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Agata Klimczak-Pawlak
University of Warsaw
https://orcid.org/0000-0002-2372-0495
agata.klimczak.pawlak@uw.edu.pl

Exploring Silence as an Element of Fluency in L2 English Academic Presentations

Viewed from the perspective of a monologue, silence may be interpreted as a means of organizing speech for the purpose of leading the listeners and attracting their attention or, alternatively, as a sign of dysfluency and consequently, an obstacle to easy comprehension. The effect depends on the placement of silent pauses and their function, a criterion that becomes particularly relevant in the case of non-native speech. This paper explores the development in the use of silent pauses by EFL students enrolled in a coursein academic presentation. The three participants selected for the study represent different general EFL proficiency levels. They participated in an academic presentation course during which their presentations at the beginning of the course (an impromptu speech) and after four weeks of specific language-focus training (a prepared short presentation) were recorded. The analysis of the silent intervals in the collected samples reveals differences in the use of silent pauses as an element of dysfluency vs. increased fluency in presenting. The results are discussed from the perspective of fluency measures on the one hand, and successful presentation skills on the other.

Keywords: silent pauses in EFL, academic presentations, EFL fluency

Słowa kluczowe: ciche pauzy w angielskim jako obcym, prezentacje akademickie, płynność w angielskim jako obcym

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1. Introduction

The value of silence in public speaking has long been recognized. A quote directly connected to silence and pauses used in numerous publications on the art of public speaking is that of Mark Twain: "no word was ever as effective as a rightly timed pause" (e.g. in Halbert and Whitaker, 2016: 15). Having observed many academic presentations in presentation classes, however, one may come to the conclusion that L2 users seem to have taken to heart a 2001 advertisement slogan recalled by Ferguson (2002: 2): "silence is weird". It seems that, due to the myriad of challenges which public speaking poses, students tend to either speak very quickly, with limited pauses, or to use filled pauses.

Listening to silence, which is a natural element of speech, noting how it is used, and what effect it allows a speaker to achieve, is advised when developing public speaking skills by handbooks such as that by Horn (2024). In her "Principles of Public Speaking" she notes that pauses which are "the intervals of silence between or within words, phrases, or sentences" (Horn, 2024: 162) can be used to create suspense, add emphasis, and express feelings in a way words cannot. Horn also warns against filled, or vocalized pauses, those filled with sounds such as "um" and "er," and other fillers which do not fulfil any function and only draw attention to the speakers' lack of confidence or hesitation.

Delivering a longer speech, be it in a social, professional or an academic setting, tends to result a certain level of anxiety in many of us. Not only do we typically want to deliver our message, make a certain impression, evoke specific feelings or reflections, but at the same time we may have a certain level of fear connected to our performance and to what our listeners might think about us, their judgements and negative evaluations. Public speaking is challenging for most of us for one reason or another. It may be so when we use our first language (L1) to present, and for most even more so when we use another language (L2).

Delivering a successful academic presentation involves ability to communicate effectively in the language in which one is to present. More than this, it involves the ability to use the voice appropriately, to transmit messages in an engaging manner which will ensure the audience's attention and involvement, and indeed to establish and maintain rapport with the audience. It also involves the ability to speak in an organized manner, to design visual aids, to have control over one's body language. The list of elements one needs to master in order to deliver a successful presentation is long, and becomes even longer for L2 users, who face one more challenge: their knowledge and ability to communicate in a non-native language.

Silent pauses in academic presentations can be viewed from two perspectives: on the one hand, they are an indispensable tool for organizing speech and directing listeners' attention, on the other, however, they can signal issues with fluency. While the use of pauses seems crucial in public speaking as such, it is particularly challenging in the case of L2 speakers, who have been shown to use longer and more frequent pauses than L1 speakers (Riazantseva, 2001; Kahng, 2014, 2018; Segalowitz, 2010). The resulting effect of lower perceived fluency has been found to be related most strongly to the placement of pauses – the number and length of silent pauses within clauses (de Jong, 2016; Kahng, 2018). However, as one of the aspects needed for a good presentation is the use of silence as a rhetorical device, speakers practicing academic presentations in L2 may find managing pauses particularly challenging.

This study explores the way Polish advanced students of English meet this challenge during the course of academic presentations. The study is motivated by the need to increase our knowledge and understanding of pausing patterns in learners for the purpose of assisting both teachers and students in the difficult task of improving fluency in academic presentations. As noticed by Chang and Windeatt (2024: 2), there is a lack of "research which goes beyond a statistical analysis of second language (L2) learner pauses in academic presentations". Their study, aiming to fill this gap by investigating pause placement and reasons for pausing, hopes to provide insights for teachers. The belief that the development of understanding of pausing patterns in academic presentations will help students and academic instructors is shared by the focus of the present study, which examines the effect of instruction (language-use focus) and awareness raising on the use of pauses in monologues.

