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Oral input-seeking behavior in second language acquisition: Conceptualization and operationalization

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ABSTRACT

This study conceptualizes oral input-seeking behavior as a construct in second language (L2) acquisition and develops and validates an instrument to measure it. Based on themes that emerged from semi-structured interviews, two questionnaire scales were developed to represent Proactive Input Exposure, which refers to learners' proactive efforts to seek oral L2 input opportunities, and Proactive Input Monitoring, which involves analyzing available oral L2 input for language learning. Data were collected from 206 Spanish learners in Florida, 294 EFL learners in Iran, and 148 English learners in Japan. Factor-analytic results across the three datasets supported our hypothesized two-factor structure. Evidence for discriminant and convergent validity was established through confirmatory factor analysis, average variance extracted, and reliability analyses. Hierarchical multiple regression analyses showed that, after controlling for the length of L2 study, Proactive Input Exposure and Proactive Input Monitoring explained significant amounts of variance in learners' self-assessed L2 proficiency in Iran and in objective listening comprehension in Japan. These findings provide preliminary evidence for the validity of oral input-seeking behavior as a domain-specific dimension of proactive language learning.

Educationally Relevant Statement

Exposure to oral language input is considered essential to second language acquisition. However, learners vary widely in the quality and quantity of their exposure to the input. This study introduces the concept of oral input-seeking behavior, which refers to learners' proactive efforts to increase their exposure to spoken language (proactive input exposure) and to engage in cognitive processing of the input (input monitoring). In addition, the results of this study showed that oral input-seeking behavior is associated with L2 speaking proficiency and L2 listening comprehension. The results offer practical insights for designing instructional environments, instructional activities, and technologies that promote learners' effort to seek and use input opportunities and foster L2 development.

1. Introduction

The concept of input is "perhaps the single most important concept of second language acquisition" (Gass, 1997, p. 1; see also

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Krashen, 1982). Input refers to language available through spoken, written, and signed modalities (Gass & Mackey, 2006, p. 5). However, oral input has occupied a central place in the field of second language acquisition (SLA), with many foundational theories focusing on learners' comprehension and processing of spoken language in communicative contexts. This type of input provides rich, real-time phonological, lexical, grammatical, pragmatic, and sociolinguistic information that supports language development. Different theoretical perspectives in SLA recognize the fundamental role of oral input, though they differ in their assumptions about the nature of language and the internal mechanisms that constrain language development (see, e.g., the chapters in VanPatten et al., 2025). At the same time, SLA theories agree that it is not the acoustic input that directly contributes to linguistic development. Rather, it is the *intake*, or the linguistic data that learners process, that is made available to internal mechanisms for potential integration into their implicit L2 system. This distinction between input and intake can be traced to Corder (1967), in which he argues that "…input is 'what goes in' not what is *available* for going in, and we may reasonably suppose that it is the learner who controls the input, or more properly his intake" (p. 165, emphasis original). As Leeser et al. (2021) point out, Corder's statement was critical in recognizing that learners themselves, not teachers, control the process and play the central role. The notion that learners "control their input" has been widely understood, discussed, and examined within linguistic and psycholinguistic theoretical approaches to SLA. However, the scope of learner control has been limited to the cognitive mechanisms that facilitate or constrain the conversion of input into intake.

While these perspectives have substantially advanced our understanding of the cognitive and linguistic mechanisms underlying L2 acquisition, their primary emphasis has been on explaining how learners process available input rather than on how they exercise their agency in the process (see Michel et al., 2025). To propose such a complementary perspective, this study draws on Papi and Hiver's (2025a) Proactive Language Learning Theory (PLLT) to conceptualize and operationalize oral input-seeking behavior in SLA. In other words, instead of focusing on how different features of input constrain or facilitate L2 development, this study shifts the focus to the learner and their proactive engagement with oral L2 input to advance L2 acquisition.

In this study, oral input-seeking behavior is defined as learners' proactive efforts to seek and use oral L2 input to support their language learning. Using qualitative and quantitative data, a questionnaire was developed to operationalize this construct. Next, its convergent, discriminant, and predictive validity was examined across three contexts: the L2-Spanish context in the United States and the L2-English contexts in Iran and Japan. For the sake of theoretical clarity, we will focus exclusively on oral input while acknowledging the importance of textual and signed input, which could be explored in future studies.

2. Background

2.1. Learner control of input: theoretical perspectives

Although input has received primary attention within linguistic and psycholinguistic approaches to L2 acquisition, these approaches still acknowledge, albeit implicitly, the important role of the learner. Specifically relevant to this argument is Corder's idea that "learner control" translates into how learner-internal mechanisms (e.g., universal grammar and/or domain-general processes) guide L2 development through selective processing of input and subsequent intake. In this section, we discuss how four major approaches to SLA assume, but do not foreground, the role of the learner in the mechanisms they propose for L2 acquisition.

