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Task communicative function and oral fluency of L1 and L2 speakers

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Abstract

To respond to recent calls for examining oral fluency from a broader social and communicative perspective, the current study aimed at investigating the effects of task communicative function on second language (L2) and first language (L1) speakers' fluency. Designing tasks that represent three different communicative functions (congratulations, bad news, and complaint), we collected data from 40 Spanish L2 learners of English, 20 L1 English speakers, and 20 L1 Spanish speakers. The data were analysed for a range of measures of speed, composite, breakdown, and repair fluency. Results of the statistical analyses (descriptive, Multivariance Analysis of Variance (MANOVA), and two-way mixed Analysis of Variance (ANOVAs)) suggested that task communicative function had an impact on the speakers' performance, with bad news eliciting the slowest speech and most mid-clause pauses, and complaint the fastest with fewest end-clause pauses. Significant differences were observed across the tasks for speech rate and end-clause pauses in the L1 English group, but the results were nonsignificant for task effects in the L1 Spanish and L2 English groups. The three language groups' fluency was statistically different, highlighting (a) cross-linguistic differences between L1 Spanish and L1 English speakers and (b) differences between L1 and L2 English speakers.

KEYWORDS
communicative functions, L2 fluency, L2 pragmatics, oral fluency

Oral fluency has recently attracted substantial attention in the field of second language (L2) research in view of its important role in L2 acquisition and development. In addition to playing a central role in L2 communicative ability, L2 fluency is seen as a reflection of the speaker's speech production process and a representation of their L2 acquisition. Development of L2 fluency research over the past two decades has offered new perspectives on fluency, promoting a more in-depth understanding of this complex construct. For example, this body of research has provided new insight in terms of how fluency is conceptualised (Lennon, 1990), how it should be analysed (de Jong & Bosker, 2013; Foster & Skehan, 1996), and how it relates to other underlying principles of L2 acquisition, such as automaticity and L1 fluency (DeKeyser, 2007; Huensch & Tracy–Ventura, 2017). One important development in this area is Segalowitz's (2010) triadic model, which has encouraged researchers to conceptualise and investigate fluency in three different but interrelated aspects of cognitive fluency (the efficiency and fluidity of the cognitive processes and operations underlying speech production), utterance fluency (the observable aspects of speech), and perceived fluency (the listeners' perceptions of the speaker's fluency).

Following the introduction of this model, a notable amount of research has focused on examining fluency in these three dimensions, trying to understand the complex and multifaceted nature of fluency. A review of the literature suggests that a large majority of such studies have investigated fluency in relation to the development of learner proficiency (Baker–Smemoe et al., 2014), task cognitive demands (Kahng, 2014; Segalowitz, 2016), the relationship between perceived and utterance fluency (Prefontaine & Kormos, 2016; Suzuki et al., 2021), and the development of fluency in instructional contexts (Mora & Valls–Ferrer, 2012; Valls–Ferrer & Mora, 2014). Despite the significant contribution of this body of research, researchers have argued that our understanding of L2 fluency is still limited and there is a need for adopting a broader approach to examining L2 oral fluency that moves beyond the current predominantly cognitively oriented framework (Segalowitz, 2010, 2016; Tavakoli & Wright, 2020). One such underresearched area is the effects of communicative and pragmatic characteristics of tasks on L2 speakers' fluency behaviour. Segalowitz (2016), for example, argued that studies examining fluency should be situated "in the social context of communication" to help better understand the role of "the pragmatic and sociolinguistic nature of communication in shaping L2 fluency development" (p. 79). In a similar argument, Taguchi (2011) highlighted the need to study cognitive processing and pragmatic knowledge together, arguing that fluency is one of the key aspects of spoken performance that can reflect pragmatic requirements of communication.

Against this background, the current study aims to help fill the gap by examining the effect of pragmatic characteristics of speaking tasks—operationalised through communicative functions—on utterance fluency. Given the culturally defined nature of pragmatics, it is essential to distinguish between differences in L2 speakers' fluency behaviour that are characteristics of their L2 performance and those that are characteristics of their first language (L1) pragmatic requirements. Therefore, adding a cross-linguistic perspective to this focus seems indispensable, as it will enable us to provide a comparison of L1 and L2 fluency behaviour and a cross-linguistic comparison of fluency behaviour in two different languages.

LITERATURE REVIEW

In this section, we provide a review of the literature in relation to three different aspects of fluency: speech production models, the relationship between L1 and L2 fluency, and pragmatic requirements of different speech acts' communicative functions.

Speech production processes in L1 and L2

Understanding the process of speech production can help highlight the significance of fluency in L1 and L2. In his widely cited model of L1 speech production, Levelt (1989) argued that speech

production comprises four distinct but interconnected stages. The first stage, conceptualiser, is where the speaker's communicative intention is identified and the preverbal message is planned and developed. The preverbal message will then move to the next stage, formulator, where the message is converted to a linguistic form through lemma activation and retrieval and selection of morphophonological and syntactic forms. The third stage, articulator, retrieves the phonetic and articulatory information about the linguistic forms and produces overt speech. The final stage, monitoring, accompanies the process at all of the previously mentioned stages, aiming to ensure the speech reflects the intended message accurately and appropriately. Three key characteristics of the process—incremental, parallel, and automatic—enable the speaker to work on different aspects of the process simultaneously and effortlessly. Given L1 speakers' complete linguistic knowledge and their access to automatic processing of the language, disfluencies in L1 speech do not occur frequently in comparison to L2 speech, and when they do, they are more likely to emerge from the demands of the conceptualiser rather than formulator or articulator.

Proposing an L2 speech production model, Kormos (2006) suggested that L1 and L2 production processes are similar in that they both involve the same four stages. She argued, however, that there are two key differences: L2 speakers have incomplete linguistic knowledge of the L2, and their access to processing the linguistic knowledge is not automatic, especially at lower levels of proficiency. These two differences increase the likelihood that the L2 production process takes place in a serial manner, and as a result, the L2 speech production process becomes slower in speed and interrupted with disfluencies. Kormos also argued that although disfluencies may occur at every stage of the L2 production process, the demands are greater for the formulator, where parallel processing is needed to bring the lexical and grammatical features of speech together. Such demands are often reflected in the slow speed, amount of silence, and frequency of repair in L2 speech, highlighting the significance of L2 fluency in understanding the L2 speech production process.

L1 and L2 fluency

Fluency, whether in L1 or L2, is commonly known as a construct difficult to define, and therefore, reaching a widely agreed-upon definition may not be realistic. In a broadly cited definition of L1 fluency, Fillmore (1979) distinctly referred to four different dimensions of the L1 speaker's ability "to fill time with talk," to speak "in coherent and semantically dense sentences," the ability to say "appropriate things in a wide range of contexts," and the ability to be "creative and imaginative in the language use" (p. 51). L2 fluency, however, has often been perceived in relation to the speaker's overall proficiency or speaking ability, a view Lennon (1990) considered as the broad perspective to defining fluency. In contrast, L2 fluency has also been defined from a narrow perspective, where specific and analysable features of speech (e.g., speed and silence) are used to conceptualise and represent fluency. Adopting a narrow perspective to understanding L2 fluency has been shown effective in researching the nature of fluency (Hunter, 2017; Kahng, 2014), in examining the assessment of fluency (Huhta et al., 2019), and in language teaching and teacher training programmes (Derwing et al., 2008). Based on this narrow perspective, several definitions have also been offered to define L2 fluency, most of which highlight the speaker's ability to produce speech with "native-like rapidity" (Housen et al., 2012, p. 2), and the extent to which the flow of speech is affected by pauses and repairs (Derwing, 2017). What these definitions have in common is an expression of the flow, continuity, and ease with which speech is produced, and the realisation that it is not interrupted by pauses or repairs.

Research in this area has shown that while some factors affect utterance fluency similarly in L1 and L2 (e.g., uncertainty increases length and/or rate of pauses), the differences between L1 and L2 production processes may differentially affect L1 and L2 fluency (de Jong, 2018). For example, when performing a task that requires several parallel cognitive operations, L1 and L2 speech are similarly affected by the task cognitive load, often leading to an increase in the conceptualiser demands with a potential impact on the speech production process. In the case of L2 speakers, however, such cognitive demands are expected to be heightened as L2 speakers will further need to deal with the demands of

the formulator and articulator (e.g., accessing and producing the right lexical and phonological units). Recent research (Duran–Karaoz & Tavakoli, 2020; Huensch & Tracy-Ventura, 2017; Peltonen, 2018; Riazantseva, 2001) has achieved significant findings to indicate that while L1 and L2 fluency are interrelated (e.g., L2 fluency can to some extent be predicted from L1 fluency), there are differences between L1 and L2 fluency.

