RESEARCH ARTICLE

Motivational dispositions predict qualitative differences in oral task performance

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Abstract

The study examined how learners' motivational dispositions predict the complexity, accuracy, fluency of their oral task performance and their overall second language proficiency. Eighty-one speakers of English as a second language in the United States completed a regulatory focus and a regulatory mode questionnaire, an oral interview task, and a picture description task. Regression analyses showed a meaningful pattern of results. The assessment mode (concerned with analysis, evaluation, and comparison) contributed to syntactic and lexical complexity, the reduction of dysfluencies, and overall English proficiency, whereas the locomotion mode (concerned with acting without deliberation) positively predicted the speed measure of fluency and the total number of errors. The prevention focus (concerned with stability, security, and safety) negatively predicted lexical sophistication, whereas the promotion focus (concerned with advancement, accomplishments, and growth) predicted overall English proficiency. Theoretical and instructional implications were discussed.

Motivation has been a popular social-psychological factor that has attracted the attention and interest of researchers in the field of second language acquisition (SLA) over the past five decades. Numerous studies have provided empirical evidence indicating motivation is a strong predictor of second language (L2) outcomes (see Papi & Hiver, 2022). Saito et al. (2018), for instance, found that students' ideal L2 self, the image of the L2 user they want to be in the future, was positively associated with their oral L2 proficiency (see also, Dunn & Iwaniec, 2022). In another study, Saito et al. (2017) showed that learners' motivation for vague and long-term goals resulted in higher oral proficiency among Japanese learners of English as a foreign language (EFL). In fact, two meta-analyses on L2 motivation studies (Al-Hoorie, 2018; Masgoret & Gardner, 2003) have shown that both the motivational components of Gardner's (1985) theory of motivation and those of Dörnyei's (2009) L2 motivational self system

correlated moderately with L2 achievement. These studies have been very valuable in shaping our understanding of the connection between motivation and L2 outcomes. However, they have been conducted from a perspective that Papi (2016, 2018) calls a quantity perspective of motivation; this motivational lens is represented by how the amount of time and energy that students invest in L2 learning affects their overall L2 motivated behaviors, performance, achievement, or proficiency but does not highlight qualitative differences in those outcomes. This motivation-as-quantity view is of great value and has formed applied linguists' current understanding of L2 motivation; however, it has neglected how motivation can result in qualitative differences in L2 learning behaviors and outcomes (see Higgins, 2012), resulting in a limited understanding of motivation. To bridge this gap, Papi (2016, 2018) has proposed an alternative view that he has called "the motivation-as-quality perspective." From this perspective, motivational differences among L2 learners could direct their goal preferences, the means and strategies they use to pursue their goals, and, consequently, the quality of their learning outcomes.

The motivation-as-quantity perspective has also been the main motivational lens in task-based language learning (TBLL), where predominantly cognitive frameworks have been used for studying language learning tasks, and learner motivation has been given a marginal role. In Skehan's (1996) framework, *code complexity*, *cognitive complexity*, and *communicative stress* were outlined as the factors that contributed to task difficulty. The only motivational aspect in the framework, labelled "stakes," was placed under communicative stress and concerned "how important it is to do the task, and, possibly, to do it correctly" (Skehan, 1996, p. 52). Likewise, Robinson (2001) proposed that three dimensions of L2 learning tasks contribute to the effectiveness of the tasks: *task complexity*, *task difficulty*, and *task conditions*. Task difficulty and, by extension, task performance in this framework is influenced by ability factors (e.g., aptitude, proficiency, and intelligence) and affective factors (e.g., motivation, anxiety, and confidence), with the former being treated as the main contributors. Motivation, as one of the affective factors that affect task difficulty, on the other hand, is described as one of the "temporarily limiting factors" that "can result in temporary expansion of resource pools currently available to meet the demands of a particular task (e.g., heightened attention to and rehearsal of input in working memory)" (Robinson, 2001, p. 32). Similar to Skehan's position, this perspective is in line with the motivation-as-quantity approach, which does not take into consideration how motivation can have qualitative effects on different aspects of L2 task performance.

To bridge this gap, the present study takes the motivation-as-quality perspective to highlight how learners' motivational dispositions can contribute to qualitative differences (complexity, accuracy, and fluency) in their L2 task performance (Papi, 2018). To this purpose, it has employed regulatory focus theory (Higgins, 1997) and regulatory mode theory (Kruglanski et al., 2000) from the field of social psychology to explore how learners' regulatory orientations can lead to individual differences in the complexity, accuracy, or fluency of L2 production as well as general L2 proficiency among learners of English as a second language (ESL) in the United States. Regulatory focus and mode theories were chosen because they outline four regulatory orientations that represent different dimensions of human motivation directing their goals, preferences, and behaviors (see Higgins, 2012; Papi & Hiver, 2020). Regulatory focus deals with motivation from outcome—that is, whether the person is approaching gains (promotion) or avoiding losses (prevention); on the other hand, regulatory mode deals with motivation from the process of goal pursuit—that is, whether the person is motivated to be good at

doing the task (locomotion) and or to do it right (assessment). The two theories provide a holistic picture of how motivational dispositions can play out in L2 task performance.

Motivation in task-based language learning

Research in TBLL has focused on the effects of different task types or conditions (e.g., Robinson, 2001, 2007; Tavakoli & Skehan, 2005) on the quality of L2 performance, which has commonly been operationalized in terms of complexity, accuracy, and fluency (CAF). Although there is a general agreement that mainly the cognitive demands of tasks and task implementation conditions lead to differences in L2 production (Pallotti, 2009; Tavakoli & Foster, 2011), several studies have highlighted the importance of motivation in task engagement and performance. The concept of L2 task motivation, proposed by Julkunen (1989), was formed as a fusion of motivational orientation and state motivation related to the task at hand. Likewise, Tremblay et al. (1995) viewed task motivation as situation-specific motivation related to specific task characteristics. Dörnyei (2003) asserted that such conceptualization fails to elaborate on the intrinsic complexity and dynamic interaction involved in task motivation and proposed *the motivational task processing system*, which includes three interrelated mechanisms that shape a recurring process of *task execution*, *appraisal*, and *action control*. Task execution refers to learners' engagement in tasks, appraisal is concerned with learners' ongoing evaluation of the execution process, and action control touches on the self-regulatory actions that learners employ to improve or reinforce their task-related behaviors. The interplay of these three mechanisms is argued to create task motivation, which can in turn contribute to the quality of L2 task performance.

Essentially, task motivation is a dynamic and complex phenomenon that is subject to diverse task-based and socio-affective factors. Dörnyei and Kormos conducted a few studies investigating task motivation in various contexts (Dörnyei, 2002; Dörnyei & Kormos, 2000; Kormos & Dörnyei, 2004). Dörnyei and Kormos (2000) found that the situated motivational factors including attitudes toward the English course and attitudes toward the tasks were better associated with the number of words produced as well as the number of turns. In addition, learners with more positive attitudes toward the course were found to participate more actively in the task. Dörnyei (2002) found that peers' motivation could affect learners' task motivation particularly if a learner with low task attitudes was paired up with a motivated peer. In the third study, Kormos and Dörnyei (2004) showed that learners' attitudes toward tasks correlated with lexical richness, but little evidence was found for the association between learners' task motivation and their accuracy and complexity of L2 production.

Some studies have explored how task-related variables influence motivation. For instance, Poupore (2014) discovered that topic interest, task content, and text features were significant predictors of learners' task engagement. Likewise, Lambert et al. (2017) found that personalized task content related to life experiences was positively associated with task motivation. MacIntyre and Serroul (2015) found that factors related to task difficulty such as topic familiarity, vocabulary, and grammatical complexity affected task motivation. Finally, Kormos and Préfontaine (2017) found that the high cognitive load and the vague structure of a task weakened students' task motivation and aggravated their task anxiety.