2. Silence and fluency

Fluency, defined as "simply the ability to talk at length with few pauses" (Fillmore, 1979: 51), seems to be in direct opposition to silence, which –as the definition has it – requires to be kept to the minimum for the speech to be perceived as fluent. Still, pauses are a natural element of oral performance, as we need to breathe, although, as noticed by (Cruttenden, 1986: 37), "we pause for other reasons and take the opportunity to take the breath". Thus, from a fluency perspective, it is not only whether silent pauses do or do not occur in speech, but how long they are, how frequently and where they occur that matters. One way to distinguish between pause types is to recognize the difference between performance and prosodic pauses, with the

former reflecting planning and production, and the latter organizing speech into major prosodic constituents (Ferreira, 2007). In L1, pauses tend to occur at major constituent boundaries and it has been found that one of the major differences between the use of pauses in L1 and L2 is in the more frequent uses of performance pauses by non-native speakers of English (Tavakoli, 2011; Kahng, 2014).

One of the major reasons for the study of speech fluency in L2 is its importance for spoken proficiency, as shown by Iwashita, Brown, McNamara and O'Hagan (2008) in their large-scale study examining the relationship between speaking and different internal features, including grammatical accuracy and complexity, pronunciation, vocabulary and fluency. In order to find predictors for the perception of fluency, studies investigate the effect of individual aspects of utterance fluency, such as speed, breakdown and repair (Tavakoli and Skehan, 2005; de Jong, 2018; Tavakoli and Wright, 2020). Speed is typically expressed by speech rate (number of syllables divided by total time), articulation rate (number of syllables divided by phonation time (total time minus pause time), breakdown by pause characteristics, including such features as pause length, mean pause duration, pause ratio and finally, repair fluency, which refers to the number and/or proportion of false starts, repetitions and reformulations. The results point to speed and breakdown fluency as strong predictors of L2 fluency, more so than repair fluency. Speed fluency, measured by speech rate, was found to correlate with overall assessment more strongly than breakdown fluency, with minimal effect of repair reported by Saito, Ikan, Magne and Suzuki (2018).

As defined above, breakdown fluency in L2 is most often measured by the duration and frequency of pauses; however, as mentioned above, it is the placement of pauses that has been shown to determine the perception of fluency in L1 vs. L2 speech as well as in spoken L2 fluency. In an interesting study of the effect of pause location on perceived fluency, Kahng (2018) found that the rate of silent pauses within a clause had the strongest correlation with perceived fluency ratings and when controlled for the number and length of pauses, fluency ratings were higher for the no pause condition than for the pause condition, and then higher for pauses between clauses, than pauses within clauses for L1 and L2 speakers. In a similar vein, de Jong (2016) found the level of L2 proficiency to be correlated with silent pauses within clauses, but not between clauses, with the pauses becoming fewer and shorter with increased level of proficiency.

Another aspect of L2 fluency research relevant for the present study refers to the educational context. Tavakoli, Cambell and McCormack (2016) found a positive effect for short, 4-week awareness-raising activities and fluency strategy training on speed fluency measures; by contrast, it was

found that "the results imply that the development of breakdown fluency (i.e. silence and pausing) is slower and less sensitive to pedagogic intervention" (Tavakoli, Cambell and McCormack, 2016: 464). The observation that many students in the experimental group increased the number of pauses after the intervention, both within and across clauses, leads the researchers to the conclusion that pausing may be related to personal style and fluency in L1 and may act as a covert monitoring process, as distinct from repair fluency as an overt-monitoring one.

Another approach to the development of fluency is based on task repetition. The early study by Bygate (1996), who observed fluency, accuracy and complexity benefits of retelling a story immediately after watching a cartoon video and then repeating it 10 weeks later, was followed by other studies (e.g. Bygate, 2001; Lynch and Maclean, 2000) in which learners were asked to repeat the same speaking task, with the results showing gains in fluency in the repeated task. Another technique reported to have brought positive results with respect to fluency development is based on repetition with a diminishing time condition, called the 4/3/2/ technique (Nation, 1989; de Jong and Perfetti, 2011; Thai and Boers, 2016).

Investigating L2 fluency in academic presentations, Chang and Windeatt (2024) concentrate on breakdown fluency, exploring the location, type and frequency of pauses as well as the reasons for pausing among L2 students from different L1 backgrounds enrolled in an English for Academic Purposes programme at an Australian university. The data come from short academic presentations prepared by the students at the end of the course, after training, practice and preparation. Silent pauses were categorized as either planned (between clauses and pauses associated with lexical units and formulaic expressions, e.g. 'first of all', 'generally speaking' etc.), or unplanned (within clause). When asked to reflect on their pauses, students recalled linguistic problems, anxiety and confidence problems (psychological reasons) and content-related ones (cognitive). The authors conclude that in the case of academic presentations, the analysis of silent pausing needs to take into accountthe complex conditioning of this particular type of speech production.