Generative perspectives on L2 acquisition (e.g., White, 2025) are specifically concerned with characterizing L2 learners' developing system or their (implicit) knowledge of abstract morphosyntactic properties, which are constrained by universal grammar. The task of L2 acquisition, then, involves "perceiving, analyzing, and establishing the core feature bundles of the second or additional language" (Slabakova, 2026, p. 64). This occurs via the delivery of appropriate intake data to internal mechanisms. However, if learners fail to intentionally link these forms to their meanings or functions, internal mechanisms such as universal grammar will be unable to restructure the underlying system, reset parameters (White, 2025), or reassemble abstract feature bundles (Lardiere, 2009). Thus, the intake that learners derive from input is paramount to reconfiguring their developing grammar.

Usage-based approaches posit that general cognitive mechanisms, and not innate linguistic knowledge, induce patterns, regularities, and relationships among elements that have been processed in some way (Ellis & Wulff, 2025). In other words, domain-general processes such as categorization, chunking, association, exemplar representation, and so forth operate on intake data rather than on ambient input, highlighting the learner's role in the formation of these cognitive processes.

VanPatten's model of input processing focuses exclusively on how L2 learners derive intake data from input during comprehension (e.g., VanPatten, 2004, 2025). The model assumes that meaning construction is central to comprehension and that L2 comprehension is more effortful and resource-intensive than L1 comprehension. Input processing lays out a series of principles that attempt to capture how learners connect meaning to morphophonological forms, why learners make some form-meaning connections and not others, and what strategies they use to assign syntactic (subject-object) roles to nouns in a sentence. Within input processing, then, learners play an active role in meaning construction and their efforts to comprehend L2 input, coupled with their limited processing resources, shape what becomes intake.

The Modular Cognition Framework (Smith & Truscott, 2025) proposes that the human mind is composed of interconnected modules (i.e., specialized subsystems) that process different kinds of representations. Linguistic representations are handled by three primary modules—phonological structure, syntactic structure, and conceptual structure. Within this framework, a lexical item such as *cat* can be conceived of as an interface linking representations of phonological structure (/kæt/), syntactic structure (N_{sing}), and a cluster of semantic/conceptual features comprising the concept of [CAT]. Importantly, L2 development involves constructing new representations in the language module by linking representations across different stores during input processing, and strengthening linked representations through subsequent use in communication (either during comprehension or production). This framework also

includes a dedicated module for *affective structures*, which is purported to encode emotional valence (positive/negative), motivation, and attitudes toward environmental stimuli. According to Truscott and Smith (2019), the association of affective structures to auditory, visual and conceptual structures plays "a vital role in controlling language production and comprehension" (p. 120), thereby acknowledging the role of the learner in language processing.

These perspectives, and the countless research studies informed by them, have greatly contributed to our understanding of how learners "control" the input. However, as Atkinson (2011) noted, they primarily explain the cognitive mechanisms through which input becomes intake while devoting relatively less attention to learners' proactive efforts to seek, shape, and regulate their learning.

Building on these perspectives, PLLT (Papi & Hiver, 2025a) proposes that input contributes to L2 acquisition through learners' intentional efforts to seek, attend to, and process it. While acknowledging the substantial contributions of mainstream cognitive approaches to SLA, the present study draws on PLLT to conceptualize and operationalize oral input-seeking behavior. Rather than replacing existing approaches, this construct complements them by explicitly focusing on learners' proactive role in creating, accessing, and exploiting opportunities for oral L2 input.

2.2. Proactive language learning theory

Recent scholarship has increasingly emphasized learner agency, autonomy, self-regulation, and ecological perspectives on language learning (e.g., van Lier, 2000; Little, 2022; Michel et al., 2025). These perspectives recognize that learners actively shape their learning environments rather than merely responding to instructional input. PLLT (Papi & Hiver, 2025a) aligns with this broader movement while offering a more specific framework for conceptualizing and measuring language learning behaviors. From this perspective, "input (i.e., ambient language), interaction, language forms, corrective feedback, instructional opportunities, and learning contexts are all resources and opportunities that learners utilize in strategic ways to reach their goal of learning a language" (Papi & Hiver, 2025a, p. 298).

PLLT outlines four learning behaviors that comprise a model of proactive language learning: input-seeking, interaction-seeking, information-seeking, and feedback-seeking behaviors. These notions are generally defined as learners' proactive efforts to seek and use input, interaction, (meta)linguistic information, and corrective feedback to acquire a new language. Whereas interest in adopting PLLT as a theoretical framework for exploring self-directed L2 learning in digital and non-digital environments is growing (e.g., Liu & Zhao, 2025; Man et al., 2026; Wang & Zheng, 2026), empirical studies have mostly been limited to feedback-seeking behavior (FSB).