The results of these studies highlight the significance of task attitudes and task difficulty in task motivation, anxiety, and performance. Nevertheless, these studies have been conducted from the motivation-as-quantity perspective and mainly used task-specific motivational factors (e.g., task attitudes, task interest) that do not provide a

theoretically meaningful account for individual differences in learners' L2 task performance (Skehan & Foster, 2013). The present study seeks to build on the previous research and examine how motivational dispositions might influence the quality of students' oral task performance (Dörnyei, 2019; Papi, 2016, 2018). More specifically, we have employed the regulatory focus and regulatory mode theories to explore such connections in a theoretically meaningful way. These theories were anticipated to lead to qualitatively different L2 outcomes because they highlight preferences that have been found to lead learners to prioritize different aspects of task performance, experience different emotions during task completion, and use different strategies to complete the task (e.g., Cho, 2021; Papi, 2018; Papi & Khajavy, 2021; Teimouri et al., 2022). In the present study, we were interested in how such motivational dispositions could influence the CAF measures of learners' oral task performance as well as their L2 proficiency. Discovering such connections can better highlight the role of motivation in accounting for individual differences in TBLL and performance. It can also help language teachers use and frame tasks in ways that would match/mismatch learners' motivational dispositions in order to maximize their habitual strengths (e.g., preference for accuracy) or minimize their habitual weaknesses (e.g., lack of preference for fluency; see Cho, 2021; Papi, 2016).

Regulatory focus theory

Regulatory focus theory (Higgins, 1997) posits that human behavior is driven by two motivational systems, *the promotion system* and *the prevention system.* Individuals who self-regulate using a predominant promotion system (promotion-focused individuals) have been found to be concerned with accomplishments, advancement, and growth, whereas those who self-regulate mainly using a prevention system (prevention-focused individuals) have been shown to be concerned with safety, security, and stability (e.g., Higgins et al., 2001). According to Higgins (1997), promotion-focused individuals are sensitive to the presence or absence of positive outcomes and motivated by ideal selves (representing hopes and aspirations), whereas those with a prevention focus are sensitive to the presence or absence of negative outcomes and motivated by ought-to selves (representing duties and obligations). Individuals with a promotion focus have been found to take more risks (Scholer et al., 2010), think intuitively (Pham & Avnet, 2004), favor speed over accuracy in task completion (Förster et al., 2003), and follow an eager strategic inclination to maximize their opportunities for gain (Crowe & Higgins, 1997). On the other hand, prevention-focused individuals tend to be more cautious and risk-averse (Scholer et al., 2010), think analytically (Pham & Avnet, 2004), favor accuracy over speed (Förster et al., 2003), and follow a vigilant strategic inclination to insure against making mistakes (Crowe & Higgins, 1997). Promotion and prevention are believed to be two independent principles, which means that one can be weak or strong in one or both dispositions.

In the field of SLA, the studies that have employed future L2 self-guides (e.g., Papi et al., 2019; Papi & Khajavy, 2021; Sato, 2017; Taguchi et al., 2009; Teimouri, 2017) best reflect the promotion–prevention distinction outlined in regulatory focus theory (Higgins, 1987, 1997). An ideal L2 self, concerned with the L2 attributes one would ideally like to possess in the future, has a promotion focus, whereas an ought-to L2 self, concerned with the L2 attributes one thinks one ought to possess in the future to avoid negative consequences, has a prevention focus (Jiang & Papi, 2022; Papi & Khajavy, 2021; Teimouri, 2017). Ideal L2 selves have been found to predict willingness to communicate in a second language (Khajavy & Ghonsouli, 2017; Teimouri, 2017),

language learning enjoyment (Tahmouresi & Papi, 2021), an eager tendency to use the target language (Papi, Bondarenko, et al., 2019; Papi & Khajavy, 2021; Sato, 2017), and persistence in language learning (Feng & Papi, 2020); ought-to L2 selves, on the other hand, have been found to predict the prevention-related emotion of L2 anxiety (Papi, 2010), lower classroom participation (Papi & Abdollahzadeh, 2012), a vigilant tendency in L2 use (Papi, Bondarenko, et al., 2019), and short-term motivated behavior (Feng & Papi, 2020). Papi and Khajavy (2021) found that a promotion focus predicted ideal L2 selves positively, whereas a prevention focus predicted ought-to L2 selves negatively, suggesting that the stronger one's promotion focus is the stronger their ideal L2 selves are, and the stronger a prevention focus is the fewer the oughts and duties that remain to be met. In sum, these studies show that promotion-focused constructs show eager L2 learning and use patterns, whereas prevention-focused constructs display vigilant L2 learning and use patterns. In addition, the studies by Papi, Bondarenko, et al. (2019) and Papi and Khajavy (2021) showed that eager L2 use positively predicts higher motivation and achievement whereas vigilant L2 use improved the intensity of motivated behavior but negatively affected L2 achievement.

A few SLA studies have directly employed regulatory focus theory. In a seminal study in the ESL context of the United States, Papi (2016, 2018) found that English learners' strength of promotion, but not prevention, predicted incidental vocabulary words and engagement in an integrated reading and writing task. In addition, prevention-focused learners learned more vocabulary items in a loss-framed condition than in a gain-framed condition. Han and McDonough (2018) found that learners' general L2 regulatory focus did not influence their task performance but their task-induced prevention focus contributed to their speech fluency and accuracy more than their task-induced promotion focus. In another study, Han and McDonough (2021) found that a prevention focus harmed accuracy in L2 task performance, whereas a promotion focus had no effect on L2 task performance. Han and McDonough's (2018, 2021) results do not precisely align with the findings of the previous studies in social psychology which were reviewed above probably because the researchers used the L2 specific measures of instrumentality-promotion and instrumentality-prevention (Taguchi et al., 2009) to measure dispositional regulatory focus, a practice whose validity has not been empirically established.

In another regulatory focus study, Cho (2021) examined how situational induction of regulatory focus via framing a task in gain terms (promotion focus) or loss terms (prevention focus) would affect their acquisition of lexical stress. The study found no effects for the loss framing but positive effects for the gain framing of the task on the outcome variable. Zhang and Papi (2021) examined how L1-Mandarin ESL learners' regulatory focus affected their L2 pragmatic production, which was measured using discourse completion tasks. The results of the study revealed that the chronic promotion focus positively predicted the L2 pragmatic production and especially so when the scenarios used involved a higher degree of imposition, lower power, and greater social distance from the interlocutor. On the other hand, the prevention focus negatively predicted the participants' L2 pragmatic production. More relevant to this study but in the context of L2 writing, Eom and Papi (2022) examined the relationship between regulatory orientations (focus and mode) and the linguistic quality of L2 written production in the EFL context of South Korea. The researchers found that the promotion focus predicted higher syntactic complexity and lexical density but the prevention focus predicted more syntactic errors and less lexical diversity in written essays.

These studies provide preliminary evidence supporting links between regulatory orientations and the quantity and quality of L2 motivated behavior, learning, and

achievement. However, research in this area is still in its infancy and much remains to be explored. More specifically, we are not aware of any published studies that have examined how learners' dispositional regulatory focus, measured with established questionnaires, might influence the CAF of their oral L2 production or their general L2 proficiency. The present study seeks to bridge this gap.

More specifically, given their preference for risk-taking, eagerness, and speed, individuals with a predominant promotion focus are expected to produce more fluent and more complex L2 speech. On the other hand, because individuals with a predominant prevention focus are more vigilant and analytic in thinking and prefer accuracy over speed, they are predicted to show more accurate oral L2 performance and use less complex linguistic structures and items to avoid possible errors. Finally, given their speculated effects on oral L2 production, these regulatory orientations are expected to positively contribute to L2 proficiency. Therefore, the following research questions and hypotheses were formulated:

RQ1: How do the promotion and prevention regulatory foci predict oral L2 fluency, accuracy, complexity, and proficiency?

H1a: Promotion but not prevention will positively predict L2 fluency.

H1b: Prevention but not promotion will positively predict L2 accuracy.

H1c: Promotion will positively and prevention will negatively predict L2 complexity.

H1d: Promotion and prevention will positively predict L2 proficiency.