3. The Study

The present study aims to explore the development in the use of silent pauses by L2 English learners in monologues (an impromptu speech and a short presentation on the same topic) by analysing characteristics of pausing in selected samples elicited from students enrolled in an academic presen-

tation course. Participants were all advanced speakers of English, however, the levels of their language proficiency differed. The academic presentation course included a 4-week training focusing on language use. Students were first recorded in a monologue task, an impromptu, and then a prepared short oral presentation on the same topic. The recorded samples were analysed for the location and function of pauses from the perspective of fluency and presentation features, with silent pauses classified for their between-clause and within-clause location, as well as their rhetorical function of emphasizing key elements in the presentation. The observation takes into account task type and the effect of instruction and training in relation to the proficiency level of the student.

The following research questions were formulated for the study:

RQ 1: What is the use of silent pauses (length, proportion, location and function) in L2 impromptu and short academic presentations in speakers with different level of L2 proficiency?

RQ 2: What is the difference between the use of silent pauses (length, proportion, location and function) before and after the 4 week instruction on the use of pauses?

RQ3: What is the relationship between the use of pauses for the development of L2 fluency and academic presentation features?

The use of silent pauses is investigated with reference to their length, proportion, location and function (non-rhetorical or rhetorical); the development of fluency is interpreted in terms of a lower proportion of pauses, especially within-clause pauses, and the development of academic presentation skills with reference to rhetorical pausing for emphasis.

3.1. Data collection procedure

The aim of the academic presentation course during which the data was collected was to prepare students to deliver effective speeches in an academic context. The focus of the class was on how to effectively prepare the content of a presentation (focus, organization of information), how to use body language, voice, and visual aids to ensure the most effective realization of one's presentation goals. The students were asked to deliver impromptu speeches numerous times throughout the course and on their basis the focus on pauses was chosen as an important element which needed to be worked on. The initial step in the 4-week training on the use of pauses was to overtly draw students' attention to pauses, so that they would recognize their types and functions. Initial activities included observations and evaluations of the effect of pauses in presentations delivered by the instructor and

selected presentations from TEDtalk. Students were then taught the basics of sound scripting, which involves planning how to use one's voice, specifically, where to pause and which words to stress. The materials used for this stage included activities from Powell's (2002) "Presenting in English". Students' awareness of the importance of pauses and their location was raised both in theory and practice. After a month the students prepared a short presentation on the same topic as their initial impromptu speech. They had time to sound script the presentation and practice it at home before, finally, delivering it in class. The impromptu speeches and the presentations were recorded by the instructor during the class with the permission of the students; and the recordings were made available to the students for further practice.

The course was open to BA and MA level students majoring in English at the University of Warsaw. Participants were all estimated as representing B2-C1 on the CEFR scale with respect to their general L2 English proficiency level. Out of 15 participants who enrolled in the course, the recordings of three females (aged 23–24) were selected for the analysis,on the basis of differences in the general level of proficiency. All students agreed to the use of their recordings for research purposes. The names of participants were coded as A, S and K, with the impromptu sample as 1 and presentation samples, analysed together, as 2. The proficiency of Speaker A was assessed as the highest, Speaker S as mid and Speaker K as the lowest within this small group. It needs to be remembered, however, that although there were noticeable differences between the students in their linguistic competence, they all represented advanced proficiency level in the L2.

3.2. Data analysis procedure

The recordings were first transcribed manually and then analysed for silent pauses with the use of Praat (Boersma and Weenink, 2007). In contrast to an earlier study (Klimczak-Pawlak and Waniek-Klimczak, 2023), no automatic pause extraction was used and the data were analysed manually. This procedure allowed for a less conservative approach as to the length of pauses. Rather than setting a specific lowest silent pause boundary, the investigator decided to analyse each pause both acoustically and auditorily. The decision was motivated by the exploratory character of the study, as well as the lack of unanimity as to the best threshold for silent pauses. The automatic extraction of pauses requires strict conditions set on the pause duration and "the traditional cut-off point of 250ms is a good choice" (de Jong and Bosker, 2013). However, shorter pauses which are not a part of articulatory closure,

in the range of 130–250ms or even 60ms, have also been reported (de Jong and Bosker, 2013). Consequently, in this study each fragment of silence was treated as a pause, unless it resulted from an articulatory closure.

For each recording, silent pauses were extracted from Praat, measured manually and verified auditorily. The analysis of pause placement and function criteria is based on Cruttenden (1986) and further modified to include the rhetorical function of a pause. As suggested by Cruttenden (1986: 37) "Pauses seem typically to occur at three places in utterances: (i) at major constituent boundaries (principally between clauses and between subject and predicate (…), (ii) before words of high lexical context (…), (iii) after the first word in an intonation group". The first place largely corresponds to a pause between clauses, however, the reference to a major constituent in prosodic terms (typically an intonation group) seems more accurate than a syntactic reference with reference to speech. Cruttenden (1986) refers to pauses of type (ii) and (iii) as reflecting hesitation, with pause type (ii) interpreted as difficulty with word-finding and type (iii) as having a planning function. Most generally, hesitation (within-clause) boundaries are expected to be shorter than pauses at boundaries. These criteria were selected for the analysis in this study as they offer the possibility of recognizing different within-clause pause places and consequently, allow the performing a more detailed analysis when compared to the between-clause and within-clause distinction used in other studies. What was needed, however, was a criterion reflecting the rhetorical function of pauses. The problem was solved by adding the rhetorical function criterion to within-clause boundaries of type (ii) and (iii). Supplemented by deliberate pauses of type (ii) and (iii) the analysis used the following categorization of pauses, with pauses of types (2b) and (3b) recognized on the basis of the contents of the speech and the length of the pause(they were expected to be longer than hesitation pauses).