Given its introduction preceded that of PLLT, the notion of FSB (Papi et al., 2019) has garnered considerable scholarly attention over the past several years. A study by Papi & colleagues (2024) found that the FSB strategy of feedback monitoring, which involves learners' efforts to attend to and learn from corrective feedback, predicted the quality of revised essays by L2 writers beyond the effects of the corrective feedback they received from their teachers (see also, Tabari et al., 2026). Several studies have shown that motivational variables such as learners' grit (e.g., Zhang & Jiang, 2025), mindsets and achievement goals (e.g., Papi et al., 2019, 2020), self-efficacy beliefs (e.g., Xu & Wang, 2024), regulatory modes (Kadivar & Papi, 2026), and future L2 selves (e.g., Zhan et al., 2023) predicted students' engagement in FSB. In addition, relational and situational factors such as teachers' support (Zhang, 2025), students' trust in their teachers (Mahbodi et al., 2025; Papi et al., 2026a), and access to feedback opportunities (Zhou et al., 2023) have been associated with FSB. More recently, Papi et al., 2026b have proposed a revised FSB model that adds a feedback-use dimension to the original model. In the new conceptualization, FSB involves learners' eliciting, monitoring, and using corrective feedback to support their language learning. The other proactive language learning behaviors have recently begun to receive scholarly attention.

In a qualitative study conducted in the United States, Farhang and Papi (2025) employed semi-structured interviews to investigate interaction-seeking behaviors among 10 international graduate students who were learning and using English as a second language. The thematic analysis of data from several hours of interviews revealed that all participants engaged in various forms of interaction-seeking behavior to enhance their oral communicative skills. These behaviors were classified under three major themes, which were characterized by seeking opportunities for interaction (e.g., going to social or public events), using the opportunities to engage in interaction with other speakers (e.g., speaking with guests at a party), and cognitively engaging in monitoring, assessing, and adjusting one's interactional behavior. In a similar study, Qian et al. (2026) explored information-seeking behavior based on interview data with 11 international students learning English as a second language and found information-seeking behavior to involve three dimensions: information elicitation, information monitoring and information use, aligning with the revised FSB model described above. Using quantitative methods, Papi et al. (2026c) conceptualized and operationalized information-seeking behavior into two components, information gathering and information use, which were found to be associated with L2 proficiency.

Although a growing body of empirical research has examined PLLT, the input-seeking dimension has received comparatively limited attention. Moreover, no psychometric instrument has yet been developed to quantitatively examine this construct. To address this gap, the present study employs an exploratory mixed-methods design to conceptualize oral input-seeking behavior and develop and validate a psychometric instrument to measure its underlying components in three contexts: the United States, Iran, and Japan.

In the present study, oral input-seeking behavior refers to learners' proactive efforts to seek out and use spoken L2 input in support of their language learning. Oral input may originate from a wide range of sources, including classroom instruction, conversations with teachers, peers, and native or proficient speakers, public talks and lectures, as well as technology-mediated sources such as podcasts, videos, films, television programs, music, and other digital media. Thus, the defining characteristic of oral input-seeking behavior is not the particular source of the input but learners' intentional efforts to seek opportunities to maximize exposure to spoken language and to use the language they encounter to facilitate L2 development. A distinction also needs to be made between input-seeking and interaction-seeking behaviors. Although interpersonal interaction is an important source of oral input, interaction-seeking behavior primarily refers to learners' proactive efforts to initiate and participate in communicative exchanges. In contrast, oral input-seeking

behavior is defined as learners' proactive efforts to obtain and learn from spoken language, whether through interpersonal interaction or one-way sources such as lectures, podcasts, films, or other digital media. Interaction, therefore, represents one potential context in which oral input may be encountered rather than the defining feature of oral input-seeking behavior.

Consistent with other lines of research on PLLT (Papi et al., 2026b, 2026c; Qian & Papi, 2026), the present study conceptualizes input-seeking behavior as a form of proactive learning, with constituent dimensions theoretically defined and subsequently evaluated through psychometric validation. In addition, the present study incorporates an initial qualitative phase to inform the conceptualization and operationalization of this newly proposed construct. Based on the objectives outlined above, the following research questions (RQs) were formulated.

RQ1: How do learners seek out and use oral L2 input in support of their L2 learning?
RQ2: What is the underlying factor structure of oral L2 input-seeking behavior?
RQ3: To what extent is learners' oral L2 input-seeking behavior associated with measures of their L2 proficiency?

3. Method

3.1. Design

The present study followed a sequential exploratory mixed-methods design. More specifically, it began with a qualitative phase, during which L2 learners were interviewed about their language learning and oral input-seeking behaviors, particularly those perceived as contributing to the development of their oral L2 comprehension skills. Findings from this exploratory phase informed the subsequent quantitative phase, during which a questionnaire was developed and administered to examine learners' engagement in these behaviors and to evaluate the construct's psychometric properties and relationships with L2 outcomes. The purpose of the qualitative phase was not to produce an exhaustive taxonomy of oral input-seeking behaviors or to achieve statistical representativeness. Rather, consistent with exploratory mixed-methods scale development, it was intended to identify recurring behavioral themes that could serve as an initial conceptual foundation for item generation. The subsequent quantitative analyses across three independent datasets were designed to evaluate and refine this preliminary conceptualization. The questionnaire was then administered to three learner groups: L2 Spanish learners in the United States and L2 English learners in Iran and Japan, allowing us to evaluate the construct's psychometric properties and examine its relationships with L2 outcomes.