In addition, L1 and L2 speakers are known to be different in terms of speed, pausing patterns, and repair fluency. Overall, fluency research suggests that L1 speakers—compared to L2 speakers—speak faster and produce fewer pauses and repairs (de Jong, 2015; Kahng, 2014; Skehan & Foster, 2012; Zuniga & Simard, 2019, among others). Examining fluency in L1 Russian and L2 English, Riazantseva (2001) reported that while L2 speakers in general speak slower and pause more frequently in their L2, their speed and pausing behaviour becomes more native-like as they develop their proficiency. Research in this area has also suggested that pause location is a key feature of utterance fluency that distinguishes L1 from L2 fluency behaviour. Tavakoli (2011), for example, demonstrated that what distinguishes L1 from L2 speakers is their pause location, with L2 speakers pausing repeatedly in mid-clause positions and L1 speakers pausing more at end-clause positions. Other research findings have suggested that while L1 speakers use repair to achieve their communicative intent, L2 speakers use pausing and repair primarily to buy time and to deal with the challenges emerging from the formulator operations (Field, 2011).

The second line of enquiry to summarise here is the cross-cultural differences that influence fluency behaviour. Several studies have shown that differences are observed between fluency behaviour in different languages. For example, examining L1 speech rate across several languages, Pellegrino et al. (2011) reported that Japanese and Spanish were the fastest languages, respectively, with English standing in the fifth ranking for speed. Examining the articulation rate of French and German L1 speakers, Trouvain and Mobius (2014) reported similar results, demonstrating that French speakers speak at a faster rate than German speakers. It is worth noting that such differences in speed are often explained in relation to the languages' phonological characteristics and syllable structures (e.g., whether allowing for small, large, or no consonant clusters).

Differences between different languages' pausing and repair behaviour have also been reported in the literature. In a study investigating cross-linguistic differences between L1 speakers of Spanish, English, and French, Huensch and Tracy–Ventura (2017) reported that the three language groups were significantly different in terms of number of filled pauses, repetitions, and corrections per second. Spanish speakers were shown to produce fewer filled pauses and repetitions, whereas L1 English speakers used more corrections than Spanish and French speakers. These findings taken together suggest that differences are anticipated when examining fluency across different language groups. Such differences, however, have not been thoroughly examined yet. Among the unexplored areas of research in cross-cultural studies is the paucity of research examining the interrelationship between L1 and L2 pausing and repair behaviour when performing different communicative functions, which may affect fluency behaviour differentially in different languages.

The final line of research to discuss here considers the effects of task design on fluency. Several studies have so far reported significant effects of task type and task design on L1 and L2 fluency (Ellis, 2009; Huensch, 2023). Design features such as type of information, task structure, and cognitive complexity are shown to affect fluency. Tavakoli and Skehan (2005), for example, provided evidence that task structure affected L2 speakers' fluency in different dimensions of speed, pausing, and repair; Foster and Skehan (1996) concluded that the properties of a task (e.g., amount of detail provided and level of familiarity with the task) have an impact on L2 fluency. In the same line, Robinson (2001) indicated that adding more elements to a direction-giving task would make L2 speakers' speech slower, while Huensch (2023) reported that L2 speakers showed more improvement in narrative tasks compared to interview tasks. As can be seen, most studies in this area have examined task in terms of its cognitive demands, with very little research examining the pragmatic characteristics of tasks and their potential impact on fluency. It is surprising that this has remained an underresearched focus in fluency studies, as the importance of pragmatic aspects of task design is frequently emphasised in

the literature (Meisel, 1987; Segalowitz, 2016; Taguchi, 2007). Highlighting "the importance of the communicative acceptability of the speech act," Segalowitz (2016) called for future research to include investigating the relationship between "measures of the speed, efficiency and fluidity of the cognitive processes thought to underlie implementation of the speech act and measures of the oral fluency of that speech act" (p. 79).

Communicative functions of tasks and oral fluency

As previously indicated, the pragmatic aspects of communication and their impact on L2 fluency is an underresearched area of enquiry. Pragmatics, or "the study of how-to-say-what-to- whom-when" in L1 and examining "how learners come to know how-to-say-what-to-whom-when" in L2 (Bardovi–Harlig, 2013, p. 67) has been an increasingly significant research focus in the field of SLA (Bardovi–Harlig, 2020; Cai & Wang, 2013; Matsumura, 2003). Pragmatic knowledge is, in essence, central to successful acquisition of an L2 because it denotes mastering how the intended meaning is conveyed. Whereas L1 speakers normally have a reliable knowledge of pragmatic requirements of the spoken language in interaction, L2 research has provided evidence that for many L2 speakers—especially those in instructional settings where exposure to cultural and contextual meanings is often limited—gaining a reliable level of pragmatic knowledge remains a challenge (Cohen, 2008; González–Lloret, 2019).

An emerging research focus in L2 pragmatics has examined how learners produce communicative functions of different speech acts (Beckwith & Dewaele, 2008; Cohen, 2008; Taguchi, 2006). In this sense, speech acts refer to "the patterned, routinized language that natives and pragmatically competent nonnative speakers and writers in a given speech community (with its dialect variations) use to perform functions" (Cohen, 2008, p. 214). Communicative functions in turn reflect the purpose for which language is used and include a range of functions such as thanking, complimenting, requesting, apologising, and complaining. It is known that performing communicative functions successfully depends on not only the L2 speaker's proficiency but also their awareness of the sociolinguistic norms (e.g., appropriacy) and communicative requirements (e.g., politeness values) of the L2.

Past research in L1 fluency has suggested that communicative functions may have an impact on fluency. Freese and Maynard (1998), for example, suggested that L1 speakers' speech rate might be slower when giving bad news, as this speech act relates to the emotion of sorrow (Couper–Kuhlen, 1986). Also investigating L1 English speech, Ogden's (2010) study concluded that speakers produced a higher frequency of repairs when complaining to someone about a third party. In the case of L1 Spanish, Felix–Brasdefer (2009) studied the prosodic features of three different varieties of Spanish when requesting. The results suggest that post-initial requests are commonly produced with a faster speed, and that the speed with which requests are produced is an indicator of politeness.

In L2 research, Taguchi (2007) investigated the effects of pragmatic aspects of task design on the production of oral speech acts of request and refusal. In this study, Taguchi operationalised pragmatic aspects of task design in terms of power difference (P), social distance (D), and degrees of imposition (R; altogether abbreviated as PDR) between the interlocutors by asking the participants to perform the communicative functions of requests and refusals to different interlocutors (i.e., teacher, boss, sister, and friend). The results indicated a significant task effect on fluency (measured in speech rate), as tasks of a higher PDR resulted in lower speech rates. While Taguchi's findings have made a valuable contribution to understanding fluency in this underresearched area, there are two limitations that invite careful examination and call for further research. First, Taguchi (2007) examined fluency as a unidimensional construct by calculating only one of the several measures that research in this area (Suzuki at al., 2021) has recommended. Second, Taguchi's (2007) design did not allow for a comparison of the extent of similarity (or difference) between L1 and L2 fluency behaviours. In other words, it is not known how L1 English speakers would perform the same tasks or how L2 learners would perform the same tasks in their L1. Given that pragmatic values and requirements—culturally defined in a language—would likely vary across different languages, we argue that any L2 investigation of such

pragmatic requirements should be compared to the norms and requirements of the same speech acts both in the learners' L1 and the target L2.

Research aims and research questions

The current study is an attempt to take fluency studies beyond the existing research focus on cognitive processing to investigate the pragmatic nature of fluency in communication. Considering the importance of pragmatics and fluency in L2 acquisition (Baker–Smemoe et al., 2014; Bardovi–Harlig & Bastos, 2011), the current study primarily aims to examine the effects of task communicative function on L2 speakers' utterance fluency (in this case, L1 Spanish learners of L2 English). Given the exploratory nature of the current study, it is also aimed at investigating whether L2 English speakers' utterance fluency is similar to L1 speakers of English and L1 speakers of Spanish. The study will therefore enable us to develop a better understanding of the relationship between task communicative function and utterance fluency in these different language groups: (a) L2 English speakers, (b) L1 English speakers, and (c) L1 Spanish speakers. Two research questions guide the current study:

RQ1. To what extent does task communicative function influence oral fluency (measured in speed, breakdown, composite, and repair fluency)?
  RQ1a. Among British L1 speakers of English (L1 English group hereafter)?
  RQ1b. Among Chilean L1 speakers of Spanish (L1 Spanish group hereafter)?
  RQ1c. Among Chilean L2 speakers of English (L2 English group hereafter)?
RQ2. To what extent is speakers' utterance fluency (measured in speed, breakdown, composite, and repair fluency) similar in these language groups?

Based on the literature presented (Felix–Brasdefer, 2009; Ogden, 2010), we predict task communicative function to have an effect on participants' utterance fluency, with performance in tasks involving negative emotions (e.g., giving bad news) or a face-threatening function (e.g., complaint) being slower, interrupted (more pauses), and more repaired (more repetitions). Based on the findings of Huensch and Tracy–Ventura (2017) and Pellegrino et al. (2011), differences between L1 English and L1 Spanish groups' utterance fluency are also expected (e.g., a faster speech rate in L1 Spanish than L1 English). Finally, L2 speakers' fluency is predicted to be different from both L1 groups in that L2 speech is slower in speed and marked by a higher frequency of pauses and repairs.