(1) Major constituent boundary
  (1a) Neutral
  (1b) Rhetorical effect
(2) Before words of high lexical content:
  (2a) Word finding difficulty (hesitation)
  (2b) Deliberate pause for rhetorical effect
(3) After the first words in an intonation group – planning pause

3.3. Results and analysis

Six speech samples were analysed, two for each participant, the impromptu speech and 2 fragments of the short, prepared, presentation: opening and

mid-presentation fragments. The length of the samples, the duration of silent pauses, mean duration of a pause and the proportion of pause time to the phonation time plus pause time have been tabulated for the three speakers in Table 1 (Speaker 1: A, Speaker 2: S, Speaker 3: K).

Table 1. Data for impromptu and prepared speech samples for each speaker: length of the sample, pause duration, number of pauses, mean pause duration, standard duration of mean pause duration, the proportion of pauses to the length of the sample

	A 1 Impromptu	**A 2 Presentation**	**S 1 Impromptu**	**S 2 Presentation**	**K1 Impromptu**	**K 2 Presentation**
Length	52.7s	36.87s	44.78s	38.35s	69.12s	39.94s
Pause duration	11.12s (N=19)	6.107s N=16	10.951s N=14	3.159s N=8	7.708s N=16	3.856s N=12
Mean pause duration	0.585s *SD* 0.23	0.381s *SD* 0.22	0.782s *SD* 0.48	0.394s *SD* 0.26	0.481s *SD* 0.42	0.321 *SD* 0.13
Pause proportion	21%	16.5%	24%	8%	11%	9.6%

The measurements show a general tendency for less pausing in the second task for each speaker, suggesting a major change between tasks in the amount of pausing. As elements of a measure of fluency, both the decrease in pause proportion and the mean length of the pauses indicate a positive effect for instruction and practice. However, on closer inspection, the results also bring unexpected results from the point of view of the relationship between the general proficiency level and the proportion of silent pauses. The impromptu data suggest the lowest proportion of pauses in the least proficient Speaker K, and a similar proportion in the other two speakers, the most proficient Speaker A and the mid-proficient Speaker S. The change in proportion of pauses after the instruction and practice was found to be the greatest in the case of mid-proficient speaker S, and the smallest in the least-proficient speaker K. Speaker A, the most proficient, uses a relatively large proportion of pauses (21% in impromptu and 16.% in prepared speech). She is also consistent in her pausing, with the mean pause duration lowering for the second task, but also becoming more varied, as shown by standard deviation measures (*SD* remains almost the same, in spite of a lower mean value).

While these results suggest a positive effect of instruction and practice on pauses from the perspective of L2 fluency, the further criterion of the location of pauses can provide more insights into pausing patterns. The generalized results for pause placement with the use of the pausing criteria

are tabulated in Table 2. The criteria were applied on the basis of auditory analysis of the contents of the speeches and individual pauses were allocated to individual categories. The summarized results show major differences between speakers, as well as between the tasks. The most proficient Speaker A uses the highest number of pauses, however, the majority of them are used either between major constituents, or for rhetorical emphasis, both between major constituents and within, with an increase in rhetorical before-word pauses in the second task. Speaker A does not use within-constituent planning pauses in either task. This type of pause is also successfully avoided by Speaker S in her second task – here the effects of instruction and practice seem evident, both with respect to the lack of planning pauses and the use of rhetorical pauses in the short presentation task, once between and once within constituents. Speaker K exhibits the least change in her use of pauses across the tasks, although she does seem to move in the right direction, with the lowered number of hesitation pauses (2a) and planning pauses (3) in the second task.

Table 2. Type of pause data: number of pauses and pause duration for impromptu and prepared speech samples for each speaker between major constituents (1), neutral (1a) with rhetorical function (1b), Before words of high lexical content (2), word finding difficulty (hesitation) (2a), deliberate pause for rhetorical effect (2b), After the first words in intonation group – planning pause (3)

	A 1 Impromptu		A 2 Presentation		S 1 Impromptu		S 2 Presentation		K 1 Impromptu		K 2 Presentation	
	N	Length	N	Length	N	Length	N	Length	N	Length	N	Length
(1) Between major const.	13	7.508s	6	2.141s	7	5.75s	5	2.374s	7	2.99s	6	2.143s
(1a) neutral	9	4.842s	5	1.635s	7	5.75s	4	1.47s	7	2.99s	6	2.143s
(1b) Rhetorical	4	2.667s	1	0.506s	0	0	1	0.904s	0	0	0	0
(2) Within – words	6	3.61s	10	3.96s	5	2.614s	3	0.785s	5	2.89s	3	0.928
(2a) Hesitation	5	3.018s	2	0.447s	5	2.614s	1	0.38	4	2.61	1	0.268
(2b) Rhetorical	1	0.593s	8	3.519s	0	0	2	0.405	1	0.282	2	0.66
(3) Within – planning	0	0	0	0	2	1.587	0	0	4	1.817	3	0.785