3.2. Qualitative phase

A total of 35 L2 learners in the Iranian and U.S contexts participated in the qualitative phase of the study. The Iranian sample included 21 English learners (12 females, 9 males) aged 16 to 32 ($M = 20.1$), with proficiency levels ranging from lower-intermediate to advanced, who were selected based on their instructors' recommendations as students demonstrating active engagement in language learning. The U.S. sample included 14 international graduate students (12 females, 1 male, 1 preferred not to disclose) aged 25 to 46 who were learning and using English as a second language at a major university. Participants were purposively selected if they had studied and lived in the United States for at least 1 year, ensuring they had ample opportunities to engage with oral L2 input in both academic and everyday contexts. The qualitative phase was intended to elicit rich descriptions of oral input-seeking behaviors as a language-general construct rather than behaviors specific to a particular target language.

Semi-structured interviews with the participants were conducted, each lasting 50–70 min. The interviews began with a grand tour question about their L2 learning experience and the learning activities they perceived as being helpful to their L2 development. The interview then zoomed in more specifically on oral input-seeking behaviors, inquiring about the activities learners engaged in to enhance their comprehension skills, either through exposure to oral input or by leveraging the input they received to improve their L2 (see Appendix A for the Interview Guide). The interviews were audio-recorded, transcribed, and manually coded, employing a thematic approach to identify, organize, and interpret patterns of behavior (Braun & Clarke, 2006). Different input-related activities were categorized into various subcategories, which in turn formed two distinct major themes (see also Noh & Papi, under review). The first one, Proactive Input Exposure, represents how often learners expose themselves to L2 input, either via digital media (e.g., films, movies, radio, podcasts) or by seeking out social situations where people speak the L2 (e.g., attending social and public events). The second one, Proactive Input Monitoring, reflected how often learners used available input to enhance their knowledge of grammar, vocabulary, pronunciation, pragmatics, and stylistic/dialectal differences. Proactive Input Monitoring extends beyond traditional listening strategies by emphasizing learners' tendency to analyze and learn from the language encountered during exposure opportunities, rather than specific techniques primarily employed to facilitate comprehension during a listening task.

3.3. Instrument

Based on the emerging themes and their corresponding activities, a questionnaire was developed that included items related to how students expose themselves to input and use it to enhance their L2 knowledge and skills. Considering this study aimed to collect data from three different learning contexts—L2-Spanish in Florida and L2-English in Iran and Japan—three context-specific versions of the questionnaire were developed. All three versions were based on the same conceptualization of oral input-seeking behavior and were designed to measure the same two hypothesized dimensions: Proactive Input Exposure and Proactive Input Monitoring. Because opportunities for accessing oral input differed substantially across the three contexts, a small number of Input Exposure items were

adapted to reflect contextually relevant sources of oral input. For example, the Florida version included more items referring to face-to-face social situations, whereas the Iranian and Japanese versions included more items referring to technology-mediated exposure. In contrast, Input Monitoring items were conceptually comparable across versions because they assessed learners' cognitive engagement with available oral input regardless of its source. Despite these contextual adaptations, all questionnaire versions were designed to operationalize the same underlying construct of oral input-seeking behavior and its two hypothesized dimensions. Accordingly, the objective of the present study was to examine the replicability of the proposed conceptualization across distinct learning contexts rather than to establish measurement invariance using identical questionnaire items. Contextual adaptations were therefore limited to Input Exposure items to reflect differences in opportunities to access oral input, while preserving the underlying theoretical dimensions.

In formulating Input Exposure items, instead of focusing on specific activities and strategies like watching YouTube videos with subtitles, we created more general items, such as *I watch English-language music videos, TV shows, movies, films, videos, reels, etc., to increase my exposure to this language,* to account for learners' proactive exposure across a wide range of settings while accommodating individual preferences. Similar items were developed for audio resources, as well as for social groups and settings. The items related to input monitoring were also formulated to capture students' tendency to analyze the L2 input they encountered (e.g., *I listen carefully to discover English grammar rules based on how people speak English*). Cognitive interviews were also conducted with several students from the same cohorts to ensure the items are accurately and easily understood.

The final questionnaire comprised 17 items, with 10 measuring Proactive Input Exposure and 7 measuring Proactive Input Monitoring (see Appendix B). The questionnaire also included an attention-check item, 10 demographic questions, and other items measuring constructs beyond the scope of this study. The items were responded to on a 6-point Likert scale, with 1 representing "*Never/Rarely*" and 6 representing "*Constantly*". The Iranian data included an English self-assessment questionnaire comprising 50 NCSSFL-ACTFL Can-Do Statements developed by Tigchelaar et al. (2017), and the Japanese data included a standardized test of English listening proficiency as the outcome variable.

3.4. Procedures

After securing the Institutional Review Board's approval, target directors and instructors were contacted and asked for cooperation. The researcher informed them of the purpose of the study, the participants' rights, and the researchers' expectations. Upon receiving approval, on-site researchers visited the participating classes at mutually agreed-upon times and asked students for cooperation. The students were informed of the voluntary nature of the study, the anonymity and confidentiality of their data, and their right to refuse to participate at any point during data collection.