METHODOLOGY

Design

The current study takes an experimental approach to researching the topic based on a mixed between–within participant factorial design. The independent variables are task communicative function and the choice of language, each with three levels. The dependent variables of the study are the different fluency measures representing various aspects of utterance fluency (see Table 1). The effect of task communicative functions will be investigated within language groups, and the the three language groups will be compared between each other to investigate language effect.

Participants

The participants of this study were 80 university undergraduate students from Chile and Britain studying English language, literature, or linguistics. The participants were divided into three language

TABLE 1 Variables and levels of the study.

Variables	Levels
Independent variables	
Communicative functions of the tasks	1. Congratulations 2. Giving bad news 3. Complaint
Choice of language	1. L1 English 2. L1 Spanish 3. L2 English
Dependent variable: Fluency measures	1. Articulation rate 2. Speech rate 3. Frequency of end-clause silent pauses 4. Frequency of mid-clause silent pauses 5. Frequency of repairs

TABLE 2 Participants' demographic information.

Information	L1 English	L1 Spanish	L2 English
Males (%)	3 (15%)	7 (35%)	17 (42.5%)
Females (%)	17 (85%)	13 (65%)	23 (57.5%)
Age average (*SD*)	20 (1.00)	23 (2.41)	25 (2.60)

groups: English L2 speakers, English L1 speakers, and Spanish L1 speakers. The two L1 groups were included in the study to provide a baseline with which the L2 group's performance can be compared. The 20 British students, aged between 18 and 21, had English as their L1 and performed the tasks in English. The 60 Chilean students, aged between 21 and 32 speaking Spanish as their L1, were divided into two groups. Twenty of the Chilean participants performed the tasks in their L1 Spanish, while the remaining 40 performed them in their L2 English (see Table 2 for participants' demographic information). The proficiency of the L2 English group was assessed through Allan's (2004) Oxford Placement Test. Based on the ranking of proficiency identified in Allan (2004), the L2 learners belonged to an intermediate level (corresponding to the B1 and B2 levels in the Common European Framework of Reference for Language [CEFR]), as they all achieved a score of 65% to 80%. A large majority (75%) of the Chilean participants had never visited an English-speaking country before, while the others had visited an English-speaking country for periods of 6 months or less.

Data collection instruments

English placement test and background questionnaire

Before performing the speaking tasks, participants were asked to complete a short background questionnaire to ensure homogeneity of the groups. For the L1 English group, this instrument aimed at ensuring that the participants' mother tongue was English and that they did not speak Spanish or had not lived in a Spanish-speaking country before. For the Chilean participants, the questionnaire sought two kinds of information: contact with English outside university and language learning background. The questions were asked to ensure that all the participants had a similar language contact profile (e.g., to identify those who might have English-speaking parents) and language learning background (e.g., schooling and travel to English-speaking countries). As previously discussed, to ensure the participants in the L2 English group had a similar level of proficiency, they took the

Oxford Placement Test (Allan, 2004). Given the limitations imposed by the COVID-19 pandemic on data collection, the test was abbreviated so that participants could complete it online during class time. The original paper-based version consists of 100 questions, each worth 1 point. The abridged version, however, included 50 questions, worth 2 points each. The test was uploaded to Google Forms and the participants received a link to the test and completed it unsupervised. To ensure the internal consistency of the adapted version of the test, a split-half reliability test was carried out, achieving a coefficient of 0.747, which is considered reliable (Bachman, 1990).

The tasks

The participants were asked to perform three tasks, each with a different communicative function: congratulate a friend who has been awarded a scholarship, give bad news to one's parent about failing a course, and complain about the noise in the university library. These three communicative functions were chosen because they are familiar to the students in this context in relation to their academic lives, and they are distinct in their pragmatic values. The tasks were based on hypothetical situations requiring some degree of imagination from the participants to consider themselves in those situations while responding to the tasks' communicative requirements. In addition, the tasks had distinctive characteristics that would signify their different communicative functions. The key difference between the functions can be explained in terms of the speaker–hearer's 'face' (i.e., the image that is reflected of the speaker or hearer). Complaint presents a threat to the hearer's positive face, as the speaker expresses their dissatisfaction about something for which the hearer is assumed responsible (Kraft & Geluykens, 2002). In contrast, delivering bad news is face threatening for the speaker, particularly when accepting the responsibility for the outcome. Congratulations, on the other hand, focuses on the hearer's positive face, as the speaker shares a sense of happiness in response to the hearer's good fortune (Elwood, 2004).

To ensure comparability of the tasks, a number of other criteria were also considered. First, the amount of information provided in each task was carefully controlled through task instructions. This was done in response to previous studies that suggest too much or too little information in a task can affect the speakers' performance (Brown et al., 1984; Tavakoli, 2009). To help the speakers with the content of what they could say, a set of four bullet points were provided in the instructions for each task. This seemed necessary as it could control, to some extent, the content of the participants' task performances and enable us to compare similar outputs. Finally, the topic and contexts of the tasks were kept comparable (i.e., all focused on academic activities related to their studies). The tasks were piloted with a group of six L2 English speakers with L1 Spanish and minor changes were made in the instructions and time allocated for task performance (1 min each). A copy of the tasks can be found in the Appendix.

Data collection

The participants in both contexts were recruited via email with the help of their university lecturers. Once the students expressed interest in participating in the study, they were sent the project's information and ethics forms to seek informed consent. The Chilean students also received a link to the placement test. Based on their results, those who obtained an intermediate level were placed in the L2 English group. Those participants who obtained either higher or lower scores were invited to join the L1 Spanish group. Because of the COVID-19 restrictions, all the meetings were run virtually using a videoconference platform of their convenience (e.g., Microsoft Teams or Zoom). Each participant met with one of the researchers individually online. Before performing the tasks, the participants were asked to complete the short language background questionnaire. Then, a PowerPoint presentation was shared with the participants, where they saw the details of the data collection

procedures and the instructions for each task in which they were asked to leave a 1-minute voice message for someone. The instructions (in Spanish or English depending on the language group) for each task were presented on one slide where the participants were invited to read them and spend 30 seconds to plan for their voice message. At the end of the 30 seconds, they were asked to start leaving the voice message. Each slide had a timer where they could see how much preparation time and speaking time was remaining. Once the first task was completed, the same procedures were used for the other tasks. To avoid any potential practice effect, a counterbalanced design for task performance was used. All the recordings were downloaded from the respective platform and prepared for data transcription and coding.

Data coding

The data for the current study comprises 240 audio files from the 80 participants performing the tasks. Once all the data were collected, the participants' performances were transcribed and coded for a number of fluency measures. First, the simple transcriptions were coded for analysis-of-speech (AS) units and clause boundaries following Foster et al. (2000). Clause boundaries were needed for location of pauses. In addition, the syllables of each performance were counted. For the English data, the website www.syllablecount.com was used. This website has been previously used by other studies for similar purposes (Kahng, 2014), producing reliable results. To ensure the accuracy of the syllable count, a sample of 5% of the data in English were listened to while their syllables were counted, reaching a correlation of 1.00 (Cohen's kappa). Similarly, the syllables for Spanish performances were counted using the website www.separaensilabas.com. A sample of 10% of the transcriptions were also checked manually for the Spanish data set and a correlation of 1.00 (Cohen's kappa) was achieved. Repair measures (e.g., repetitions, false starts, and reformulations) were manually coded and added to the transcriptions. Finally, pauses were measured using the waveform and spectrogram functions of PRAAT software (Boersma & Weenink, 2020), using a threshold of .250 milliseconds (de Jong et al., 2015). Once pauses were identified in PRAAT, they were manually inserted in the transcripts. Before moving to the next step, 12% of the data was coded by a second researcher, obtaining a kappa value of 1.00, with a significance of $p < .05$. The interrater agreement for repair measures also reached a value of 1.0 with a significance of $p < .05$. Following research in this area (Duran–Karaoz & Tavakoli, 2020), unpruned data were used when calculating measures of speed and composite fluency.

Once the coding process was completed, the participants' speech samples were analysed in terms of speed, breakdown, repair, and composite measures. Research in this area has long suggested that speed, breakdown, and repair constitute the main factors underlying oral fluency (Skehan, 2003; Tavakoli & Skehan, 2005). More recent research suggests that composite measures in which speed and silence are combined (e.g., speech rate) are also a reliable indicator of the speaker's overall fluency (Skehan, 2009; Suzuki et al., 2021).