Thus, when analysed from the perspective of placement, silent pauses present an interesting pattern which seems to be conditioned by the general proficiency of the speaker and the effect of instruction and practice. An interplay between the two factors can be seen in mid-proficiency Speaker S, who uses fewer pauses, especially those for hesitation and planning and starts to use pauses for rhetorical purposes after instruction and practice. The effect of instruction can also be noticed in lower-proficiency Speaker K, similarly shown by a lower number of hesitation and planning pauses. The most proficient Speaker A, on the other hand, increases the number of within-constituent pauses in the second task, but does it for rhetorical emphasis. An interim conclusion that can be drawn as the result of data analysis so far is that the instruction and practice seems to have affected the fluency of the less proficient speakers, particularly the mid-proficient one more than their presentation skills, while the most proficient Speaker A benefitted the most at the level of organizationof the academic presentation, in the use of silent pauses for rhetorical effect.

The generalized picture based on empirical data provides information as to the main tendencies. The analysis presented below looks at the specific pause-usage of each participant and the details of the coding of pause types.

Speaker A

The most proficient speaker A uses a relatively large number of pauses in her impromptu speech. Unlike the other speakers, she seemed to use rhetorical pauses for emphasis not only within constituent units, but also at major unit boundaries from the beginning of the course. Examples of clause-boundary pauses which perform a rhetorical function, are coded **1b**as in

> [A:IM1] *Hello everyone I'm gonna talk to you about a very (0.177)* ***2a*** *interesting topic (0.449)* ***1b does*** *education kill creativity (0.949)* ***1b or*** *(0.414)* ***1a*** *should we make it a question or a* ***statement*** *(0.957)* ***1b****.I think we may say it does...*

The opening excerpt of the impromptu already promises a good talk. The speaker makes long silent pauses (0.449 to 0.957) in important places, emphasising the most relevant words, pausing before and after them. The structure of the opening sentences is simple and straightforward, the message clearly stated and delivered. Emphasis is achieved by pauses as well as pitch change, as she consistently uses higher pitch for stressed syllables. The second part of the impromptu loses the original easy flow, as the talk has not been thought-through, and consequently requires online planning. However,

the time for planning comes from pauses before words and filled pauses rather than pauses for planning.

> [A:IM2] *think we may say it does because from the first day on (0.439)* ***1a*** *children are made to sit (0.792)* ***1a*** *– em (filled 0.644) – (silent 0.118)* ***1a*** *just sit and make some exercises that are very (0.447)* ***2a*** *– em (filled 0.429) – (0.859)* ***2a*** *that don't allow much spontaneity and are very (0.951)* ***2a*** *there are very clear rules they have to follow.*

The prepared speech follows a similar pattern as the opening of the impromptu, however, within-major constituent pauses are used even more frequently, in many cases shorter than before. The decision to assign silent pauses as rhetorical, particularly the short ones (e.g. 0.176ms before *interesting*) came from the pitch pattern and auditory impression. The talk begins with a filled pause, a sign of stress corresponding to the delivery of a prepared speech, with a higher degree of anxiety than in the case of the impromptu.

> [A:P1] *Emm emmsooem – (filled 1.96) I'd like to discuss an (0.176)* ***2b*** *interesting and I think a quite important question (0.280)* ***1a*** *because (0.270)* ***2b*** *I think it is important to all of us (0.182)* ***1a*** *in a way (0.40)* ***1a*** *And the question is* ***2b*** *(0.432) why (0.266)* ***2b*** *does education kill creativity and (0.363)* ***2b*** *does it really* ***2b*** *(0.700) kill* ***2b*** *(0.312) creativity.*

In the mid-presentation excerpt a similar pattern can be observed, however, the number of emphasized words drops.

> [A:P2] *I think the main reason (0.506)* ***1b*** *why school kills creativity is (0.341)* ***2a*** *that it is (1.00)* ***2b*** *not predicated on the ideas of academic ability (0.238)* ***1a*** *and this academic ability the idea of academic ability (0.485)* ***1a*** *also dominates our view (0.106)* ***2a*** *of intelligence.*

To recapitulate, Speaker A uses pauses regularly across and within major constituency boundaries, but the flow of her speech is easy to follow and the pauses do not hinder fluency due to their good motivation and placement.

Speaker S

The mid-proficiency speaker comes across as a good presenter in her impromptu from the perspective of audience reaction (laughter); as with Speaker A, she is much more fluent in the opening section than later on, however, unlike Speaker A, her use of pauses in the second part of the

impromptu is based on planning and word-searching. She finds it difficult to build a coherent argument spontaneously, so it is difficult to assess the grammar and/or rhythm of the speech.