3.5. Data analysis

Given that the main purpose of this study was construct validation, the collected data were analyzed using exploratory factor analysis (EFA) in SPSS 29 (IBM) and confirmatory factor analysis (CFA) in Mplus 9. EFA and CFA were conducted sequentially as complementary stages of the scale-development process to explore and evaluate the proposed measurement model within each dataset. Following the standard psychometric validation procedures, EFA was run on the data to explore the factor structure of oral input-seeking behavior. In the EFA, items with factor loadings below .40, substantial cross-loadings ($\geq$ .40 on multiple factors with a loading difference of less than .20), or conceptual redundancy were removed iteratively. This was followed by model-comparison CFAs to examine the discriminant validity of the factors that emerged from the EFA. Depending on the distributional characteristics and treatment of the observed variables, different robust estimators (MLR or WLSMV) were employed for the CFA models, following standard recommendations for psychometric analyses.

Next, hierarchical multiple regression analyses were conducted to examine how the final factors would predict variance in L2 measures, thereby exploring the predictive validity of the scales. Because the questionnaire versions were adapted to reflect contextual differences in opportunities for oral input, the present study did not aim to compare latent means across contexts. Instead, each dataset was analyzed independently to examine whether the proposed two-factor conceptualization of oral input-seeking behavior would be supported across different learning contexts. Accordingly, measurement invariance was not tested because the questionnaire versions did not include identical items. These analyses are described separately for the US, Iranian, and Japanese datasets in the following sections.

Prior to model estimation, cases that failed the attention checks were removed. In addition, all data were screened for outliers or implausible response patterns, and no exclusions were made. Across all datasets, missing data were handled using full information maximum likelihood (FIML) estimation in Mplus with the robust maximum likelihood (MLR) estimator. This approach uses all available observed data to estimate model parameters, assuming the data are missing at random, and avoids the information loss associated with listwise deletion or imputation while also providing robust standard errors.

4. Results

4.1. Site 1: L2-Spanish learning in Florida

The first dataset was collected from 206 undergraduate students (126 females, 77 males, 3 others) learning Spanish at a major university in the US state of Florida. Students' age range fell predominantly between 18 and 24 ($M = 21.62$, $SD = 3.31$). All participants

spoke English as their first language, and most of the participants reported being in their third ($n = 48$) or fourth year ($n = 70$) in college, while fewer were in their first ($n = 4$), second ($n = 10$), or fifth year ($n = 12$). Sixty-two participants did not report a specific year. These students were from a variety of majors, including psychology ($n = 32$), biology ($n = 13$), and computer science ($n = 11$). The participants were enrolled in 1000- ($n = 67$), 2000- ($n = 78$), 3000-level ($n = 13$), and 4000-level ($n = 8$) Spanish classes, while 41 participants did not identify a specific placement level. The data were collected during the Spring 2025 semester using a paper questionnaire that took approximately 15 min to complete.

After running the descriptive analyses reported above, EFA was conducted to determine the number of unidimensional factors underlying oral input-seeking behavior. Bartlett's test of sphericity, $\chi^2(55) = 985.50$, $p < .001$, and the Kaiser-Meyer-Olkin measure of sampling adequacy, KMO = .88, confirmed that it was appropriate to factor analyze these data ($N = 206$). We ran an initial EFA with principal axis factoring and direct oblimin rotation. The factor solution was determined based on eigenvalues > 1, the scree plot, and theoretical expectations. The analysis yielded a two-factor solution (Table 1) with 6 items loading on Factor 1, Proactive Input Monitoring, and 5 items loading on Factor 2, Proactive Input Exposure. The model explained a cumulative 52.71% of the variance.

To assess whether this two-factor model was the most appropriate measurement model relative to a single-factor alternative, a model-comparison CFA was conducted (Brown, 2015). We began by estimating a two-factor CFA model using a robust maximum likelihood estimator. Global fit was assessed using comparative fit index (CFI), Tucker–Lewis index (TLI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR). The two-factor model demonstrated excellent global fit: $\chi^2(42) = 71.97$, $p = .002$, CFI = .964, TLI = .954, SRMR = 0.04, RMSEA = .05 [.034, .081]. In addition, all items loaded strongly and significantly on their intended latent factors, supporting the hypothesized two-factor measurement model (Table 2). Next, we estimated another CFA in which all items loaded onto a unidimensional factor. As shown in Table 3, model fit was unacceptable, indicating that these data are unlikely to reflect a single, unidimensional latent factor. Based on these preliminary tests, we decided to retain the two-factor model. Both factors in this model exhibited strong construct reliability and validity (see Table 4), and latent factor correlations were moderate ($r_{latent} = .46$), further supporting the independence of the two constructs.