While a wide range of measures have been historically used to examine fluency, a recent meta-analysis by Suzuki et al. (2021) provided clear and convincing guidelines on which utterance fluency measures best relate to perceived fluency. The meta-analysis results, in effect, indicated that certain measures of utterance fluency are consistently associated with human ratings (or perceptions) of fluency, suggesting that the objectively calculated utterance fluency measures, to a large extent, represent humans' perceptions of fluency. Drawing on Suzuki et al.'s findings, five fluency measures were chosen for the purpose of the current study. First, both articulation rate and speech rate were included. As they represent pure (i.e., excluding pauses) and composite (i.e., including pauses) measures of speed, respectively (Mora & Valls–Ferrer, 2012), they will enable us to examine the participants' fluency behaviour from both perspectives (i.e., pure speed vs. speed including silence). Following the existing research about the importance of pause location (Hunter, 2017; Suzuki et al., 2021; Tavakoli, 2011), frequency of silent pauses was examined at mid-clause and end-clause positions. The measures

TABLE 3 Utterance fluency measures in the present study.

Measure	Description
Articulation rate (speed measure)	Total number of syllables divided by total speaking time (in seconds), excluding pauses
Speech rate (composite measure)	Total number of syllables divided by total speaking time (in seconds), including pauses
Breakdown fluency	
Frequency of mid-clause silent pauses (MCSP) produced in 60 seconds	Total number of silent pauses at mid-clause location
Frequency of end-clause silent pauses (ECSP)	Total number of silent pauses at end-clause location produced in 60 seconds
Repair fluency	Total number of repairs (repetitions, replacements, and false starts) in 60 seconds

for breakdown fluency were normalised using time as a factor (all calculated on a 60-second measure). Finally, repair fluency was measured in terms of the total number of repetitions, reformulations, replacements, and false starts per minute. Table 3 shows a summary of fluency measures and their calculation.

Data analysis

The statistical analysis process consisted of three main parts. First, the assumptions for multivariate analysis were checked, following Pallant's (2020) suggestions. These assumptions include screening the data for outliers, and checking data normality, linearity, and multicollinearity.

Levene's test of equality of error variance suggested that most fluency measures in each language group were normally distributed, but there were exceptions (e.g., repair measures in the three language groups and L2 English breakdown measures) suggesting there were outliers in these measures. The 5% trimmed mean valued for all fluency measures was further compared in the three language groups. The results showed that the original and trimmed mean scores were not very different in each case. Based on this evidence and drawing on previous research highlighting the variance in individuals' fluency behaviour (de Jong et al., 2015), it seemed plausible to keep the outliers in the data set. After checking the assumptions, a repeated-measures MANOVA was run to examine the overall effects of the independent variables, and any potential interaction between them, on the dependent variables of the study. MANOVA, in effect, allows us to examine the changes in the behaviour expressed in the dependent variables (i.e., speed, breakdown, and repair fluency) by the changes presented by the independent variables (i.e., different communicative functions and different language groups; Tabachnick & Fidell, 2014). In addition to the MANOVA, two-way (mixed) repeated-measures ANOVAs were run to examine (a) the effects of the communicative functions, and (b) the effects of language groups on the participants' fluency. The results of the repeated-measures ANOVA enabled us to answer our research questions. If any significant differences were obtained, Scheffe tests were used to identify where the significant results are. To reduce the risk of obtaining Type I error, a Bonferroni-corrected alpha level of $p < .01$ was used ($.05/5 = .01$). Effect sizes were calculated and considered in the comparisons. Effect sizes were interpreted in the light of Plonsky and Oswald's (2014) recommendations of $r = 0.25$ being small, $r = 0.40$ medium, and $r = 0.60$ large effect sizes. Where Cohen d was needed in pairwise comparisons, Plonsky and Oswald's (2014) recommendations were followed, considering d values of 0.40 as small, 0.70 as medium, and 1.00 as large for between-group comparisons, and d values of 0.60 as small, 1.00 as medium, and 1.40 as large for within-group comparisons.

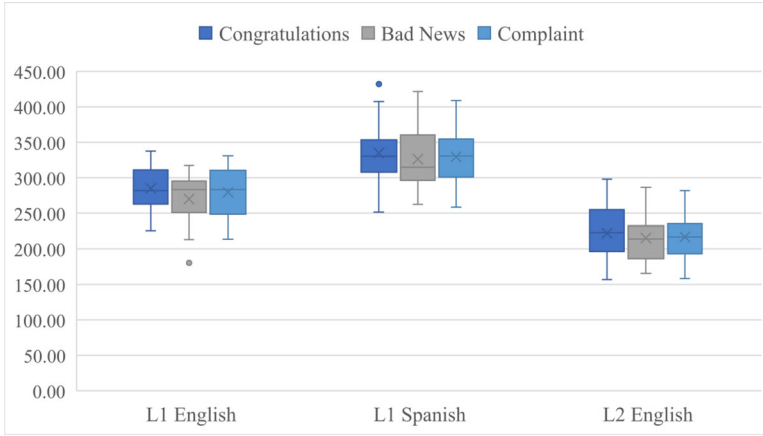

FIGURE 1 Articulation rate across tasks and language groups.
[Color figure can be viewed at wileyonlinelibrary.com]
Note. Articulation rate is the total number of syllables divided by total speaking time (in seconds), excluding pauses.

RESULTS

Table 4 shows the descriptive statistics for means, standard deviations, and 95% confidence intervals for the means of the fluency measures in the participants' performances in the three tasks and across language groups.

Repeated-measures MANOVA and two-way ANOVAs

The overall results of the MANOVA showed significant effects of task communicative function, Wilks' lambda = 0.492, $F(10,68) = 7.02$, $p = .001$, $\eta_p^2 = 0.508$, and language group, Wilks' lambda = 0.224, $F(10,68) = 7.02$, $p = .001$, $\eta_p^2 = 0.527$, on speakers' fluency, with considerable effect sizes for both significant results. The results suggest that there are significant differences in the speakers' fluency behaviour as a result of both communicative functions and language groups. The interaction between the two variables, however, was nonsignificant, Wilks' lambda = 0.710, $F(20,136) = 1.27$, $p = .208$, $\eta_p^2 = 0.158$, implying the two independent variables did not interact to influence the speakers' fluency behaviour. The results will be presented for each fluency measure separately before they are summarised to answer the research questions.

Articulation rate

Figure 1 shows the effects of task communicative function on articulation rate of the participants in the three language groups.

As the boxplots in Figure 1 show, the speakers' articulation rate in the different tasks varies, with congratulations eliciting the highest articulation rate ($M = 284.99$, $SD = 28.87$ for L1 English; $M = 334.85$, $SD = 40.24$ for L1 Spanish; $M = 222.36$, $SD = 36.71$ for L2 English speakers) and bad news projecting the lowest articulation rate ($M = 270.11$, $SD = 35.67$ for L1 English; $M = 326.36$, $SD = 42.43$ for L1 Spanish; $M = 215.31$, $SD = 32.29$ for L2 English) across the language groups. The results of the repeated-measures ANOVAs, however, fail to demonstrate a significant task effect on the articulation rate in the L1 English, $F(2,18) = 2.52$ $p = .108$, $\eta_p^2 = 0.219$; L1 Spanish, $F(2,18) = .753$, $p = .485$, $\eta_p^2 = 0.077$; or L2 English group, $F(2,38) = 1.10$, $p = .343$, $\eta_p^2 = 0.055$. The results suggest that while the speakers' articulation rate varies across the task, the differences

TABLE 4 Descriptive statistics for fluency measures across tasks and language groups.

Fluency measures	Tasks	L1 English		L1 Spanish		L2 English	
		Mean (*SD*)	95% CI	*Mean* (*SD*)	95% CI	*Mean* (*SD*)	95% CI
Articulation rate	Congratulations	284.99 (28.87)	[271.48, 298.50]	334.85 (40.24)	[316.01, 353.69]	222.36 (36.71)	[210.36, 233.95]
	Bad news	270.11 (35.67)	[253.42, 286.81]	326.36 (42.43)	[306.50, 346.22]	215.31 (32.29)	[205.01, 225.66]
	Complaint	279.43 (36.49)	[262.35, 296.51]	329.45 (39.35)	[311.03, 347.87]	217.01 (28.64)	[207.66, 226.07]
	Average	**278.17**		**330.22**		**218.22**	
Speech rate	Congratulations	209.03 (28.35)	[195.76, 222.30]	257.98 (44.40)	[237.20, 278.76]	158.81 (39.36)	[146.02, 171.25]
	Bad news	192.48 (35.28)	[157.97, 209.00]	242.23 (34.69)	[226.00, 258.47]	151.26 (31.10)	[141.22, 161.16]
	Complaint	215.70 (33.85)	[199.86, 231.55]	254.53 (43.37)	[234.23, 274.83]	155.29 (32.18)	[145.02, 165.60]
	Average	**205.73**		**251.58**		**155.12**	
Frequency of MCSP	Congratulations	6.60 (4.01)	[4.71, 8.48]	6.50 (3.77)	[4.73, 8.26]	10.25 (3.70)	[9.04, 11.45]
	Bad news	9.75 (4.33)	[7.71, 11.78]	7.25 (2.67)	[5.99, 8.50]	11.55 (2.92)	[10.54, 12.55]
	Complaint	9.00 (3.02)	[7.58, 10.41]	7.80 (3.99)	[5.93, 9.66]	11.75 (4.16)	[10.43, 13.06]
	Average	**8.45**		**7.18**		**11.18**	