> [S:IM] *… and I'm going to talk about education kills (0.248)* ***2a*** *creativity (1.10)* ***1a****. I quite agree with it(0.326)* ***1a*** *because (laughter 2.07) because I think that people have to study we have to (0.352)* ***2a*** *read what (0.70)* ***3*** *what we have to not what we want to (laughter 2.169). We em – (filled 1.004) – can't (0.887)* ***3*** *we can't (1.237)* ***3*** *we can't study (0.615)* ***2b*** *more than we have to (0.573)* ***1a*** *because it is focused only (0.496)* ***2a*** *on main topic (1.97) we can't use creativity in in (0.903)* ***2a*** *education system (1.038)* ***1a*** *and I think that's all (0.506)* ***1a*** *It's all for now...*

In the prepared speech, however, the speaker is much better in control of the delivery. Nervous at the beginning, she emphasizes the first key word by a long pause followed by a filled pause, and then gets the rhythm of speech.

> [S:P1] *and today I'm going to answer the question 'does education kill creativity (0.904)* ***1b*** *– emmm (filled 0.867) – first of all we have to focus (0.380)* ***2a*** *on the the other aspect which is connected with the previous question (0.242)* ***1a*** *what is the role of education nowadays. (0.634)* ***1a*** *In today world many people want to study and they do this.*

The same pattern, with silent pauses followed by filled pauses continues throughout her speech, but the use of rhetorical pauses and emphasis makes her speech sound fluent and well-organized. The control of the grammar is also very different, with the making of pauses better motivated by the structure of the talk.

> [S:P2] *what's more creativity (0.129)* ***2b*** *is very important in our life because it helps us to create something new to think about something (0.438)* ***1a*** *and it helps our brains to – eem (filled 0.708) to think* ***1a*** *(0.156) – ee (filled 0. 122) and to (0.276)* ***2b*** *think about something in various ways*.

Speaker K

Speaker K is the least proficient and the proficiency level coincides with problems in presentation, i.e. pauses, repetitions, incomplete clauses, etc. However, she is a lively speaker, provoking a lively reaction from her audience. In her impromptu speech, she begins with many repetitions performed in a playful manner.

[K:IM1] *and today I would like us to think to think ab ab a (laughter 1.823) a little bit (0.372)* ***1a*** *about whether modern education is possible without modern technologies (0.684)* ***1a*** *– em (filled 0.384) – my personal point of view is that we – em (filled 1.73)* ***3*** *– in nowadays world we can't have modern education without modern technologies (0.506)* ***3*** *technologies (0.707)* ***1a*** *because (0.737)* ***3*** *because because (laughter 2.16) many things which – nowa which nowadays – we are doing everything is (1.60)* ***1a*** *mostly associated with modern technologies starting from (0.314)* ***2a*** *the presentations which we have (0.287)* ***1a*** *and ending fr about and – em (filled 0.411) – ending on presentation in our work for example (0.246)* ***1a****.*

The second part of the impromptu provides further evidence of relatively frequent use of mid-major-constituent pauses, repetitions and filled pauses, but the structure of the talk continues to be focused on the audience (notice the closing of the impromptu).

[K:IM2] *And I think that (0.248)* ***2a*** *from the first stages of lives of the students and lives of every child (0.409)* ***1a*** *we should start (0.0.417)* ***3*** *we should start to teach them modern technologies because (0.448)* ***2a*** *– em (filled 1.67) – it is more – em (filled 0.447) very important and in their future life and in their future work it would be (0.282)* ***2b*** *very essential and they would (0.157)* ***3*** *will be using it from all of the time (0.294)* ***1a*** *I think that your opinion is the the same and thank you….*

The pressure of the prepared short presentation makes the speaker in the second sample seem nervous, but progress has clearly been made. The speaker builds a more coherent argument, and although she still uses repetitions, filled pauses and pauses for planning, the flow of her speech has improved. The mid-presentation fragment [K:P2] illustrates a more even rhythm of presentation, coupled with grammatically complete structures. Interestingly, however, the relatively low proportion of pauses to the whole speech results from the use of numerous very short pauses, which does not make the presentation easy to follow.