Table 4 presents the descriptive statistics and reliability indices for the final two-factor model. As shown, participants demonstrated moderate levels of Input Exposure ($M = 2.43$, $SD = 1.08$) and Input Monitoring ($M = 3.41$, $SD = 1.11$). Coefficient alpha and omega for both scales exceeded the recommended threshold of .70, suggesting strong internal consistency of these scales. In addition, composite reliability was excellent, and the average variance extracted (AVE) for both scales met the minimum threshold of .50, indicating satisfactory convergent validity. Overall, these results support the construct validity of the two-factor model. The same model was subsequently examined in two foreign-language contexts in Iran and Japan. The predictive validity of the two input-seeking constructs will be examined next in relation to two measures of L2 proficiency.

4.2. Site 2: English learners in Iran

Data were collected from 294 English learners (212 females, 82 males) at a private language institute with numerous branches located in Tehran, the capital of Iran. Most participants were between 15 and 17 years old ($n = 197$), with a mean age of 17.94 (SD =5.06). The majority ($n = 283$) identified Farsi (Persian) as their first language, while a few identified Azeri ($n = 3$) and Kurdish ($n = 2$). Most participants were high school students ($n = 225$), while others were either university students ($n = 51$) or graduates ($n = 18$). The students were in their first ($n = 96$), second (n = 80), third ($n = 37$), fourth (n = 16), or fifth year or higher ($n = 22$), across a variety of degree paths or majors.

As with the first dataset, Bartlett's test of sphericity, $\chi^2(78) = 2300.41$, $p < .001$, and the Kaiser-Meyer-Olkin measure of sampling adequacy, KMO = .91, indicated that it was appropriate to analyze these data using EFA ($N = 294$). The analysis yielded a two-factor solution (Table 5), with 5 items loading on Factor 1 (Input Exposure) and 6 on Factor 2 (Input Monitoring).

Next, we compared two-factor and single-factor CFA models using a mean- and variance-adjusted estimator (WLSMV). This two-factor model demonstrated a decent global fit (Table 6), and all standardized factor loadings exceeded the recommended threshold of .50, supporting the two-factor measurement model (Table 7). In the single-factor CFA model with all items loaded onto a unidimensional factor, the item loadings for several items were unacceptable, and overall model fit also deteriorated, indicating that a unidimensional latent factor is unlikely to account for these data. We therefore retained our initial two-factor CFA model. Although the

Table 1
Oblimin rotated loadings of all measurement items for the L2-Spanish dataset.

	F1 Proactive input monitoring	F2 Proactive input exposure	*h*
Q9	**.82**	-.07	0.61
Q11	**.72**	.06	0.57
Q7	**.71**	-.02	0.49
Q3	**.69**	-.07	0.44
Q5	**.66**	.09	0.51
Q13	**.59**	.23	0.55
Q15	-.07	**.81**	0.61
Q17	.00	**.73**	0.54
Q4	-.01	**.68**	0.45
Q2	.13	**.69**	0.59
Q14	.02	**.66**	0.46

Note. F denotes factor. Bold loadings $p < .05$.

Table 2
Standardized and unstandardized CFA factor loadings for the two-factor model (US data).

Latent constructs	*β*	*B*	*SE*	*Z*
Input Exposure				
Q2	.79	—	0.04	18.32
Q4	.69	0.67	0.05	16.02
Q14	.70	1.22	0.04	17.09
Q15	.69	1.21	0.04	18.63
Q17	.65	0.98	0.05	16.61
Input Monitoring				
Q3	.64	—	0.04	13.95
Q5	.71	1.27	0.04	15.29
Q7	.69	1.26	0.04	15.87
Q9	.76	1.49	0.03	21.05
Q11	.75	1.37	0.04	18.56
Q13	.74	1.41	0.04	17.98

Note. $N = 206$. All coefficients significant at the $p < .001$ level. Residual covariances between Q15 ↔ Q17 were estimated freely.

Table 3
Comparison of measurement model fit indices for the L2-Spanish data.

Model	χ^2 (*df*)	CFI	TLI	RMSEA [90% *CI*]	SRMR	AIC	SBIC
Two-factor Model	71.97 (42)	.964	.954	0.05 [.034, .081]	0.04	7027.28	7033.02
Single-factor Model	314.94 (54)	.746	.690	0.15 [0.137, 0.169]	0.098	7734.56	7740.47

Note. Chi-square ratios and other coefficients are significant at the $p < .01$ level. Akaike information criterion (AIC) and sample-size adjusted Bayesian information criterion (SBIC) values obtained with robust ML estimator using Monte Carlo integration.

Table 4
Descriptive statistics and reliability estimates for the final two-factor model.

	k	*M*	SD	α	ω	CR	AVE
Factor 1 (Input Exposure)	5	2.43	1.08	.83	.84	.89	.53
Factor 2 (Input Monitoring)	6	3.41	1.11	.86	.86	.92	.52

Note. k = number of items. α = Cronbach's alpha; ω = McDonald's omega; CR = composite reliability; AVE = average variance extracted. McDonald's omega is a reliability coefficient that does not assume tau-equivalence and is therefore often preferred when factor loadings differ across items.

RMSEA (.13) for this model exceeded the conventional criterion for close fit, the remaining fit indices supported the adequacy of the two-factor model.