(Continues)

TABLE 4 (Continued)

Fluency measures	Tasks	L1 English		L1 Spanish		L2 English	
		Mean (*SD*)	95% CI	*Mean* (*SD*)	95% CI	*Mean* (*SD*)	95% CI
Frequency of ECSP	Congratulations	13.15	[10.68, 15.61]	10.85	[9.34, 12.35]	11.20	[10.04, 12.35]
		(5.27)		(3.21)		(3.62)	
	Bad news	12.05	[10.61, 13.48]	10.20	[9.17, 11.22]	10.57	[9.37, 11.82]
		(3.06)		(2.19)		(3.76)	
	Complaint	10.00	[8.51, 11.48]	9.65	[8.49, 10.80]	10.02	[9.01, 11.03]
		(3.17)		(2.47)		(3.14)	
	Average	**11.73**		**10.23**		**10.59**	
Frequency of repairs	Congratulations	2.70	[1.26, 4.13]	3.70	[2.10, 5.29]	5.05	[3.80, 6.24]
		(3.06)		(3.40)		(3.78)	
	Bad news	2.05	[0.88, 3.21]	3.65	[2.50, 4.79]	4.87	[3.83, 5.86]
		(2.48)		(2.45)		(3.15)	
	Complaint	1.10	[0.55, 1.64]	2.95	[2.00, 3.89]	3.90	[2.86, 4.98]
		(1.16)		(2.01)		(3.33)	
	Average	**1.95**		**3.43**		**4.60**	

Abbreviations: ECSP, end-clause silent pauses; MCSP, mid-clause silent pauses.

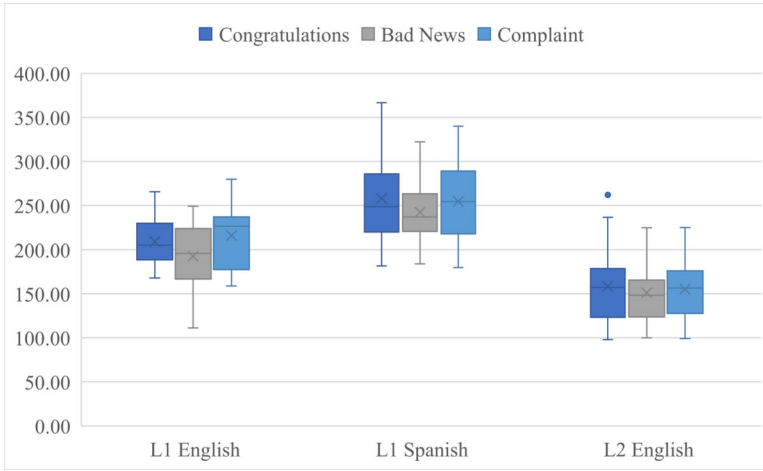

FIGURE 2 Speech rate across tasks and language groups.
[Color figure can be viewed at wileyonlinelibrary.com]
Note. Speech rate is the total number of syllables divided by total speaking time (in seconds), including pauses.

are not statistically significant. The effect sizes for these comparisons were all lower than 0.25 and therefore considered small. In terms of the effects of language groups, Figure 1 illustrates that the L1 Spanish group has the fastest articulation rate (with an average of 330.22 across tasks), while the L2 English group is the slowest (with an average of 218.22 articulation rate across tasks). The results of the MANOVA demonstrate statistically significant differences between the three language groups, $F(2,77) = 91.04$, $p < .001$, $\eta_p^2 = 0.703$, and the Scheffe test results suggest all three groups are statistically different from one another ($p < .001$ for each comparison). Cohen's d for the comparison of articulation rate between language groups shows large effect sizes with $d = 1.39$ for L1 English and L1 Spanish, $d = 1.82$ for L1 English and L2 English, and $d = 3.16$ for L1 Spanish and L2 English, all suggesting large effect sizes (see all Cohen d values and confidence intervals in the Online Supporting Information).

Speech rate

For speech rate, the descriptive statistics shown in Figure 2 suggest the speakers' speech rate varies across the three tasks, and a similar pattern of performance across tasks can be observed for L1 Spanish and L2 English, with speech rate being the highest in congratulations and the lowest in bad news.

When considering task effects more carefully, the results show that complaint is performed at the highest speech rate in the L1 English speakers ($M = 215.70$, $SD = 33.85$), whereas congratulations elicits the highest speech rate in L1 Spanish and L2 English speakers ($M = 257.98$, $SD = 44.40$ for L1 Spanish; $M = 158.81$, $SD = 39.36$ for L2 English). The lowest speech rate is observed in bad news across the three language groups ($M = 192.48$, $SD = 35.28$ for L1 English; $M = 242.23$, $SD = 34.69$ for L1 Spanish; $M = 151.26$, $SD = 31.10$ for L2 English speakers). The results of the ANOVA show a significant effect of task, $F(2,18) = 6.28$, $p = .008$, $\eta_p^2 = 0.441$, on L1 English speakers' speech rate. The pairwise comparison results suggest there was a statistically meaningful difference between bad news and complaint ($p < .005$; $d = 0.67$). For the L1 Spanish and L2 English groups, however, the results do not reach a statistically significant level, $F(2,18)$ 2.74, $p = .091$, $\eta_p^2 = 0.234$, and $F(2,38) = 1.28$, $p = .288$, $\eta_p^2 = 0.063$, respectively, implying there is no task effect on the speech rate of these two language groups.

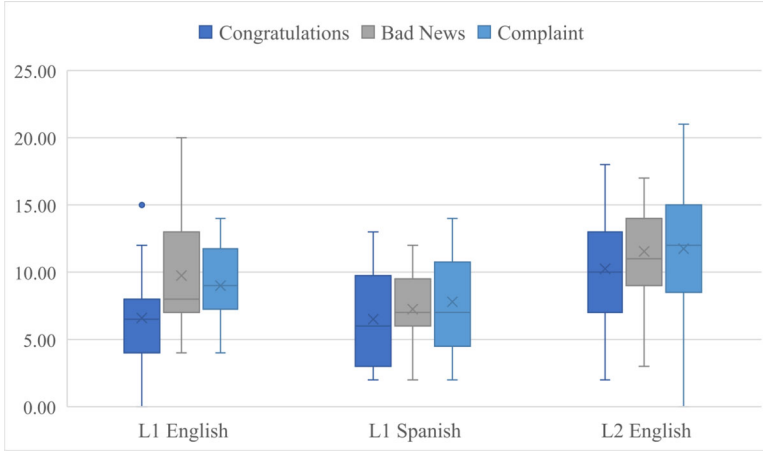

FIGURE 3 Frequency of mid-clause silent pauses across tasks and language groups. [Color figure can be viewed at wileyonlinelibrary.com]
Note. Total number of silent pauses at mid-clause location produced in 60 seconds.

A comparison of speech rate across different language groups shows that the three groups have different speech rates. The results of the MANOVA, $F(2,77) = 63.63$, $p = .001$, $\eta_p^2 = 0.623$, and the post hoc Scheffe test suggest the three groups are statistically different from one another ($p < .001$ for each comparison), with L1 Spanish speakers producing the highest speech rate (average of 251.58) in comparison to the L1 and L2 English speakers, who are producing slower speech rates (averages of 205.73 and 155.12, respectively). Cohen's d for the comparison of speech rate between languages suggests large effect sizes with $d = 1.24$ between L1 English and L1 Spanish, $d = 1.50$ between L1 English and L2 English, and $d = 2.64$ for the comparison between L1 Spanish and L2 English.

Frequency of mid-clause silent pauses

For frequency of mid-clause silent pauses (MCSP), as shown in Figure 3, the results suggest that the speakers produce different frequency of MCSP across the tasks. L1 Spanish and L2 English speakers show a similar pattern of performance across the tasks, where their pauses show the same pattern of frequency of MCSP (congratulations < bad news < complaint). For the L1 English group, however, the highest number of MCSP is produced when giving bad news. The results of the ANOVA suggest there is not a significant task effect on speakers' MCSP in any of the three language groups. The results for L1 Spanish frequency of MCSP, $F(2,18) = 1.04$, $p = .373$, $\eta_p^2 = 0.104$, failed to reach a statistically significant level. However, the results for the L1 English, $F(2,18) = 4.51$, $p = .026$, $\eta_p^2 = 0.334$, and L2 English groups, $F(2,38) = 3.87$, $p = .029$, $\eta_p^2 = 0.169$, were approaching a significant level although with small effect sizes.