[K:P1] *OK (0.104)* ***1a*** *so my topic is (0.186)* ***1b*** *there is no modern education without modern technologies and I would like to talk a little bit about this (0.473)* ***1a*** *and what I would like to say at the beginning (0.281)* ***3*** *At the beginning (0.117)* ***3*** *I would like to say that I agree with this statement because as we (0.387)* ***3*** *as we know (0.431) 3****1*** *– em (filled 0.671) – (silent 0.345)* ***1a*** *modern technologies are everywhere today and we are using it (0.268)* ***2a*** *on a daily basis*

[K:P2] *But we shouldn't (0.474)* ***2b*** *also forget about the thing that modern technologies are also helpful for the teachers (0.427)* ***1a*** *because thanks to modern technologies teacher can prepare presentations* ***1a*** *(0.363) and they can search many interesting – em (filled 0.325) so… sources.*

The main observation from the above overview of the major tendencies in the use of pauses in context relates to two features: the use of prosody and building a coherent argument. The two aspects interact, with prosody helping to highlight important aspects and cover up for grammatical or logical incoherence. It seems that this interaction works for Speaker S more than for Speaker K, with Speaker A the most systematic in the use of both aspects. Thus the conclusion from this section is similar to the one based on the empiricaldata: it is Speaker A who develops her presentation skills best, with Speaker S and K following. The present section discussed students' performance in terms of pauses as well as prosody, however, the prosodic aspect was added on an auditory basis only and calls for further study.

3.4. Discussion

To summarize the results and analysis and to address the research questions, a comparison between the use of pauses by the speakers in each task (RQ1) and across tasks (RQ2) will open the discussion section, to be followed by the key aspect of the relationship between pausing in the development of L2 fluency vs. L2 academic presentation skills (RQ3).

The first aspect, the use of pauses across students in each task, makes it possible to assess their utterance fluency, as well as the ability to make part of a public speech with virtually no preparation. The participants use different resources to make their speech successful: besides the structure and rhetorical devices, they make contact with the audience in moments of doubt, provoking laughter. This interesting strategy is employed by mid-proficiency Speaker S and lower-proficiency Speaker K, with the latter resorting to it to a greater extent. While laughter is excluded from the speaking time, and cannot be treated as a pause, it is a successful device to buy time and connect with the audience. The use of pauses for planning, defined in the current study after Cruttenden (1986) as pauses after the beginning of a major constituent, has an additional ally in the form of audience-created planning time. Not surprisingly, just as laughter accompanies the performance of the two lower-proficiency students, so do planning pauses, with Speaker S using them twice and Speaker K four times in their impromptu speeches. Speaker A, the most proficient, does not provoke laughter, nor does she

stop for planning. What she does, however, is use longer within-constituent pauses, both hesitation and rhetorical ones. With respect to the proportion of pauses, however, the low-proficiency Speaker K has the lowest pause-time to whole speech (11%), with the other students at a similar level (24% in Speaker's S impromptu and 21% in Speaker A). In the case of the second task, the short prepared presentation, it is Speaker S who uses pause-time the least (8%), followed by Speaker K (9.6%) and finally, Speaker A (16.5%). Apart from instruction and practice, the very nature of the task, a speech prepared earlier by the students, and consequently less challenging as regards on-line processing, has a clear effect on the number and duration of pauses. However, while the less proficient students seem to have concentrated on avoiding pauses, especially planning and hesitation ones, the most proficient speaker uses rhetorical pauses to a much greater extent (3.519s in A, 0.282 in S and 0.660 in K). The strategies used by the speakers in the prepared speech suggest different aims depending on the proficiency level: the less proficient speakers aim to improve their fluency, while the most proficient speaker concentrates on presentation skills rather than avoiding pauses, and uses them for rhetorical purposes more in the practised than in the impromptu speech.

With respect to RQ2, the positive effect of the 4-week training on the use of pauses can be seen in the change in the pause proportion, which is lower in the second than in the first taskfor each student (see Table 1). This difference can be attributed to awareness raising, instruction and practice during the 4-week training, as well as task-type. While the before-intervention impromptu task may seem more difficult, the prepared short presentation put an additional pressure on the speakers, making the monologue possibly more challenging. The comparison between impromptu and prepared speech is based on the whole length of the impromptu and on two fragments of the presentation: from the beginning and mid-presentation. The motivation was to compare the spontaneous presentation of speech from the impromptu with prepared speech in the opening section, which is most likely memorized by the speakers, and mid-speech, when they resort to a more natural flow of speech. The comparison based on the overall data suggests a tendency of lowering of the length and proportion of pauses in all the speakers, with the most noted effect in mid-proficiency Speaker S (the proportion of pauses dropping from 24% in the impromptu to 8% in the prepared short presentation). The analysis of the short presentation data does not show noticeable differences between the initial fragment and the mid-presentation one, other than the tendency to use opening phrases, e.g. filled pauses in Speaker A, 'and today…' by Speaker S and 'OK' by Speaker K.

The empirical data suggest that while there is a change in the use of pauses in all the speakers, there is a difference in the change with respect

to the within-major constituent and between-constituent boundary pauses (see Table 3). The analysis based on the placement of pauses generalized into these two major categories suggests increased problems with the within-major constituent (within clause) pauses in the case of the most proficient Speaker A. In view of the earlier discussion, however, this conclusion does not seem to reflect this speaker's performance at all. Thiscalls for more detailed analysis of pausing in specific tasks,type of instruction, and practice. Thus, in the case of academic presentations, analysis based on the two categories of pauses as a fluency measure is not sufficient,and alsocalls for recognition of the rhetorical function of pauses.