As shown in Table 8, both factors demonstrated good internal consistency, with Cronbach's alpha, McDonald's omega, and composite reliability values meeting or exceeding recommended thresholds. Input Monitoring also demonstrated satisfactory convergent validity (AVE = .64). Although the AVE for Input Exposure (.44) fell below the recommended threshold of .50, its composite reliability remained high (.79), and all standardized factor loadings were statistically significant, suggesting that convergent validity may still be considered acceptable. The latent factor correlation was moderate ($r_{latent} = .49$), and all residuals fell within the recommended range of ±2.0.

Table 5
EFA results with oblimin rotated loadings of all measurement items for the L2-English data.

	F1 Proactive input exposure	F2 Proactive input monitoring	*h*
Q17	**0.89**	0.03	0.67
Q15	**0.84**	−0.03	0.66
Q18	**0.54**	−0.05	0.34
Q19	**0.48**	0.09	0.30
Q14	**0.47**	0.21	0.40
Q9	−0.08	**0.92**	0.75
Q11	0.03	**0.83**	0.74
Q7	−0.02	**0.79**	0.60
Q5	0.01	**0.73**	0.54
Q13	0.15	**0.72**	0.70
Q3	0.01	**0.70**	0.59

Note. F denotes factor. Bold loadings $p < .05$. Cumulative variance explained = 56.93%, EFA model $\chi^2(55) = 1869.10$, $p < .001$.

Table 6
Comparison of measurement model fit indices.

Model	χ^2 (*df*)	CFI	TLI	RMSEA [90% *CI*]	SRMR	AIC	SBIC
Two-factor Model	320.75 (53)	.965	.957	0.13 [.11, .14]	0.03	9029.11	9066.51
Single-factor Model	575.98 (54)	.932	.917	0.18 [0.16, 0.19]	0.05	9141.59	9178.47

Note. Chi-square ratios and other coefficients are significant at the $p < .01$ level. Akaike information criterion (AIC) and sample-size adjusted Bayesian information criterion (SBIC) values obtained from separate models estimated using robust ML estimator with Monte Carlo integration.

Table 7
Standardized and unstandardized CFA factor loadings for the two-factor model (Iran data).

Latent constructs		*β*	*B*	*SE*	*z*
Input Exposure	Q14	.70	—	0.03	21.15
	Q15	.84	1.18	0.02	32.98
	Q17	.84	1.18	0.02	33.44
	Q18	.60	0.85	0.03	15.57
	Q19	.67	0.95	0.04	17.02
Input Monitoring	Q3	.90	—	0.01	55.24
	Q5	.75	0.85	0.02	29.93
	Q7	.81	0.91	0.02	37.18
	Q9	.86	0.98	0.01	53.81
	Q11	.89	1.01	0.01	76.08
	Q13	.88	0.99	0.01	59.41

Note. $N = 294$. All coefficients significant at the $p < .001$ level.

4.2.1. Predictive validity

To examine the predictive validity of the scale, we ran hierarchical multiple regression analyses with learners' self-assessed English proficiency as outcome variable. The ACTFL-based self-assessment comprised of 50 items describing five different levels of English proficiency ($M = 179.7$, $SD = 21.00$) (Tigchelaar et al., 2017). In addition, Length of L2 Study ($M = 6.84$, $SD = 2.47$), which is also important for predicting L2 proficiency, was used as a covariate.

Before estimating these regression models, we checked the histograms of the residuals to ensure that the assumption of normality of the residuals was satisfied. The scatterplots of standardized residuals by standardized predicted values were also checked to ensure that the assumptions of linearity and homoscedasticity were met. No outliers above +3.0 or below −3.0 were found. Tolerance values (> 0.20) and VIFs (< 2.00) also indicated no issues with multicollinearity in the regression models. Finally, the Durbin-Watson statistic was assessed against benchmark values (i.e., between 1 and 3), which indicated that the assumption of independent residuals was satisfied.

The regression results (Table 9) showed that, in step 1 of this model, Length of L2 Study accounted for a marginal but significant proportion of the variance in self-assessed English Speaking Proficiency ($R^2 = 0.02$, $F(_{1, 289}) = 5.60$, $p = 0.019$). In step 2, adding Input Exposure to the model explained a significant proportion of variance in learners' self-assessed English Proficiency, $\Delta R^2 = .128$, F_{change} $(2, 288) = 24.76$, $p < 0.001$. Adding Input Monitoring in step 3 resulted in a significantly improved model, $\Delta R^2 = .065$, F_{change} $(3, 287)$ $= 25.64$, $p < 0.001$, for a total $R^2 = .21$. In this final model, Input Monitoring remained a significant predictor of English Proficiency beyond the effects of Length of L2 Study ($\beta = .37$, $p < 0.001$), while Input Exposure was non-significant ($\beta = .09$, $p = 0.21$). These results indicate that although Input Exposure was associated with learners' self-assessed L2 proficiency when entered in Step 2, it did not explain unique variance after Input Monitoring was added to the final model. This pattern suggests that the predictive effect of Input Exposure is largely shared with, or accounted for by Input Monitoring.