In terms of task effect, the results show there were differences in mid-clause pausing of speakers from each language group when performing the three communicative functions. L1 English speakers produced MCSP with the highest frequency when giving bad news ($M = 9.75$, $SD = 4.33$), while their lowest frequency was found in the task of congratulations ($M = 6.60$, $SD = 4.01$), with complaint in between ($M = 9.00$, $SD = 3.02$). In the case of L1 Spanish speakers, the highest frequency of MCSP was found in complaint ($M = 7.80$, $SD = 3.99$), while the task of congratulations also prompted the lowest frequency of MCSP ($M = 6.50$, $SD = 3.77$). L2 English speakers also produced the highest frequency of MCSP in complaint ($M = 11.75$, $SD = 4.16$). However, their lowest frequency of MCSP was found when congratulating ($M = 10.25$, $SD = 3.70$). For language effect, the results of the MANOVA show a significant difference, $F(2,77) = 12.95$, $p = .001$, $\eta_p^2 = 0.252$. More specifically, the comparison of speakers' frequency of MCSP between languages suggests that the pausing behaviour of

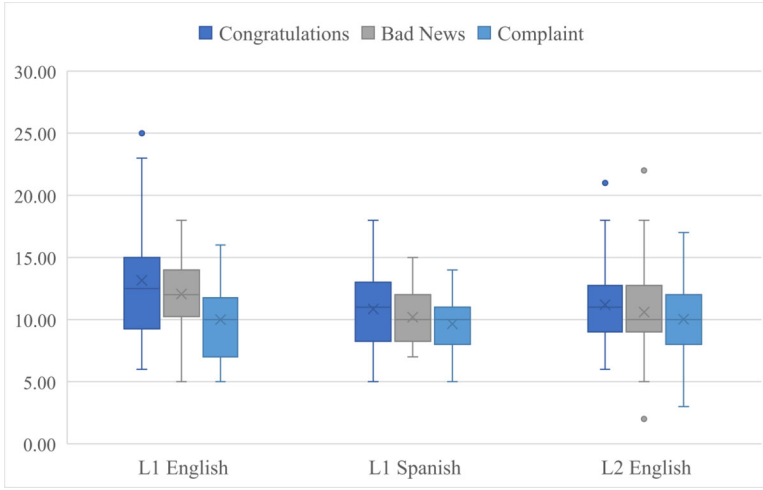

FIGURE 4 Frequency of end-clause silent pauses across tasks and language groups.
[Color figure can be viewed at wileyonlinelibrary.com]
Note. Total number of silent pauses at end-clause location produced in 60 seconds.

L2 English speakers is significantly different from the L1 English group ($p = .005$, $d = 0.74$) and L1 Spanish group ($p = .001$, $d = 1.13$).

Frequency of end-clause silent pauses

For end-clause silent pauses (ECSP), the descriptive statistics results show that the participants' pausing varies across different tasks with congratulations containing most ECSP and complaint the fewest across languages. As can be seen in Figure 4, a similar pattern of pausing is observed in the fluency behaviour of the different language groups across tasks.

When comparing task effects in the speakers' performances of each language group, the results show that all language groups produce the highest frequency of ECSP in congratulations ($M = 13.15$, $SD = 5.27$ for L1 English; $M = 10.85$, $SD = 3.21$ for L1 Spanish; $M = 11.20$, $SD = 3.62$ for L2 English), and the lowest frequency in complaint ($M = 10.00$, $SD = 3.17$ for L1 English; $M = 9.65$, $SD = 2.47$ for L1 Spanish; $M = 10.02$, $SD = 3.14$ for L2 English). The results of the ANOVA indicate that there is a significant task effect in L1 English speakers' end-clause pausing, $F(2,18) = 8.27$, $p = .003$, $\eta_p^2 = 0.479$. The Scheffe test results show the difference between congratulations and complaint is statistically significant ($p = .005$; $d = 0.69$), with a medium effect size. The results for the L2 English and L1 Spanish groups, however, are nonsignificant, $F(2,38) = 1.92$, $p = .160$, $\eta_p^2 = 0.092$ for L2 English, and $F(2,18) = 1.35$, $p = .282$, $\eta_p^2 = 0.131$ for L1 Spanish speakers, both indicating small effect sizes.

The comparison between language groups shows that L1 English speakers produce more ECSP ($M = 11.73$, $SD = 4.12$) in comparison to the L1 Spanish ($M = 10.23$, $SD = 2.66$) and L2 English ($M = 10.59$, $SD = 3.53$) speakers. However, the results of the MANOVA for language effect shows no significant difference between the three groups, $F(2,77) = 1.73$, $p = .173$, $\eta_p^2 = 0.045$.

Frequency of repairs

The analysis of the participants' repair behaviour (see Figure 5) suggests that the number of repairs produced in different tasks vary. The results also suggest the three language groups behave differently,

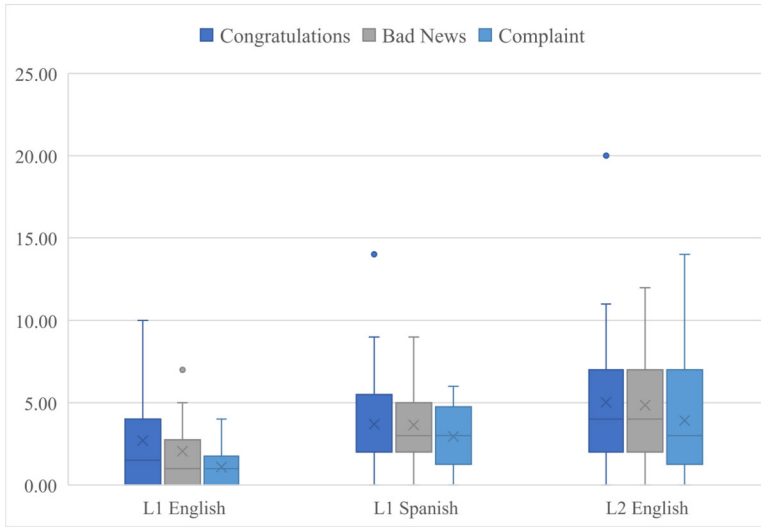

FIGURE 5 Frequency of repairs across tasks and language groups.
[Color figure can be viewed at wileyonlinelibrary.com]
Note. Total number of repairs (repetitions, replacements and false starts) in 60 seconds.

although a similar pattern in the production of repairs across the tasks can be observed in all language groups.

Considering task effects on the speakers' repair fluency, the results show that complaint has elicited the fewest (L1 English, $M = 1.10$, $SD = 1.16$; L1 Spanish, $M = 2.95$, $SD = 2.01$; L2 English, $M = 3.90$, $SD = 3.33$) and congratulations has had the most repairs (L1 English, $M = 2.70$, $SD = 3.06$; L1 Spanish, $M = 3.70$, $SD = 3.40$; L2 English, $M = 5.05$, $SD = 3.78$) in each language group. The results of the ANOVA suggest that L1 English speakers' repair behaviour is significantly affected by task communicative functions, $F(2,18) = 5.04$, $p = .01$, $\eta_p^2 = 0.359$. The pairwise comparisons suggest a significant difference between congratulations and complaint ($p < .05$, $d = 0.69$), suggesting a medium effect. The results for L1 Spanish, $F(2,18) = 1.35$, $p = .282$, $\eta_p^2 = 0.131$, and L2 English groups, $F(2,38) = 1.92$, $p = .160$, $\eta_p^2 = 0.092$, however, are nonsignificant.

The results from the comparison of repair behaviour across language groups suggest that L2 English speakers produce the highest number of repairs (average of 4.60), while L1 English speakers produce the lowest number (average of 1.95). L1 Spanish speakers stand in the middle by producing an average of 3.43 repairs in their performance across the tasks. The results of the MANOVA suggest that there is a statistically significant difference between the language groups, $F(2,77) = 8.11$, $p = .001$, $\eta_p^2 = 0.174$. When observing the results in more detail, it is noted that L1 English and L2 English groups are statistically different in their repair fluency ($p < .001$, $d = 0.86$), but other comparisons are nonsignificant. Table 5 presents a summary of the results for each research question.

DISCUSSION

The current study was aimed at investigating the effects of task communicative function on oral fluency of speakers in three different language groups: 20 L1 English speakers, 20 L1 Spanish speakers, and 40 L2 English speakers (whose L1 is Spanish). The research design has allowed us to compare the effects of task in a within-participant and effects of language group in a between-participant design. In what follows, a summary of the findings is presented in relation to the research questions before the results are discussed in relation to the literature presented earlier in the article.

TABLE 5 Summary of results.