Table 3. The number, length and mean duration of pauses within two major categories, between and within major constituents in impromptu and short presentation samples for individual speakers

	A1 Impromptu		A2 Presentation		S1 Impromptu		S2 Presentation		K1 Impromptu		K2 Presentation	
	N	Length	N	Length	N	Length	N	Length	N	Length	N	Length
Between major const.	13	7.508s (0.58s)	6	2.141s (0.356s)	7	5.75s (0.82s)	5	2.374s (0.474s)	7	2.99s (0.427s)	6	2.143s (0.357s)
Within major const.	6	3.611s (0.601s)	10	3.966s (0.396s)	7	4.201s (0.60s)	3	0.785s (0.261s)	9	4.709s (0.523s)	3	1.713s (0.571s)

The relationship between the use of pauses for the development of L2 fluency and academic presentation features (RQ3) proves to be particularly interesting, as it suggests a connection between general L2 proficiency level and the type of progress that is made by the student. When interpreted for pause use from the perspective of pause duration, proportion and location, the data suggest that the mid-proficiency Speaker S makes the greatest progress, followed by the lower-proficiency Speaker K. The high-proficiency Speaker A, on the other hand, is the only one to increase the use of within-major constituent pauses in her second recording; meaning that with the pausing pattern interpreted in terms of fluency development, she seems to be the least successful. However, this assessment is clearly contrary to the auditory data, as speaker A comes across as the most fluent of the three. In fact, the fluency of this speaker does not vary greatly across the tasks, which is similar to what was noticed for pitch-accent ratio in an earlier study (Klimczak-Pawlak and Waniek-Klimczak 2023). What does change, however, is the organization of speech. There is an increase in the number of within-clause pauses specifically in the prepared academic presentation. The

four weeks of instruction, practice and preparation may have increased the anxiety level, leading to a complex conditioning of pausing, which partly justifies the change. However, what explains the difference best is the distinction between two types of within-clause pauses: hesitation vs. rhetorical-pauses used for emphasis.

The application of L2 fluency research to academic presentations needs to take into account the complex conditioning of pausing, as postulated by Chang and Windeatt (2024). Moreover, research pointing to the negative effect of within-clause silent pauses for fluency (e.g. de Jong, 2016; Kahng, 2018; Chang and Windeatt, 2024) requires further analysis in these specific speech tasks, so that the conditions for a good presentation are taken into account. With silent pauses encouraged, and filled pauses discouraged in public speaking handbooks (e.g. Horn, 2024), the use of silent pauses is a notable feature of a good presentation in L2; however, for the sake of analysis and practice, it is of paramount importance to specify the conditions for recognizing a rhetorical pause from a hesitation pause. The present study resorted to auditory analysis of the data for this purpose, however, further research is needed in order to develop well-defined and motivated criteria.

4. Conclusion

The analysis of the recorded samples shows that the use of silent pauses differs between tasks (impromptu speech and prepared presentation) for each speaker and across speakers, pointing to the relevance of the level of general L2 language proficiency on the use of pauses, and the effect of the 4 week training. The results for the individual speakers show that the analysis of empirical data provides different results depending on the level of detail that is included in the analysis. The comparison of the length of pauses, pause duration, mean pause duration and pause proportion points to the training having been of the greatest benefit to mid-proficiency Speaker S, while the lower-proficiency Speaker K and the highest-proficiency Speaker A seem to be in a similar position. However, a more detailed analysis of pauses shows that the distribution of pauses and their use for the purpose of making the presentation easy to follow differs. When viewed from this perspective, the most advanced student A proves to use silent pauses in the most proficient way, but only when their use for a rhetorical function is recognized as a separate category. If generalized for between- and within- major constituent placement, the change in pause usage suggests opposite results, with Speaker A using more within-constituent pauses after instruction in the

prepared short presentation sample. These observations lead to the conclusion that academic instruction has had the effect of increasing utterance fluency for mid-proficient Speaker S and lower-proficient Speaker K, with greater positive change in the case of the former and less in the latter student. The most proficient Speaker A, on the other hand, has implemented the emphasis of key words with rhetorical pauses in her speech, characteristic features of a good presentation.

The observations made in the course of the analysis lead to tentative conclusions which can offer initial insights into learning and teaching the use of pausing in L2 academic presentation courses. The small number of observations and the length of analysed samples are the main limitations of the study. The analysis itself includes only some possible measures and criteria. There are several aspects that could provide further insights into the development of fluency in academic presentations, including the analysis of filled and unfilled pauses and the prosodic organization of speech. One of the aspects that was noticed as relevant in the recognition of the rhetorical function of pauses is the stress pattern and the emphatic use of pitch, syllable length and loudness. Further studies are needed before recommendations for the teaching of pausing in L2 academic presentations can be offered. However, even at this stage, the results of the study suggest the need to concentrate on the development of general L2 fluency by focusing on the limitation of within-clause pauses in the case of lower or mid-proficiency students, while the use of within-clause pausing with rhetorical function can be successfully practiced with those of high-proficiency.

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