneous speech is essential for comprehending how language is produced in real-time communicative contexts. Levelt’s (1993) language production model provides a theoretical framework to analyze these spontaneous speech characteristics. According to Levelt, speech production involves four key stages: conceptualization, formulation, articulation, and self-monitoring. At each level, speakers plan, construct, produce, and evaluate their utterances. This process aligns with observations by Clark and Clark (1977), who highlighted performance features in speech such as fillers ("uh," "um"), false starts, and repairs as reflections of language planning and monitoring. Therefore, analyzing spontaneous speech through this model allows researchers to systematically interpret the mental operations that govern verbal expression and its disfluencies.

A comprehensive understanding of spontaneous speech production requires the integration of multiple theoretical frameworks that account for both linguistic processing and cognitive load. Dell’s spreading activation model (1986) also contributes to understanding how lexical items are retrieved and errors occur, especially during formulation. Goldman-Eisler (1968) argued that hesitations and pauses often mark cognitive overload, which links directly to Levelt’s conceptualization. Similarly, Shriberg (2001) emphasized the systematical of dis-fluency patterns in spontaneous speech across speakers and contexts. These theoretical perspectives collectively highlight that speech production is not only a linguistic process but also a reflection of underlying cognitive mechanisms operating under varying levels of processing demand.

Prior studies have applied Levelt’s model in various contexts. For example, Clark and Clark (1977) observed spontaneous features across various speech acts in native English speakers, noting consistent markers that suggest planning. In contrast, Bortfeld et al.

(2001) conducted a large-scale analysis that categorized dis-fluency by gender and speaking role, revealing statistically significant trends in filler use and pauses. Kormos (2006), focusing on L2 learners, found that cognitive load significantly influenced the rate and type of dis-fluency observed in learners' speech, especially under time constraints. These findings collectively highlight the interplay between cognitive mechanisms and linguistic choices in shaping spontaneous speech, reinforcing the relevance of psycholinguistic models in empirical speech analysis.

Despite these findings, there has been minimal focus on the analysis of spontaneous speech in informal university settings using Levelt's model as a framework. This study seeks to address this gap by investigating the characteristics of spontaneous English speech among university students and linking these characteristics to the phases of Levelt's language production model. Furthermore, it examines the influence of social context, discourse type, and speaker identity on dis-fluency characteristics, providing wider educational implications.

METHOD

This research uses a qualitative descriptive approach. according to Sugiyono (2019), qualitative research is research used to examine the conditions of natural objects and the data obtained tends to be qualitative data with qualitative data analysis techniques. The data sources consist of transcripts of spontaneous English conversations from publicly accessible platforms, such as student podcasts, unscripted talk shows, and YouTube interviews. These sources were selected based on their unscripted and interactive nature to reflect authentic spontaneous speech. As natural discourse provides valuable insights into pragmatic features such as speech acts, turn-taking, and discourse markers (Taguchi, 2015). In addition, spoken data from such platforms often exhibit features that are difficult to observe in scripted or formal contexts, making them ideal for pragmatic analysis (Yule, 2017). The use of spontaneous data also aligns with recent studies empahsizing the significance of authentic interaction in examining language learners pragmatic competence in dynamic, real life settings (Ishihara & Cohen, 2014). There by supporting the validity of this research design.

The research instrument is a coding sheet used to identify speech features such as pauses, repetitions, hesitations, false starts, and self-corrections. These speech markers

were categorized and analyzed according to the stages in Levelt's model. As disfluencies are key indicators of cognitive processing in spontaneous speech, detailed attention was given to their categorization to ensure analytical precision (Tottie, 2019). Data collection involved transcribing selected audio clips, ensuring accuracy in capturing disfluency features, which is essential for maintaining the validity of psycholinguistic analysis (Watanabe, 2017). This methodological approach allows researchers to systematically uncover the underlying cognitive mechanisms in spoken language production, thus contributing to a deeper understanding of real time language processing.

The sample consisted of six audio segments, each approximately 3–5 minutes long, taken from three different online student podcasts. Speakers included both male and female students in academic discussions, casual reflections, and group interviews. Each transcript was annotated manually to tag spontaneous speech features, which were then coded based on their alignment with conceptualization, formulation, articulation, or self-monitoring. As spontaneous speech patterns are known to reflect real time cognitive processing in naturalistic contexts (Wagner et al., 2018). This analytical approach is essential to capture the dynamic interplay between linguistic performance and cognitive mechanisms underlying spontaneous verbal production.

Coding was conducted manually using a color-coded system. For instance, fillers were highlighted in yellow, repetitions in green, and self-corrections in red. Transcripts were segmented into speaking turns, and each turn was analyzed independently to ensure feature traceability. Criteria for identifying spontaneous speech features were based on Kormos (2006) and Clark & Clark (1977). This systematic approach enhances the reliability of the analysis by minimizing ambiguity in the classification of features and ensuring consistent interpretative frameworks across all data segments.