Regulatory mode theory

Whereas regulatory focus theory concerns end-states and outcomes, regulatory mode theory (Kruglanski et al., 2000) involves the functional aspect of self-regulation or the process of goal pursuit. According to Kruglanski et al. (2000), there are two regulatory modes, an *assessment mode* and a *locomotion mode*, which lead individuals to pursue goals in different manners: "Assessment constitutes the comparative aspect of self-regulation that critically evaluates alternative goals or means to decide which are best to pursue and appraises performance" (p. 793). On the other hand, "locomotion constitutes the aspect of self-regulation concerned with movement from state to state, including commitment of psychological resources to initiate and maintain such movement" (p. 793). High assessors tend to critically evaluate the situation to make sure they are pursuing the right goals and using the right means to achieve those goals; in contrast, high locomotors tend to initiate and maintain their movement toward the goal without any interruptions. Like promotion and prevention, assessment and locomotion are believed to be independent constructs that exist on a continuum. In other words, individuals can be weak or strong on one or both dispositions.

The locomotion mode has been associated with higher levels of motivation and achievement (Kruglanski et al., 2000). Locomotors tend to be decisive (Webster & Kruglanski, 1994) and less likely than others to procrastinate (Pierro et al., 2011), learn from the past (Pierro et al., 2008), or experience nostalgia (Pierro et al., 2013). They choose tasks and goals that are easier to achieve (Kruglanski et al., 2000) and prefer small but immediate rewards to larger but delayed ones (Guo & Feng, 2015). Assessors, conversely, tend to worry about making mistakes (Herman, 1990), learn from the past

(Pierro et al., 2008), have higher standards for performance (Pierro et al., 2011), and procrastinate (Pierro et al., 2011). They take longer to complete assignments, but they do so with higher accuracy (Kruglanski et al., 2000).

Regulatory mode theory has recently been introduced to the field of SLA by Teimouri et al. (2022). The researchers examined the connection between the regulatory mode of English learners in Iran and their emotions, motivation, and self-reported L2 proficiency. The study found that locomotion positively predicted L2 joy, intended effort, willingness to communicate, and self-reported L2 proficiency and negatively predicted L2 anxiety. On the other hand, assessment positively predicted L2 anxiety, joy, intended effort, and attention but not self-reported proficiency. In addition, cluster analysis showed that learners who have stronger scores in both locomotion and assessment showed the highest levels of joy, attention, willingness to communicate, and intended effort. These results were largely in line with the conceptual foundations of regulatory mode theory and the results of previous studies in the field of social psychology which were reviewed above. In the study by Eom and Papi (2022), which examined the relationship between regulatory mode and the written products of learners of English in South Korea, assessment was found to predict measures of syntactic and lexical complexity and accuracy, but locomotion did not predict any of the measures. The results of the study, however, cannot be extended to oral L2 task performance due to the different psychological processes involved in oral versus written production (Ellis & Yuan, 2005), a gap that this study seeks to bridge.

Theoretically speaking, locomotors' bias for speedy task completion can contribute to the fluency of their oral L2 production (Kruglanski et al., 2000). On the other hand, high assessors' tendency to compare and analyze, along with their preference for accuracy over speed (Kruglanski et al., 2000) can potentially harm their oral L2 fluency but contribute to their L2 accuracy. High locomotors have been found to focus narrowly on a single goal they have on hand, ignore the less goal-relevant information, and avoid risky paths that may delay their task completion. Applied to L2 learning, locomotors' "just-do-it" attitude may not contribute to the complexity of their L2 production. High assessors, on the contrary, have been found to set higher standards of performance (Pierro et al., 2011); in addition, they seem to think about and evaluate different options and possibilities before acting in order to make sure they take the right steps and choose the right means and strategies. Therefore, assessors are expected to produce more complex language than locomotors in their oral L2 production. Finally, given the predictions outlined above, both assessment and locomotion modes are anticipated to contribute to the holistic measure of L2 speaking proficiency.

Based on the studies reviewed above, the second research question and four ensuing hypotheses are stated as follows:

RQ2: How do the assessment and locomotion regulatory modes predict oral L2 complexity, accuracy, fluency, and proficiency?

H2a: Locomotion will positively but assessment will negatively predict L2 fluency.

H2b: Assessment will positively but locomotion will negatively predict L2 accuracy.

H2c: Assessment but not locomotion will positively predict L2 complexity.

H2d: Assessment and locomotion will positively predict L2 speaking proficiency.

Methods

Design of study

The present study employed an observational design in the sense that the researchers did not manipulate the independent variables (IV) or dependent variables (DV) of the study. That is, no intervention or treatment was employed to create a change in the participants' emotions, thoughts, or behaviors. Instead, the participants' performance on an oral L2 task as well as their overall L2 proficiency were examined in relation to their regulatory orientations, which were measured using questionnaires. Such a design typically yields correlational or associational results that highlight how two variables are correlated or associated. In this study, however, given that the IVs of the study were personality traits/dispositions that were present far in advance of the participants' oral L2 performance on a task and the questionnaire data were collected before task completion, causal relationships can also be inferred. In other words, if a relationship is discovered in the present study between an IV such as regulatory focus and a DV such as oral L2 accuracy in the task completed, it can be suggested that the IV has an effect on the DV, but not the other way around.

Participants

Eighty-one international students (32 males and 49 females) who studied in different fields of study at a major U.S. university and used English as a second language participated in this study. The participants ranged from 18 to 41 years of age ($M = 24.52$, $SD = 4.94$), and the majority of them spoke either Chinese (38%) or Spanish (21%) as their first language. Half of the participants were graduate students ($n = 41$), and the other half were undergraduate students ($n = 35$), faculty ($n = 2$), or spouses of students ($n = 3$). One third of the participants had lived in the United States for less than 1 year ($n = 33$) and a quarter ($n = 19$) for more than 3 years. Only 12 participants reported that they were taking English classes at the time of data collection. For more descriptive statistics, see Table 1.

The international student population in the United States was selected as the target population because they constitute a large and growing cohort of learners/users of English as a second language. According to the Institute for International Education's (2022) Open Doors Report on International Educational Exchange, in the 2021–2022 academic year, there were approximately one million international students studying in the United States, who contributed over $32.8 billion and 335,000 jobs to the U.S. economy. These students have typically experienced learning English in both EFL and ESL contexts. The advantage of learning English in both contexts is that it can

Table 1. Summary of learners' background information ($N = 81$)

First language	Chinese: 31 (38%)	Spanish: 21 (26%)	Korean: 4 (5%)	Other: 25 (31%)
Academic status	Undergraduate: 35 (43%)	Graduate: 41 (51%)	Faculty: 2 (2%)	Spouse of student: 3 (4%)
Length of residence in the United States	Less than 12 months: 33 (41%)	12–23 months: 20 (25%)	24–35 months: 9 (11%)	36 months or more: 19 (23%)
The use of English per week	Less than 10 hr: 32 (39%)	10–19 hr: 16 (20%)	20–29 hr: 7 (9%)	30 hr or more: 26 (32%)

help students develop not only the knowledge of the formal aspects of the language but also the ability to use English for daily and professional communication.

Instruments

Questionnaires

A questionnaire was used to collect motivational and demographic data from the participants. The first part of the questionnaire measured the participants' regulatory focus using Higgins et al.'s (2001) regulatory focus questionnaire. The questionnaire includes 11 items, six measuring the promotion focus (e.g., "Do you often do well at different things that you try?") and five measuring the prevention focus (e.g., "How often did you obey rules and regulations that were established by your parents?"). The questions were answered on a 5-point Likert-type scale with 1 indicating "*never or seldom/never true/certainly false*" and 5 indicating "*very often/very often true/certainly true.*" The second part included the regulatory mode questionnaire (Kruglanski et al., 2000). The questionnaire includes 12 items measuring the locomotion mode (e.g., "I enjoy actively doing things, more than just watching and observing."), and 12 items measuring the assessment mode (e.g., "I like evaluating other people's plans."). The questions were answered on a 6-point Likert-type scale with 1 denoting "*strongly disagree*" and 6 denoting "*strongly agree.*" The last part of the questionnaire consisted of a collection of demographic and background information items including age, gender, career/academic status, and length of residence in the United States.