Research question	Key findings
RQ1a	L1 English speakers' speech rate ($p = .008$), frequency of end-clause silent pauses ($p = .003$), and repairs ($p = .001$), were significantly affected by task communicative function. L1 English speakers spoke more slowly and had more end-clause pauses and repairs in bad news compared to complaint. L1 English speakers' speech rate was significantly different between complaint and bad news, with a medium effect size. Their performances between congratulations and complaint were significantly different in terms of repair and end-clause silent pauses, both with medium effect sizes.
RQ1b	No significant task effect was found on L1 Spanish speakers' fluency.
RQ1c	No significant task effect was found on L2 English speakers' fluency.
RQ2	Speakers' fluency was significantly different when compared by language and task communicative function ($p < .001$). The three language groups were statistically different, with large effect sizes, in terms of articulation rate and speech rate (pairwise comparison of $p < .001$ between languages). L2 English speakers' frequency of mid-clause silent pauses was statistically different from both L1 English speakers ($p < .05$) and L1 Spanish speakers ($p < .001$). L2 English speakers also produced statistically more repairs than L1 English speakers ($p < .001$).

RQ1: Task communicative function and fluency behaviour

RQ1 (a, b, and c) examined the extent to which the communicative function of speaking tasks influences oral fluency in terms of speed, breakdown, composite, and repair measures in the three language groups. The results of the statistical analyses demonstrate interesting findings in relation to task effects. First, the results showed that fluency of only one language group (L1 English) was significantly ($p < .01$) affected by task communicative functions. The statistically significant results of the task effect in L1 English speakers' performance were obtained for the differences in their speech rate (complaint > congratulations > bad news), frequency of end-clause pausing (congratulations > bad news > complaint), and repair measures (congratulations > bad news > complaint). Medium effect sizes were observed for task effects on speech rate and ECSP in the L1 English group suggesting that the magnitude of the differences between tasks was noticeable. The differences in mid-clause pausing across tasks in this group was also approaching a significant level ($p = .026$) but given the strictly set Bonferroni-corrected alpha level of $p < .01$ and the small effect size of 0.334, the difference was considered not meaningful. Overall, the results suggested that the L1 English group spoke faster and produced fewer end-clause pauses in complaint and used more repair in congratulations. In line with our prediction, these results suggest that L1 English speakers' utterance fluency behaviour (e.g., speed and pausing) is affected by task communicative function. No statistically meaningful differences were observed across tasks of different communicative functions in the other two groups, implying that L1 Spanish and L2 English speakers' utterance fluency was not affected, in statistical terms, by task communicative functions. None of the effect sizes were noticeable either. This finding contradicts our prediction, as we expected task communicative function to affect the three language groups' fluency.

The results of performance across tasks in different language groups, however, demonstrated similar patterns of utterance fluency. In terms of speed, the results suggested that performance in bad news was the slowest (in both articulation rate and speech rate) across the three language groups, implying that the groups typically slowed down when performing a task involving negative emotions. Although such differences failed to reach a statistically meaningful level, they suggest that speed tends to be an aspect of speech that can help speakers fulfil task communicative requirements and to achieve the needed impact on the listener. For pausing patterns, the participants generally produced more mid-clause pauses in bad news and complaint and more end-clause pauses and repairs in congratulations.

In addition, the same pattern of decrease in end-clause pausing and repairs (congratulations > bad news > complaint) is observed across the three language groups.

Another important point emerging from task effects is that many (but not all) of the variances observed in the participants' fluency behaviour seem to be similar across different language groups (e.g., all groups perform congratulations and complaints faster than bad news). These results imply that the speakers seem to manipulate the speed of their performance, at least to some extent, to accommodate the communicative and pragmatic requirements of each function (i.e., joy in congratulations and sorrow in bad news). This finding is in line with previous research (Freese & Maynard, 1998) reporting that speakers' speed of delivery may vary when performing different speech acts and functions. This finding is also in line with previous research in pragmatics (Couper–Kuhlen, 1986) implying a slower speed is expected when expressing emotions of sorrow. Interestingly, the only significant result for speech rate across the tasks is observed for the L1 English group producing the complaint task statistically faster than bad news ($p < .005$). Observing the only significant results in the L1 English group may imply that in English, the speed of delivery—in this case, in complaint—may be related to achieving a better pragmatic impact. The nonsignificant results for speech rate and articulation rate in the L2 English group can be attributed to the fact that L2 speakers generally speak at a slower rate, and with their incomplete linguistic knowledge of the L2, they may find it difficult to manipulate the speed of their performance to match the pragmatic aims of the task. The nonsignificant results for the L1 Spanish group may suggest there are different pragmatic requirements for these tasks in Spanish. Without further research, however, it is difficult to explain such findings with certainty.

We examined both mid- and end-clause pauses in this study. The results indicate that different pausing behaviours are observed across different tasks, as bad news elicits more mid-clause pauses than congratulations in all three groups. Across the three tasks, L1 English speakers produce the highest number of mid-clause pauses in bad news, whereas Spanish speakers (both the L1 Spanish and L2 English groups) produce the highest number of mid-clause pauses in complaint. The differences in mid-clause pauses across tasks do not reach a significant level in any of the groups, and the effect sizes for these comparisons are small.

As discussed earlier, it is generally believed that end-clause pauses are related to conceptualisation focusing on 'what to say,' compared to mid-clause pauses central to formulation overseeing 'how to say it.' Mid-clause pausing is particularly important in L2 research, as it has been considered a characteristic of L2 speakers' fluency behaviour (Tavakoli, 2011) and is commonly perceived as a time-buying strategy during which L2 speakers deal with the processing demands of the formulation stage. In L1 speech, on the other hand, mid-clause pauses are infrequent and when they occur, they are often related to lexical access (e.g., identifying a low frequency word) or the monitoring processes (e.g., checking the accuracy and/or appropriacy of the content). Here, while we note that L1 English speakers produce frequent mid-clause pauses in bad news (compared to the other two tasks), we can explain the pauses in relation to the formulation demands (e.g., formulating the language of giving bad news) or as a strategy to meet the communicative and pragmatic requirements of the task (e.g., slowing down to prepare the listener for the bad news). For the L2 English and L1 Spanish groups, we observe a similar pattern of increase in mid-clause pauses from congratulations to bad news and complaint. The highest number of mid-clause pauses by these two groups in complaint suggests that the Spanish-speaking participants (whether in the L1 Spanish or L2 English group) may find complaining more challenging to perform in relation to 'how to say it.' Considering the pragmatic requirement of the tasks, it can be argued that complaining, a face-threatening speech act, may be pragmatically perceived differently in different languages, and these different perceptions might influence the way speakers perform a task with implications for its utterance fluency.

For end-clause pauses, the results also show different pausing patterns across the tasks, with the fewest observed in complaint and the most in congratulations. As discussed, the differences for end-clause pauses only reach significance in the L1 English group (bad news > complaint). Given that end-clause pauses are assumed to be related to the conceptualisation stage of the speech production process, it can be argued that the speakers include more end-clause pauses as they are challenged on

what to say when planning the message for bad news. It is also possible to argue that the speakers are pragmatically motivated to slow down their performance when giving bad news to prepare the hearer, and they achieve this by adding more pauses between clauses.

The highest number of end-clause pauses produced in congratulations can highlight the need for more time planning the preverbal message. Given that this task is not a face-threating function or a cognitively demanding task, one wonders why all language groups have made more end-clause pauses in this task. One explanation we can offer is that perhaps the participants found it difficult to congratulate someone for an extended period of 1 minute and as a result, they may have spent more time planning and preparing for what to say to fill that time.

In terms of repairs, the results similarly indicate a variation in the frequency of repairs across tasks, with congratulations eliciting the most and complaint the fewest repairs. The differences between the number of repairs across tasks reaches a significant level only for the L1 English group, with all the three tasks being different from one another (congratulations > bad news > complaint; $p < .01$). The first important implication of this finding is that task communicative function affects repair fluency, and this task influence seems to behave consistently in different language groups. Repair is the outcome of the monitoring process in which the speaker examines the speech production process for accuracy, appropriacy, and communicative success purposes. While repair is a common feature of speech in both L1 and L2, the functions of repair are usually different in the two language groups, with the former using the repair opportunity predominantly to achieve their communicative purposes and/or check its appropriacy, and the latter using it primarily for linguistic accuracy. The findings of the current study suggest that task communicative function encourages different amounts of repair across tasks, and this is done in a similar way across different language groups. Given that repair is generally a less known aspect of fluency, these results call for more research to further examine the effects of pragmatic requirements of performance and repair fluency.

The finding about the high frequency of repair in congratulations is intriguing. A post hoc qualitative examination of the data suggests that repetition is the most frequently used kind of repair in congratulations across all three groups. Given the positive face of congratulations, one would expect this task to elicit fewer repairs, compared to the other two tasks. This finding invites more research to examine why the speakers produce so many repetitions when congratulating a friend.