To improve reliability, a second coder reviewed 20% of the transcripts using the same coding protocol. Inter-coder agreement reached 87%, indicating consistent feature identification. Discrepancies were discussed and resolved collaboratively.

FINDINGS AND DISCUSSION

Research Findings

The analysis revealed several recurring features in the spontaneous speech of university students:

1. Pauses and Hesitations: Common fillers like "uh" and "um" were frequently used, particularly at the beginning of turns or when searching for vocabulary.
2. Repetitions: Students often repeated words or phrases, especially when organizing their thoughts.
3. Self-Corrections: Speakers corrected themselves mid-sentence, revising word choices or grammatical structures.
4. False Starts: Some utterances began and were abandoned midway, replaced with more appropriate structures.

A sample excerpt:

"So, uh, I think that... I mean, like... the— the main issue here is, uh, about how we perceive language."

This line displays fillers ("uh," "like"), a false start ("the— the main issue"), and a self-monitoring revision ("I think that... I mean, like...").

These patterns occurred across all segments, with minor variations in frequency. For example, casual discussions showed more fillers, while academic conversations had more self-corrections. Additional samples also include:

"Well, uh, when we talk about... um, the— the structure of... I mean, the education system..."

"I guess, I guess it's... like, kind of— sort of confusing when... when there's no clear guidance."

These further illustrate how spontaneous speech involves ongoing negotiation between intended meaning and linguistic output.

Categorization by Levelt's Stages:

Speech Feature	Frequency	Mapped Levelt Stage
Fillers	42	Conceptualization
Repetitions	19	Formulation
Self-corrections	17	Self-Monitoring
False starts	11	Formulation

These findings correspond with the cognitive stages described in Levelt's model. Pauses and hesitations are strongly associated with the conceptualization phase, where speakers decide what to say. Repetitions and false starts typically occur during formulation, indicating efforts to construct grammatically and semantically appropriate expressions. Articulation is evident in the physical delivery, which sometimes falters due to processing delays. Self-monitoring is reflected in on-the-spot corrections, demonstrating speakers' active evaluation of their speech.

These phenomena affirm that spontaneous speech is not chaotic but structured around cognitive strategies for managing real-time language production. Studies by Clark and Clark (1977) and Bortfeld et al. (2001) support these observations, noting that speech disfluencies are systematic and meaningful. The presence of these features in university student speech suggests that even proficient speakers engage in constant internal monitoring and adjustment during communication.

Furthermore, these results align with Kormos (2006), who demonstrated that spontaneous speech in L2 contexts often involves delays in lexical retrieval and increased reliance on fillers. Our findings mirror that pattern even in L1-like performance, showing the universal application of Levelt's model.

Additional discussion points include the impact of context on speech disfluency. In academic discussions, students tend to be more careful, leading to more self-monitoring features. In contrast, casual conversation settings yielded more frequent use of fillers and repetitions, possibly due to lower cognitive pressure but more flexible turn-taking.

Another factor involves gender and speaker roles. Bortfeld et al. (2001) noted differences in disfluency rates between male and female speakers. Although our sample was not large enough for statistical generalization, initial trends suggest female students exhibited slightly more self-corrections, possibly reflecting greater attention to linguistic accuracy.

Moreover, the mode of communication—audio vs. video—appeared to influence delivery. In segments where students were aware of being recorded visually, their utterances contained fewer fillers, possibly due to increased performance awareness. This aligns with Thornbury (2005), who argued that task-type and audience awareness affect fluency behaviors.

Lastly, psycholinguistic training and awareness may contribute to reduced disfluency. Students with exposure to public speaking tasks or psycholinguistics courses may demonstrate fewer spontaneous speech features as a result of enhanced metacognitive awareness. Integrating such training into language curricula could thus foster smoother real-time production.

CONCLUSION AND SUGGESTIONS

This study concludes that spontaneous speech among university students reflects the cognitive stages outlined in Levelt's language production model. Features such as pauses, repetitions, false starts, and self-corrections are linked to different stages of planning and monitoring in speech production. These findings validate the use of Levelt's framework in naturalistic spoken data analysis. It is suggested that educators and language instructors incorporate awareness of these speech phenomena into language learning curricula. Training that focuses on fluency and real-time monitoring could help learners improve both confidence and competence in spoken language. Activities such as podcast projects, impromptu speech tasks, and peer-recorded interviews can help students internalize spontaneous communication dynamics. Future studies may benefit from incorporating live data through interviews or speech tasks to compare with secondary data. The integration of software-based speech analysis tools may also enhance data accuracy and coding reliability. Programs such as PRAAT or ELAN can aid in micro-level acoustic analysis of delinquencies. Moreover, future research should investigate multi-modal indicators such as facial expressions and gestures to enrich the understanding of speech production dynamics. Comparing L1 and L2 speaker performance under similar task constraints could also yield deeper insights into the role of language dominance in dis-fluency occurrence. Longitudinal studies involving learners at different stages of proficiency may clarify how spontaneous speech competence develops over time

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