Interview task

Following questionnaire administration, a structured interview task was conducted to elicit oral English production samples from the participants as a measure of their English proficiency. Oral interviews were used because they are common tools for measuring general L2 oral proficiency (Salaberry, 2000) and are used in major standardized tests such as the International English Language Testing System and the American Council for Teaching Foreign Languages Oral Proficiency Interview. Before conducting the interviews, the participants were informed that the interview task would be conducted to learn more about their experiences studying and living in the United States. The participants were asked questions ranging from their reasons for coming to the United States and the specific university to the positive and negative aspects of their experiences; their answers were audio-recorded with permission.

Picture description task

An oral picture description task (Heaton, 1975) was used to examine the participants' oral L2 production.[1] This kind of narrative task has been used by researchers interested in examining the complexity, accuracy, and fluency of oral L2 production in L2 task-based research (e.g., Ellis & Yuan, 2004), is more cognitively demanding than other types of tasks like personal information exchange or decision-making tasks (Foster & Skehan, 1996), and can better distinguish individual performance variation across participants. The picture depicts a view of a street including buildings and several people who are interacting or doing different activities. The participants were asked to

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[1]The picture description task and the interview prompt are available online in the IRIS repository: https://www.irisdatabase.org/.

take a few moments to study the picture and describe what was going on in the picture to the researcher. To make the students more engaged in the task, they were told that their oral descriptions would be recorded to be played back later to another student who would try to redraw the picture based on the recording.

Procedures

After securing approval from the Institutional Review Board, a recruiting email with information about the purpose and procedures of the study was sent to the international students studying at the university; the email asked about the students' willingness to participate in the study in exchange for a $25 gift card. The researchers then contacted the respondents individually to schedule a mutually convenient time for data collection, which was completed in a quiet lab where a researcher met individually with the participants one at a time. Researchers were matched with the participants in a way that the researcher did not share the same first language with the participants from whom they were collecting data. During the data collection process, a uniform protocol was followed by the researchers. After reading and signing a consent form, the participants first completed an online version of the questionnaire on a laptop computer. The survey was administered using Qualtrics, which is an online platform for developing and conducting online surveys. The interview about the participants' experiences of studying and living in the United States was conducted next, which lasted approximately 10 minutes, on average. Finally, the participants completed the picture description task by simply describing what they saw in the picture. No time limit was set on the task, and the participants were not allowed to take written notes. With permission from the participants, the interviews and the participants' performance on the picture description task were audio-recorded using Audacity (https://www. audacityteam.org/).

Before data collection for the study, all the instruments and procedures were piloted on 15 international students from different countries who volunteered to assist with the research study. The volunteers completed all the steps involved in the study and provided feedback on how to modify some of the procedures and instruments to increase the quality and efficiency of the data collection.

Data coding and analysis

The picture description recordings were transcribed and coded in terms of speech units (AS unit; Foster et al., 2000), which is defined as an utterance consisting of an independent clause or subclausal unit and any associated subordinate clauses. The dependent variables of linguistic performance were the CAF measures of oral L2 production, which were operationalized in terms of eight subcomponents. Due to the specific characteristics associated with each of the four regulatory orientations, CAF measures were chosen in a way that would reveal those dispositions in oral L2 task performance. More specifically, both the speed (the number of words per minute) and dysfluency (the number of dysfluencies) measures of fluency were chosen because the former has been found in social psychology to be associated with locomotion (Förster et al., 2003) and we were interested in exploring whether the latter has the same connection with locomotion or promotion. Both the mean length of error-free clauses and the total length of error-free clauses were considered in measuring accuracy because we were interested in exploring whether locomotors made mistakes at a higher rate or whether they might appear so due to their tendency to talk more, and the number of clauses per AS unit was used as the common measure of syntactic

complexity. Finally, following Kyle et al. (2021), the measure of textual lexical diversity was used as a common measure of lexical diversity, and following Kyle et al. (2018), frequency and range were used as measures of lexical sophistication. The oral interview recordings were used to rate the participants' overall English proficiency. The measures are described as follows.

Fluency was measured in terms of the number of words per minute and the total number of dysfluencies. These were calculated by dividing the total number of words by the number of minutes participants spent speaking. The online software Word Counter (https://wordcounter.net/) was used for this purpose. The number of dysfluencies was calculated manually in terms of the sum of false starts, repetitions, and reformulations.

Complexity was measured manually by three raters in terms of syntactic complexity and lexical complexity. Syntactic complexity was calculated in terms of subordination—that is, the number of clauses per AS unit. The larger were the number of clauses per AS unit, the higher was the complexity score for each writing sample. Three raters coded the data for syntactic complexity; they calculated the number of AS units and clauses within each for 10% of the transcribed speech samples. The initial agreement was 90%, which increased to 100% after the raters discussed the discrepancies. The rest of the transcripts were divided between the raters. Lexical complexity was measured in terms of diversity and sophistication. Lexical diversity was measured using the measure of textual lexical diversity (MTLD) for content words, which are calculated through a series of type/token-ratio samplings and curve fittings, and in contrast to the common measures of type/token ratio or mean segmental type/token ratio, these are not affected by text length (McCarthy & Jarvis, 2010). The web-based Tool for the Automatic Analysis of Lexical Diversity (Kyle et al., 2021) was used for this purpose. Lexical sophistication was measured in terms of frequency (Brown Frequency for Content Words Logarithm) and range (SUBTLEXus Range for Content Words; Kyle et al., 2018).

Accuracy was assessed manually by three researchers in terms of the total length of error-free clauses and the mean length of error-free clauses, with the latter controlling for the length of clauses. To establish interrater reliability for the accuracy measures, two researchers independently rated all the interview transcripts and the results were compared to see whether there was consistency in the identification of errors. The initial correlation between the two ratings was .75. A third researcher compared the two ratings and made a final judgement when there was a discrepancy between the two raters. The third raters' judgements were used as the final measures for lexical and syntactic accuracy.

Overall L2 proficiency was evaluated using the TOEFL iBT independent speaking rubrics, which classify performance on the speaking proficiency test on a 5-point scale with 0 indicating no or an unrelated response to the prompt and 4 indicating the most advanced response that fulfills the demands of the task. Three raters listened to each oral interview together and determined the scores. After norming the assessment process based on 10% of the data, the raters individually rated the speech samples and discrepancies among the scores were discussed until an agreement was reached.

Questionnaire data, along with the coded L2 production data, were submitted to SPSS 25 (IBM). Principal component analyses (PCA) were performed on the items related to regulatory focus and regulatory mode using the standard entry method and direct oblimin with Kaiser normalization as the factor rotation method. The number of factors was determined using the underlying theories, eigenvalues larger than 1, and scree plots. The initial PCA included 11 items from the regulatory focus questionnaire, which loaded on four factors, with one factor containing only one item. After deleting the one item and rerunning the analysis, three factors emerged with eigenvalues larger

than 1, but the scree plot showed two clear factors, which aligned with the two components in regulatory focus theory (Higgins, 1997). The analysis was run for a third time with two factors predetermined to be extracted. The final model with two factors explained 47.5% of the variance. The first factor, which explained 27.81% of the variance (eigenvalue = 2.87), included four items (Cronbach's alpha = .79; Composite reliability = .88) representing the prevention focus. The second factor, which included four items (Cronbach's alpha = .62; Composite reliability = .74) related to the promotion focus explained 19.66% of the variance (eigenvalue = 1.97). Additionally, the Kaiser–Meyer–Olkin value for sampling adequacy (.69) was larger than the acceptable value (.50), and Bartlett's test of sphericity was statistically significant $\chi^2(21) = 128.88$, $p < .001$, showing the data were suitable for factor analysis.

The initial PCA on items related to regulatory mode showed nine factors with eigenvalues larger than 1, accounting for 69.67% of the variance. The scree plot, however, showed two factors from the point of inflection, which matched the two components in regulatory mode theory (Kruglanski et al., 2000). Results of the reanalysis with two factors predetermined to be extracted explained 35.46% of the variance. The first factor explained 17.75% of the variance (eigenvalue = 3.60; Cronbach's alpha = .78; composite reliability = .83) and included 10 items related to the assessment mode. The second factor, which included 11 items representing the locomotion mode, explained 15.52% of the variance (eigenvalue = 3.26; Cronbach's alpha = .74; composite reliability = .83). In addition, the value for Kaiser–Meyer–Olkin sampling adequacy was .63 and Bartlett's test of sphericity was significant, $\chi^2(190) = 470.74$, $p < .001$, showing the data were suitable for PCA.