RQ2: Fluency behaviour across language groups

RQ2 asked if there were differences across the three language groups in terms of their fluency behaviour. The results of the analyses demonstrate some key differences between the different language groups. In terms of speed, the results suggest that the groups are statistically different from one another, with large effect sizes, in their articulation rate ($p < .001$) and speech rate ($p < .001$), with the L1 Spanish group recorded as the fastest and the L2 English group as the slowest. These results are in line with previous research that suggests that (a) L1 Spanish speakers speak faster than English speakers (Pellegrino et al., 2011) and (b) L2 speakers speak more slowly than L1 speakers (Foster & Tavakoli, 2009; Huensch & Tracy–Ventura, 2017).

With regard to mid-clause pauses, a significant difference was observed across the language groups, with the L2 English group producing more mid-clause pauses ($p < .001$) than the other two groups. This finding is also in line with previous research (Kahng, 2014; Kormos, 2006) suggesting mid-clause pausing is a key characteristic of L2 speech. Given that mid-clause pausing is known to be related to the formulator stage of the L2 speech production process, it was expected that the L2 speakers generally pause frequently in mid-clause position. However, it is interesting to see the L1 English group, compared to the L1 Spanish group, produce more mid-clause pauses in general and more mid-clause pauses in bad news in particular. This new finding adds to our cross-linguistic understanding of fluency behaviour as it highlights two important points. First, it implies L1 Spanish speakers do not pause as frequently as L1 English speakers in mid-clause positions. This can explain one reason

for why Spanish speakers' speech rate is faster than English speakers. Second, we observe that the L1 English speakers produce more mid-clause pauses in bad news than in other tasks, implying there may be different pragmatic and communicative requirements for these tasks in the two languages.

As for end-clause pauses, the results suggest that the L1 English speakers produce more end-clause pauses than the other two groups. Although the differences across the three groups are not statistically significant, it is important to note that the L1 English speakers pause more frequently at end-clause position than the L1 Spanish and L2 English groups. The higher frequency of end-clause pausing in the L1 English group, in contrast with fewer end-clause pauses in the other two groups, can perhaps be considered a characteristic of spoken English and explained in the light of the cross-linguistic differences between the two languages.

End-clause pauses in L2 are particularly important as they are shown to predict L2 functional adequacy. Defining functional adequacy as "appropriacy and efficacy of language in relation to task and context" (p. 33), Ekiert et al. (2022) reported a significant relationship between functional adequacy (measured through a functional adequacy scale) and end-clause pauses, suggesting L2 speakers who produce fewer end-clause pauses are rated as more functionally adequate. The findings of the current study, however, show that the L2 learners' end-clause pausing pattern could also be related to cross-linguistic differences, as both L1 Spanish groups behaved similarly in their end-clause pausing patterns.

For repairs, the results suggest that the L2 English speakers are statistically different ($p < .001$) from the L1 English speakers, as they produce more repairs, corroborating previous research that reports a high volume of repairs in L2 speech (Kormos, 1999; Zuniga & Simard, 2019). The fact that the L2 English group is not different from the L1 Spanish group (both groups producing a similar number of repairs) implies that the Spanish language allows for more repairs during the speech production process in comparison to English. This finding, however, differs from that of Huensch and Tracy–Ventura (2017), who reported that L1 English speakers produced more repairs than L1 Spanish speakers. The contradictory findings can be explained in terms of the different tasks employed in these studies. Clearly, further research is needed to investigate this.

CONCLUSION

The current study aimed at expanding our understanding of the extent to which pragmatic characteristics of speaking tasks influence L2 and L1 speakers' fluency in three different language groups. Overall, the results of the study in relation to task effects confirm that task pragmatic requirements have an impact on utterance fluency behaviour of the L1 English group, implying that in English, task communicative functions shape, at least to some extent, speakers' utterance fluency. In the other two language groups, however, task effects did not show a statistically meaningful effect on performance. It can be argued that while in English, task communicative requirements are addressed by the speaker's changes in utterance fluency (speed, pausing, and repair), in Spanish, utterance fluency does not change substantially to reflect task pragmatic requirements. L2 English speakers' fluency, as predicted, was different from that of L1 English speakers (slower speed and more pausing), but task effects were not present, which could be explained in the light of their L2 developmental processes (i.e., at a more advanced level, they learn how to use fluency to fulfil task communicative functions).

We observed some similar patterns of utterance fluency across tasks (e.g., higher speed in complaint and more repairs in congratulations) in all language groups, suggesting the tasks may encourage speakers' fluency behaviour in a consistent manner. Such findings draw our attention to Segalowitz's (2016) call for further research in pragmatic and communicative aspects of fluency. Based on the findings of the current study, it seems plausible to argue that Segalowitz's (2010) model of fluency may need another component to consider the speaker's deliberate manipulation of utterance fluency to create an effect on the listener. The results also imply the need to revisit our understanding of oral fluency by highlighting the importance of communicative intentions and the potential role they play in shaping

utterance fluency. While research in this area suggests disfluency features such as mid-clause pausing and repair are broadly related to the formulation stage, the results of the current study imply that pausing and repair also reflect the pragmatic requirements of the task presumably determined during the conceptualisation stage of speech production. For L2 speakers, the results demonstrate that their fluency behaviour contains features reflecting the demands of L2 processing and production (e.g., slow speed and high frequency of mid-clause pauses), but they also suggest that L2 learners' fluency behaviour mirrors, at least to some extent, the pragmatic requirements as conceptualised in their L1 (e.g., fewer end-clause pauses needed in L1 Spanish).

The results in relation to the differences between the two L1 groups draw our attention to an important finding: Different utterance fluency behaviour is observed in the two languages in response to the same pragmatic requirements. Future research needs to investigate this across different languages. Another important note to conclude this article with is that there is a need to revisit our definitions of L2 fluency to include such communicative and pragmatic concepts when defining the complex construct of L2 fluency. Fillmore's (1979) definition of L1 fluency explicitly refers to "the ability to have appropriate things to say in a wide range of contexts" (p. 51). Definitions of L2 fluency, including the ones discussed in this article, however, often lack a reference to how fluency is influenced by communicative and contextual factors. Without understanding and considering the interaction between the communicative requirements of performance and speakers' fluency behaviour, our assessment of utterance fluency will not accurately reflect the multifaceted construct of fluency.

The results have significant implication for language teaching and testing. First, the finding that L1 English speakers' speed, pausing, and repair change to address the pragmatic requirements of a task is an important finding to be considered by English as a second or foreign language teachers when teaching pragmatic aspects of L2. Raising learners' awareness about pragmatic requirements of different communicative functions in the L2 and how they are reflected in the speaker's fluency (e.g., English L1 speakers slowing down when giving bad news) can be a useful primary discussion in teaching aspects of L2 pragmatics; the discussion can then be followed by engaging learners in analysing and comparing pragmatic requirements of specific tasks in their L1 with the L2. The finding about the differences between utterance fluency of the different language groups also has significant implications for language testing, as such evidence provides a broader cultural understanding of how utterance fluency varies in different languages. The results, for example, demonstrate that while some characteristics of speech (e.g., pausing frequently when giving bad news) appear to be distinctive features of communicating a function in L1 English, they may not be distinctive pragmatic requirements of communication in different languages, an important point to be considered when assessing candidates' speaking ability either by human raters or in automated assessment of speaking.

This study comes with some limitations. The most important limitation of the study is that we have investigated only three communicative functions in Spanish and English. Examining other functions in a range of languages would enrich our understanding of fluency. In addition, we used only one task to represent each communicative function. While we controlled for a range of different aspects of task design, the three tasks had different topics. The tasks also presented different hypothetical scenarios, which may have required different degrees of imagination. Therefore, the results might have been affected by the operationalisation of the communicative function in such dimensions. This is a limitation that future research can address by counterbalancing communicative function and task topic and controlling for more dimensions of task design. Finally, a qualitative perspective (e.g., stimulated recalls) can help shed light on what encourages the different fluency behaviour in different communicative functions.

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SUPPORTING INFORMATION

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APPENDIX

Task instructions used with the L2 English group

Task 1:

You have seen on social media that your friend Taylor has finally received a scholarship to study English abroad for a semester. Taylor has been applying for this scholarship a few times but was rejected every time.

Leave a **1-minute voice message** for your friend to congratulate him. In the message, you should:

- Congratulate him for the scholarship.
- Ask about how and when he learnt the news.
- Ask about the English school he is joining.
- Ask him to give you advice on how to apply.

Task 2:

You have just found out that you have failed a course at the university. Leave your mother a **1-minute voice message** to give her the bad news. In the message, you should:

- Tell her that you have failed.
- Explain why it has happened.
- Say what you will do now.
- Reassure her that this will not affect your progress at the university.

Task 3:

You and your classmates have been having problems working and studying in the library on the campus as it is very noisy. You have decided to complain about it to the library director, Mr. Smith. Leave Mr. Smith a **1-minute voice message** to complain about the noise. In your message, you should:

- Say that you want to complain.
- Explain what the problem is.
- Give an example of what you have experienced.
- Discuss what you expect as a result of your complaint.