Results

Descriptive statistics related to all the target variables are presented in Table 2. As shown, the participants seem to be stronger in their locomotion than in the assessment mode and in the promotion than in prevention focus. The average oral proficiency of the participants is 3.06 on a 5-point scale from 0 to 4. They spent approximately an

Table 2. Descriptive statistics for all the variables used in the study

	Range	*M*	*SD*	95% CI
Assessment	2.13–5.50	3.93	.88	3.73–4.1
Locomotion	2.82–5.55	4.33	.70	4.17–4.48
Promotion	2.20–5.00	3.65	.58	3.53–3.78
Prevention	2–4.5	3.45	.63	3.31–3.59
English speaking proficiency (oral interview data)	2.00–4.00	3.06	.71	2.90–3.22
Time on picture task (seconds)	43–401	123.55	67.00	109–138
Number of words (picture task)	212–1211	635.58	248	580.54–690.62
Words per minute (picture Task)	54.57–192.24	113.25	27.64	107.14–119.36
Number of dysfluencies (picture task)	00–26.00	8.40	6.32	7.00–9.79
Total length of error-free clauses (picture task)	14.00–475.00	101.47	71.57	85.65–111.30
Mean length of error-free clauses (picture task)	4.17–29.00	9.21	3.86	8.36–10.06
MTLD for content words (picture task)	17.11–156.89	53.96	26.01	48.20–59.70
Brown frequency of content words (picture task)	98.35–643.61	367.56	110.56	343.11–392.01
SUBTLEXus range of content words (picture task)	3639–6428	474.20	493.65	4632–4851
Clauses/AS units (picture task)	.83–1.79	1.23	.18	1.19–1.27

average of 124 seconds on the task and produced an average of nearly 636 spoken words per task performance.

Multiple regression analysis assumptions including normality, linearity, multicollinearity, and homoscedasticity were checked and met. In addition, no outlier was removed as a result of multivariate outlier testing. Multiple regression analyses with the standard entry method were run to examine the relationships between the regulatory orientations and measures of L2 complexity, accuracy, fluency, and speaking proficiency (see Table 3 for correlations). The regression analysis was used because it is considered a flexible and more powerful alternative to mean-comparison techniques such as *t* tests and analyses of variance (Plonsky & Oswald, 2017) and makes it possible to statistically control for covariates, variables that we are not interested in but may affect the results of the analysis.

To test Hypothesis 1a (H1a: Promotion but not prevention will positively predict L2 fluency.) and Hypothesis 2a (H2a: Locomotion will positively but assessment will negatively predict L2 fluency.), two multiple regression analyses were run with assessment, locomotion, promotion and prevention as predictor variables and the fluency measures of speaking speed (i.e., words per minute) and the total number of dysfluencies (i.e., false starts, repetitions, and reformulations) as the outcome variables, respectively. In addition, to reduce the heterogeneity inherent in the data collected from such as diverse group of participants, in addition to English speaking proficiency, demographic factors such as age, gender, and length of residence in the United States were added as covariates. The results of the two analyses partially confirmed our hypothesis (Table 4). In the first analysis, locomotion was the only statistically significant predictor of the words-per-minute measure of fluency, $F_{(8, 72)} = 15.92$, $p < .001$; $R^2 = .64$. In the second analysis, assessment emerged as a statistically significant negative predictor of the total number dysfluencies, $F_{(8, 72)} = 5.02$, $p < .001$; $R^2 = .36$. These results partially confirm Hypothesis 1a and Hypothesis 2a. In addition, the covariates proficiency, age, and gender emerged as statistically significant predictors of the speed measure (more proficient, male and younger participants producing more words per minute) and proficiency and age (less proficient and younger participants producing more dysfluencies) emerged as significant predictors of the dysfluency measure.

To test Hypothesis 1b (H1b: Prevention but not promotion will positively predict their L2 accuracy.) and Hypothesis 2b (H2b: Assessment will positively but locomotion will negatively predict L2 accuracy.), two additional regression analyses were run

Table 3. Correlations between predictor and outcome variables

	Promotion	Prevention	Assessment	Locomotion
Words/minute	.14	−.02	.31**	.24*
Number of dysfluencies	−.23*	.20	−.34**	−.24*
Length of error-free clauses	.11	−.01	.01	−.11
Mean length of error-free clauses	.16	−.10	−.02	.05
Clauses/AS units	.13	.11	.21	.16
MTLD for content words	.09	−.18	.32**	.06
Brown frequency of content words logarithm	.10	.29**	.03	.01
SUBLEXus range of content words	−.03	.30**	−.06	−.03
Oral English proficiency	.31**	−.17	.26*	.25*
Age	−.06	.15	−.14	−.05
Gender	.02	.01	.04	.01

*$p < .05$; **$p < .01$; ***$p < .001$.

Table 4. Regression analyses with fluency measures as outcome variables

| | Fluency: Total number of words per minute | | | | | Fluency: Total number of dysfluencies | | | | |
| | | | | 95% CI | | | | | 95% CI | |
Variables	*B*	β	*p*	L	U	*B*	β	*p*	L	U
Assessment	2.85	.09	.24	−1.89	7.58	−1.73	−.24	<.05	−3.18	−.29
Locomotion	9.91	.25	<.01	3.01	16.81	−.84	−.09	.43	−2.94	1.27
Promotion	1.67	.04	.70	−7.04	10.38	−1.24	−.11	.36	−3.89	1.42
Prevention	3.80	.09	.24	−2.53	10.12	.67	.07	.49	−1.26	2.60
Proficiency	17.96	.46	<.001	11.27	24.64	−2.10	−.24	<.05	−4.14	−.06
Age	−1.82	−.33	<.001	−2.67	−.96	.35	.27	<.05	.09	.61
Gender	−13.95	−.25	<.01	−22.34	−5.56	1.67	.13	.20	−.89	4.23
LOR	.05	.03	.68	−.19	.29	.03	.10	.37	−.04	.11
R^2/F			.64/15.92/ *p* <.001					.38/5.39/ *p* <.001		

Note. LOR = length of residence.

Table 5. Regression analyses with accuracy measures as outcome variables

| | Accuracy: Total length of error-free clauses | | | | | Accuracy: Mean length of error-free clauses | | | | |
| | | | | 95% CI | | | | | 95% CI | |
Variables	*B*	β	*p*	L	U	*B*	β	*p*	L	U
Assessment	−.32	−.04	.71	−2.00	1.37	−.32	−.07	.55	−1.37	.73
Locomotion	−2.80	−.30	<.05	−5.26	−.35	−.38	−.07	.63	−1.91	1.16
Promotion	1.62	.14	.30	−1.47	4.72	.74	.11	.45	−1.20	2.67
Prevention	.80	.08	.48	−1.45	3.05	−.47	−.08	.51	−1.87	.94
Proficiency	2.49	.27	<.05	.11	4.87	1.39	.26	.07	−.10	2.87
Age	.28	.21	.07	−.03	.58	.04	.05	.66	−.15	.23
Gender	1.91	.14	.21	−1.07	4.90	.49	.06	.60	−1.37	2.35
LOR	.03	−.04	.48	−.06	.12	−.01	−.07	.61	−.07	.04
R^2/F			.19/2.17/ *p* <.05					.09/.85/ *p* = .55		

(see Table 5). In the first analysis with the total number of error-free clauses as the outcome variable, locomotion emerged as a negative predictor, $F(8, 72) = 2.48$, $p < .05$; $R^2 = .22$, suggesting that this orientation leads to a higher number of clauses with errors. In the second analysis with the mean length of error-free clauses as the outcome variable, none of the orientations emerged as a significant predictor, $F(8, 72) = 2.97$, $p < .01$; $R^2 = .25$. These results partially confirm Hypothesis 2b but not Hypothesis 1b. In addition, proficiency as a covariate significantly predicted both measures, suggesting that the higher one's L2 proficiency, the lower their number and rate of errors.

Next, to test Hypothesis 1c (H1c: Promotion will positively, and prevention will negatively predict L2 complexity.) and Hypothesis 2c (H2c: Assessment but not locomotion will positively predict L2 complexity.), four other multiple regression analyses were run. The results for lexical sophistication measures—that is, lexical frequency and range (Table 6)—showed that prevention emerged as a positive predictor of both measures, suggesting that prevention was associated with lower lexical sophistication, partially confirming Hypothesis 1c. In addition, as presented in Table 7, assessment emerged as a positive predictor of both lexical diversity, $F(8, 72) = 3.41$, $p <$

Table 6. Regression analyses with lexical sophistication measures as outcome variables

| | Lexical sophistication: frequency | | | | | Lexical sophistication: range | | | | |
| | | | | 95% CI | | | | | 95% CI | |
Variables	B	β	p	L	U	B	β	p	L	U
Assessment	.01	.08	.50	−.03	.05	25.26	.07	.52	−52.44	102.96
Locomotion	.01	.05	.69	−.05	.07	38.14	.09	.50	−75.05	151.33
Promotion	−.01	−.05	.74	−.09	.06	30.31	.06	.67	−112.53	173.18
Prevention	.06	.25	<.05	.01	.12	114.61	.24	<.05	10.88	218.33
Proficiency	−.02	−.09	.47	−.08	.04	−83.41	−.20	.13	−193.09	26.26
Age	.01	.20	.08	−.01	.01	7.90	.13	.27	−6.14	21.94
Gender	−.10	−.30	.01	−.17	−.03	−109.05	−.18	.12	−246.71	28.62
LOR	−.01	−.06	.60	−.01	.01	−1.49	−.09	.46	−5.47	2.48
R^2/F	.21/2.40/ p. < .05					.17/1.90/ p =.07				

Table 7. Regression analyses with lexical diversity and syntactic complexity as outcome variables.

| | Lexical diversity: MTLD for content words | | | | | Syntactic complexity: Number of clauses per AS unit | | | | |
| | | | | 95% CI | | | | | 95% CI | |
Variables	B	β	p	L	U	B	β	p	L	U
Assessment	6.40	.22	<.05	.08	12.71	.05	.23	<.05	.00	.09
Locomotion	−2.06	−.06	.66	−11.26	7.15	.02	.09	.52	−.05	.09
Promotion	2.66	.06	.65	−8.96	14.27	.02	.08	.58	−.06	.11
Prevention	−2.01	−.05	.64	−10.45	6.42	.04	.14	.22	−.02	.01
Proficiency	5.24	.14	.25	−3.68	14.15	.06	.22	.09	−.01	.12
Age	−1.64	−.31	<.01	−2.78	−.49	.01	.31	<.01	.00	.02
Gender	5.16	.01	.36	−6.03	16.36	−.01	−.02	.84	−.09	.08
LOR	.25	.18	.12	−.07	.58	−.01	−.13	.29	−.01	.00
R^2/F	.28/3.41/ p. < .01					.19/2.15/ p < .05				

.01; R^2 = .28, and syntactic complexity, $F(8, 72) = 2.15$, $p < .05$; R^2 = .19. These results confirmed Hypothesis 2c. In addition, age negatively predicted lexical diversity and positively predicted syntactic complexity.

To test our final hypotheses (H1d: Promotion and prevention will positively predict L2 proficiency; H2d: Assessment and locomotion will positively predict their L2 speaking proficiency.), L2 speaking proficiency was used as the outcome variable. The results of the analysis (Table 8) showed that assessment and promotion emerged as significant predictors of L2 proficiency, $F(8, 72) = 5.14$, $p < .001$; R^2 = .27, partially confirming our hypotheses. Out of the covariates, age was a negative and LOR was a positive predictor.

As summarized in Table 9, the results showed that assessment negatively predicted one measure of fluency (the total number of dysfluencies) and positively predicted lexical diversity (MTLDT for content words), syntactic complexity (the number of clauses per AS unit), and L2 proficiency. Locomotion positively predicted the speed of word production (the number of words per minute) and negatively predicted a measure of accuracy (the total length of error-free clauses). Prevention predicted lower lexical sophistication (higher frequency and range), and promotion positively predicted L2 proficiency.

Table 8. Regression analyses English proficiency as outcome variable.

Variables	*B*	β	*p*	95% CI L	95% CI U
Assessment	.17	.21	<.05	.01	.33
Locomotion	.04	.04	.74	−.20	.28
Promotion	.31	.25	<.05	.02	.6
Prevention	−.04	−.04	.72	−.26	.181
Age	−.03	−.23	<.05	−.06	−.01
Gender	.19	.13	.20	−.10	.48
LOR	.01	.37	<.01	.01	.02
R^2/F			.33/5.14/ *p* < .001		

Table 9. Summary of the results

Category	Predictor	Outcome	Beta	*p*
Regulatory mode	Assessment	Dysfluency: Total number of dysfluencies	−.24	<.05
		Lexical diversity: MTLD for content words	.22	<.05
		Syntactic complexity: Number of clauses per AS unit	.23	<.05
		L2 speaking proficiency	.21	<.05
	Locomotion	Fluency: Words per Minute	.25	<.05
		Accuracy: Total length of error-free clauses	−.30	<.05
Regulatory focus	Promotion	L2 speaking proficiency	.25	<.05
	Prevention	Lexical sophistication: Frequency	.25	<.05
		Lexical sophistication: Range	.24	<.05

Discussion

Fluency

The results of this study did not confirm Hypothesis 1a (H1a: Promotion but not prevention will positively predict L2 fluency.). The participants' promotion focus did not predict either the number of words per minute or the total number of dysfluencies even though it correlated negatively with the latter (Table 3). Theoretically speaking, the risk-taking tendency of promotion-focused individuals was expected to make them more willing to speak a second language without the fear of making errors, thus at a faster pace. In the context of L2 writing, Eom and Papi (2022) also did not find any relationship between promotion or prevention and this fluency measure. L2 motivation studies have shown that the ideal L2 self/own, which has a promotion focus, predicted eager L2 use and willingness to communicate (e.g., Khajavy & Ghonsooly, 2017; Papi, Bondarenko, et al., 2019; Papi & Khajavy, 2021; Sato, 2017), whereas the ought-to L2 selves, which have a prevention focus, correlated with vigilant L2 use and L2 anxiety (e.g., Papi, Bondarenko, et al., 2019; Papi & Khajavy, 2021; Teimouri, 2017). Therefore, the lack of support for this relationship in the results of this study might suggest that the participants' fluent production of the target language might be more related to their ideal L2 selves, which are L2-specific measures of the promotion focus, rather than their dispositional regulatory focus. This explanation, however, needs to be empirically tested because there is not much evidence for the connection between ideal L2 selves

and fluency. In addition, eagerness to use and willingness to communicate in the target language may not necessarily translate into speedy oral production.

Hypothesis 2a stated that "locomotion will positively but assessment will negatively predict L2 fluency." The regression results showed that both locomotion and assessment predicted L2 fluency measures but in different manners. Locomotion positively predicted the speed measure of fluency (the number of words per minute), and assessment negatively predicted the dysfluency measure (the total number of dysfluencies). These results align with the findings of previous studies that have shown that high locomotors prioritize speed over accuracy in task completion, whereas high assessors prioritize accuracy and precision over speed (Kruglanski et al., 2000). Therefore, it is not surprising that locomotors speak at a faster rate and assessors are more careful to speak with fewer dysfluencies. In SLA research, Eom and Papi (2022) did not find similar results in L2 writing probably due to the less spontaneous and less pressured nature of L2 writing during which the writer is not being watched in real time to communicate in an efficient manner. Teimouri et al. (2022) found locomotion positively predicted L2 joy and proficiency, and negatively predicted L2 anxiety, which has been found to harm fluency (Pérez Castillejo, 2019). Theoretically speaking, locomotors take joy in doing things and do not worry much about making errors, characteristics that might have led to their speedy L2 production. On the other hand, assessors analyze, compare, and evaluate their actions in advance, which might be why they are less dysfluent in their oral performance. These results suggest that both locomotion and assessment can lead to higher fluency, with the former contributing to the speed of speech and the latter contributing to the reduction of dysfluencies.

Accuracy

Hypothesis 1b stated that "prevention but not promotion will positively predict L2 accuracy." The multiple regression results showed that prevention did not predict accuracy, rejecting our hypothesis. These results also seemingly contradict the findings of the previous studies that have shown individuals with a prevention focus are more accurate in task completion than those with the promotion focus (e.g., Förster et al., 2003). The connection between a vigilant approach to L2 use and accuracy has been highlighted by Foster and Skehan (1996), who argued that the ability to avoid errors in performance, possibly reflects "higher levels of control in the language as well as a conservative orientation, that is, avoidance of challenging structures that might provoke error" (p. 475). In L2 writing, Eom and Papi (2022) found the prevention focus to predict a higher ratio of errors. However, prevention did not predict any of the measures of L2 accuracy in this study.

These results might be due to the difference between the nature of L2 performance and the psychological tasks used in previous studies. Whereas in Eom and Papi's (2022) study the target task involved L2 writing that may tap into the explicit knowledge of forms, and the studies in the field of social psychology focused on a single task such as proofreading or drawing to measure their participants' performance (for a review, see Higgins & Cornwell, 2016), the present study focused on the participants' oral L2 performance, which is itself spontaneous, requiring online processing of information (Ellis & Yuan, 2005) and taps mainly into the implicit knowledge, which develops over time and through long-term involvement in a process of trial and error (Bley-Vroman, 1986). When learners notice a new linguistic structure, they likely develop an awareness and probably some sort of explicit knowledge of that structure (Schmidt, 1983). The

structure, however, cannot be automatized unless it is used in actual communication and practiced (DeKeyser, 2007; Sato & McDonough, 2019). In other words, learners who eagerly use the second language and make errors are more likely to notice the gap in their interlanguage, reflect on the gap, receive feedback on their errors, and improve their L2 accuracy than those who do not try (Schmidt, 2010). The prevention focus, however, is characterized by sensitivity to the presence or absence of negative outcomes, risk avoidance, and vigilance (Papi & Khajavy, 2021). Such a vigilant and risk-averse strategic inclination in L2 use could have diminished the learners' tendency to engage in the hypothesis-testing and trial-and-error processes that could have helped them improve their L2 oral accuracy (Bley-Vroman, 1986).

Hypothesis 2b stated that "assessment will positively but locomotion will negatively predict L2 accuracy." The multiple regression results showed that whereas assessment did not predict accuracy, locomotion emerged as a negative predictor of the total length of error-free clauses but not of the mean length of error-free clauses. In other words, whereas locomotors seem to make more errors in total, when the length of their oral production is considered, the difference disappears. The lack of relationship between assessment and accuracy measures was not expected. Theoretically speaking, individuals with a strong assessment mode tend to examine, analyze, and evaluate options before acting. They have been found to complete tasks with a higher accuracy (Kruglanski et al., 2000) and learn from their past mistakes (Pierro et al., 2008). In L2 learning, these tendencies may be represented in the amount of attention assessors pay to the accuracy of their language forms and to the corrective feedback, which may in turn contribute to their L2 accuracy (Teimouri et al., 2022). That is also probably why, in the context of L2 writing, Eom and Papi (2022) found that assessment predicted a lower rate of errors. However, the lack of relationship between assessment and accuracy in this study could be due to the more controlled nature of writing, during which explicit knowledge can be more easily used to increase its accuracy, versus the spontaneous and online nature of L2 speaking, which may not benefit as much from explicit knowledge of accurate L2 forms (Ellis & Yuan, 2005).

The locomotion mode resulted in higher number of errors in total but not when considering the length of L2 production. This might suggest that whereas locomotors make more errors due to their lack of concern with accuracy, their errors could only be due to their tendency to speak faster with less attention to form. L2 users with a strong locomotion mode appear to move from one action to another without much deliberation. Such a tendency to move from one state to another may translate into willingness to communicate in a second language (Teimouri et al., 2022) and speaking one sentence after another without much hesitation or deliberation on the syntactic or lexical accuracy of the sentences, which could have led to the production of more errors even though the number of errors was not statistically significant when the average number of clauses produced is considered.

Complexity

Hypothesis 1c stated that "promotion will positively, and prevention will negatively predict L2 complexity." The results of the study partially confirmed this hypothesis. Promotion did not predict any of the complexity measures. This was not expected considering that the risk-taking and eager tendency associated with promotion should have motivated them to try more complex lexical and syntactic structures (Eom & Papi,

2022; Papi & Khajavy, 2021). According to Skehan and Foster (1999), L2 complexity represents "the capacity to use more advanced language, with the possibility that such language may not be controlled so effectively. This may also involve a greater willingness to take risks, and use fewer controlled language subsystems" (pp. 96–97). The risk-taking tendency associated with promotion, however, did not lead to enhanced L2 complexity in this study. It might be the case that not only the promotion concerns with gains but also how much the individual values the outcome matters. In other words, the extent to which an individual has an eager inclination to use a second language in a risky way might depend not only on their dispositional promotion focus but also on their ideal L2 selves and the cost and value associated with using the target language. If the disposition is in place and the outcome is strongly desired, this should create a regulatory fit that would lead to a more eager and risky tendency in using more complex L2 structures.

Prevention predicted lexical range and frequency, suggesting that prevention-focused learners use less sophisticated vocabulary; that is, they used vocabulary items that are more frequently used in general and across a larger variety of contexts. These results make sense considering the risk-averseness associated with this regulatory focus. The prevention focus is associated with the desire to avoid negative consequences by avoiding errors of commission (Scholer et al., 2010). This means that individuals with this focus tend to use safer lexical options and avoid using the riskier ones that may lead to negative consequences. SLA research has shown that such learners use a vigilant strategic inclination in their L2 use, which motivates them to avoid using the L2 unless they have to (e.g., Papi & Khajavy, 2021). The results of this study show that such a regulatory focus also influences the lexical choices that individuals make while speaking in a second language.

Hypothesis 2c stated that "assessment but not locomotion will positively predict L2 complexity." This hypothesis was confirmed. The assessment mode predicted syntactic complexity (the number of clauses per AS unit) and lexical diversity (i.e., MLTDT), whereas the locomotion mode did not. These results suggest that assessors embedded a larger number of clauses within the AS units that they orally produced and used a more diverse set of lexical items in the oral L2 production. The emergence of assessment as a predictor of the syntactic and lexical measures of complexity was expected. In L2 writing, Eom and Papi (2022) also found assessment to predict lexical diversity and syntactic complexity. Learners with a strong assessment mode are characterized by their interest in doing things right and setting higher performance standards than others (Pierro et al., 2011). Assessors have been found to learn from their past mistakes (Pierro et al., 2008), hesitate in decision-making (Webster & Kruglanski, 1994), and take longer to complete assignments but they do so with higher accuracy (Kruglanski et al., 2000). In other words, they seem to employ the right tools and methods for task completion. When it comes to language learning, this tendency might direct these students to pay more attention to the nuances in using different L2 structures and vocabulary and use more complex syntactic structures and more diverse lexical devices to communicate.

On the other hand, the participants with a locomotion mode appear to be interested in getting things done one after another, choose the easier tasks to complete, and not to be concerned with doing things right (Kruglanski et al., 2000). Locomotors have been found to make quick decisions (Webster & Kruglanski, 1994), act fast (Pierro et al., 2011), avoid challenging tasks (Kruglanski et al., 2000), prefer immediate but smaller rewards (Guo & Feng, 2015), and not learn much from their past mistakes (Pierro et al., 2008). When it comes to learning a second language, these tendencies might lead to the

use of simpler syntactic structures and more limited lexical items without much deliberation or hesitation. That could explain why locomotion did not predict L2 complexity measures, but it predicted the speed of their L2 production.

Summary of discussion

Assessment contributed to syntactic complexity, lexical diversity, the reduction of dysfluencies, and overall proficiency, whereas locomotion positively contributed to the participants' speed of oral production (L2 fluency) and the commission of a larger number of errors in total. The findings suggest that due to their tendency to evaluate, analyze, and compare before acting, high assessors might tend to use more complex syntactic structures, more diverse lexical items, and less dysfluent speech to communicate effectively. Locomotors, on the other hand, appear to be speedy in their L2 production but at the expense of accuracy due to their concern with moving from one state to another without much forethought, deliberation, or analysis. These results provide preliminary evidence that those who engage in paying attention to, reflecting on, and analyzing language and its use more often than others—that is strong assessors —are more successful language learners/users than others (see also, Eom & Papi, 2022; Teimouri et al., 2022).

Prevention was found to predict lower levels of lexical sophistication (frequency and range). That is, prevention-focused participants tended to use more frequently and more widely used items than others. This could be due to the conservative bias of prevention-focused individuals that motivates them to choose the lexical items that are less likely to lead to potential errors and negative consequences. Thus, making safer lexical choices seems to align with the risk-averse tendency associated with the prevention focus. Promotion only predicted overall L2 proficiency. It might be the case that the promotion focus only indirectly, through L2-specific goals such as ideal L2 selves, influences L2 outcomes (e.g., Papi & Khajavy, 2021).

Theoretical implications

Papi and Hiver (2022) defined motivation "as a phenomenon that explains the direction, vigor, and persistence of actions in the learning process" (p. 113). This definition supports the argument that motivation is characterized not only by a force or energy that affects learners' intensity and duration of effort but also by preferences that direct students' choices, learning behaviors, and learning outcomes. The present study confirmed this argument and provided evidence for the qualitative effects of motivational dispositions on oral L2 task performance. More specifically, participants with different regulatory profiles showed differences in their oral L2 task performance, highlighting the validity of the motivation-as-quality perspective (Papi, 2016, 2018; Teimouri et al., 2022). Thus, motivation theory needs to move beyond the conceptualization of motivation as quantity of effort and extend its scope to how various motivational dispositions and states direct learners' preferences for different goals and means for achieving those goals, which in turn contribute to qualitative differences in L2 outcomes.

Likewise, theoretical models of task-based language learning need to move beyond the view of learner factors such as motivation as factors that "can sometimes be important in getting learners to the starting line" (Long, 2014, p. 59), are limited to the stakes of the task performance (Skehan, 1996), or "can result in temporary

expansion of resource pools currently available to meet the demands of a particular task" (Robinson, 2001, p. 32). The results of the present study confirmed that motivation and engagement can not only expand the resource pool available to the learner in the task but also lead to habitual differences in the learner's complexity, accuracy, and fluency of oral L2 performance. Such differences could have roots not in their intensity of motivation but in their dispositional preferences for various task characteristics and conditions. Aligned with this argument, Skehan and Foster (2013) classified their participants into groups of "complexity-oriented learners, accuracy-oriented learners, and fluency-oriented learners, whose performance showed some stability whatever the task being done" (p. 252; see also Skehan & Foster, 1997; Tavakoli & Skehan, 2005). Applied to Robinson's (2001) triadic componential framework, for instance, learners who are strong in the regulatory mode of assessment may prefer and perform better on more complex tasks with higher reasoning demands and some planning time than strong locomotors, who may prefer simpler, here-and-now tasks with no planning time. Similarly, learners with a strong promotion focus may prefer tasks with less structure and a divergent solution, which require creativity and risk-taking, but prevention-focused learners may prefer structured tasks with convergent solutions that minimize risk of committing errors (see Van Dijk & Kluger, 2011).

The role of the learner in task-based language learning, therefore, should not be reduced to concepts such as task difficulty. The learner is in fact the main agent of learning and performance (Papi, Rios, et al., 2019) rather than a factor within a model of task characteristics. Task-based language learning models should thus expand to adopt a more organic perspective in which the learner is viewed as the agent and doer of learning rather than an abstract concept with a marginal role. Such a learner-centered perspective can help expand the scope of task-based language learning by emphasizing the role of learner in theoretical models. This is simply because it is the learner who engages in learning, participates in task-based lessons, completes tasks, pays attention to and processes input, and tries to use the language and learn in a task-based lesson. Accounting for the learner characteristics and behaviors as critical factors in the learning process can help portray a more comprehensive and ecologically valid understanding of how the learners do task-based language learning (Li et al., 2022).

Educational implications

The results of this study provide support for the differential contribution of self-regulatory orientations to oral L2 task performance. Teacher's awareness of the influence of such motivational/personality traits on their students' oral communicative behavior could lead to better understanding of possible explanations for such interindividual differences in learning behavior and performance. Such an awareness of how these learner traits influence L2 oral production can also lead to the adoption of strategies to enhance the regulatory focus or mode that could be conducive to task-based language learning. In fact, the temporary induction of different regulatory orientations has been the topic of extensive research in the field of psychology (Higgins, 2000; Mauro et al., 2009). In the present study, the regulatory orientations predicted different oral production measures, suggesting that the strategic induction of these orientations could be beneficial to L2 learning and performance (Cho, 2021; Han & McDonough, 2018, 2021; Papi, 2016, 2018). For instance, having students perform tasks that require deep understanding, analysis, and comparison of different L2 structures could induce an assessment mode that would

potentially benefit L2 learning. Previous L2 studies have in fact shown that intentional reasoning, "understanding and explaining the motives, beliefs and thoughts which cause others to perform certain actions" (Robinson, 2007, p. 194), could enhance the complexity and accuracy of L2 production (e.g., Awwad et al., 2017). On the other hand, adopting a just-do-it attitude, a characteristic of high locomotors, could be conducive to a speedy use of the target language when fluency is more desirable. Encouraging L2 use free of concern for the formal aspects of the language could be an example of a locomotion-enhancing instructional technique (Mauro et al., 2009). Temporary induction of a promotion focus through lessons, tasks, assessment tools, and feedback could also have positive effects on L2 learners' task performance (see Papi, 2016, 2018; Van Dijk & Kluger, 2011).

Limitations and future directions

The data for this study were collected from a group of participants who were very diverse in terms of not only their English proficiency but also with respect to their first language, academic status, level of education, years of learning English, length of residence in the United States, etc. To reduce this heterogeneity, the participants' speaking proficiency, age, gender, and length of residence in the L2 context were controlled by entering them as covariates in the regression models. This has probably helped reduce the bias in the data and increase the statistical power of our analyses. However, it is recommended that future studies recruit participants from more homogeneous groups to reduce the standard error and variance. The current study focused on how regulatory focus and mode predicted L2 complexity, accuracy, and fluency based on the assumption that such regulatory orientations would direct individuals' preferences in L2 speaking. Future studies can examine learners' cognitive, affective, and behavioral engagement in L2 learning in relation to such motivational dispositions.

Research on task-based language learning and the arguments surrounding prioritizing decisions in task performance (e.g., Robinson, 2001; Skehan, 1998) can certainly benefit from a consideration of such motivational characteristics. In Skehan's (2003) words, "if we could establish more clearly which individual differences are relevant for task performance, it might then be possible to increase the sensitivity of research designs by conducting condition-seeking studies" (p. 8). For instance, it would be interesting to explore how the effects of planning are mediated by learners' regulatory modes. It is possible that strong assessors value and approach planning differently than locomotors, who have shown a tendency to act without much deliberation and planning. This might help explain why pretask planning does not consistently improve L2 outcomes. Trying to explain inconsistencies in pretask planning studies in L2 writing, Ellis (2021) argued that "high self-monitors view writing as a problem-solving activity, so PTP [pretask planning] may help them; low self-monitors are more oriented towards knowledge-creation and thus benefit from an approach involving free-writing followed by revision" (p. 151). The present study used general and chronic regulatory orientations to examine individual differences in the quality of L2 production. Examining L2-specific measures of these orientations could deepen our understanding of how learners' motivational characteristics influence their L2 learning behaviors and outcomes (see Teimouri et al., 2022).

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