4.3. Site 3: L2-English learning in Japan

The data was collected from 148 English majors at a Japanese university. Their age ranged from 18 to 26 ($M = 21.62$, $SD = 1.26$). All participants were native Japanese speakers. They were almost equally distributed across first ($n = 35$), second ($n = 38$), third ($n =$

Table 8
Descriptives and reliabilities of final scales in the two-factor model for L2-English dataset.

	k	*M*	SD	α	ω	CR	AVE
Factor 1: Input Exposure	5	4.23	1.10	.80	.80	.79	.44
Factor 2: Input Monitoring	6	4.60	1.06	.92	.92	.92	.64

Note. k = number of items. α = Cronbach's alpha; ω = McDonald's omega; CR = composite reliability; AVE = average variance extracted. McDonald's omega is a reliability coefficient that does not assume tau-equivalence.

Table 9
Multiple regression analyses predicting English proficiency self-assessment scores.

Model	Predictor	β	t	*p*	95% CI	Tolerance	VIF
1	Length of Study	.14	2.37	.019	0.20–2.15	1.00	1.00
2	Length of Study	.10	1.80	.073	–0.08–1.77	0.99	1.01
	Input Exposure	.34	6.06	< .001	4.64–9.11	0.99	1.01
3	Length of Study	.08	1.48	.140	–0.22–1.56	0.98	1.02
	Input Exposure	.09	1.27	.206	–1.01–4.66	0.56	1.79
	Input Monitoring	.37	5.31	< .001	4.67–10.16	0.56	1.80

44), and fourth ($n = 31$) years in their studies. All participants completed the input-seeking questionnaire, which was modified to reflect contextual differences, and a standardized English listening proficiency test in early 2025.

Based on the results obtained in the U.S. and Iranian contexts, CFA was conducted to (a) evaluate the fit of the two-factor model in the Japanese context and (b) compare it with a single-factor alternative. Robust maximum likelihood estimation indicated an overall acceptable fit to the Japanese data, $\chi^2(34) = 49.80$, $p = .040$ (scaled), $\chi^2/df = 1.46$, CFI = .96, TLI = .95, RMSEA = .07 [95% CI: .02, .10], SRMR = .06. All items loaded significantly on their intended latent factors, with no factor loading falling below the commonly used threshold of .30 (see Table 10). Overall, the results supported the hypothesized two-factor model. As reported in Table 11, the single-factor model demonstrated an unacceptable fit compared to the two-factor alternative, suggesting that the observed responses are unlikely to reflect a single, unidimensional latent construct. Therefore, we retained the originally specified two-factor model, without allowing residual covariances among items, in all subsequent analyses.

Both factors in this model exhibited adequate construct reliability and validity (see Table 12). Although the AVE value for Input Exposure (AVE = .45) was slightly below the recommended threshold of .50, its composite reliability (CR = .76) exceeded .70, suggesting acceptable convergent validity. In addition, the latent correlation between Input Exposure and Input Monitoring (r_{latent} = .60) was below the recommended threshold of .85 for discriminant validity (Brown, 2015), and the heterotrait–monotrait ratio (= .65) was well below the conservative threshold of .85, supporting adequate discriminant validity between the two constructs.

4.3.1. Predictive validity

Hierarchical multiple regression analyses were conducted again to examine the scale's predictive validity, while controlling for Length of L2 Study. In the Japanese context, listening scores from a standardized English proficiency test (TOEIC®) served as outcome variables. TOEIC® is a two-hour examination designed to assess English communication skills in everyday and workplace settings. It consists of 100 listening items and 100 reading items, with scores for each section ranging from 5 to 495. Evidence supporting the validity and reliability of TOEIC® has been reported by both its test developer, Educational Testing Service (Hsieh, 2023), and independent researchers (Cid et al., 2017; In'nami & Koizumi, 2012; Yoo & Manna, 2017). It was expected that Input Exposure and Input Monitoring would be associated with the listening comprehension scores from this test (hereafter, Listening Proficiency).

The same procedures as in the first two studies were followed to check the assumptions before running hierarchical linear regressions. Descriptive statistics showed that participants had a mean Listening Proficiency score of 296.20 ($SD = 80.00$) and an average Length of L2 Study of 2.48 years ($SD = 1.07$). Examination of skewness and kurtosis indicated that both variables were approximately normally distributed and suitable for subsequent parametric analyses.

Table 13 presents the results of hierarchical regression analyses predicting Listening Proficiency. Length of L2 Study was included as a covariate in the base model, along with Input Exposure. The results showed that both Length of L2 Study and Input Exposure emerged as significant predictors, with the model explaining 20% of the variance in Listening Proficiency: $R^2 = .20$, $F_{(2145)} = 18.33$, $p < .001$. Comparable results were observed when only Input Monitoring was entered along with Length of Study (Model 2), yielding 17% explained variance: $R^2 = .17$, $F_{(2145)} = 14.91$, $p < .001$. In the final model with all variables included (Model 3), Length of Study (β = .40, $p < .001$) and Input Exposure (β = .22, $p = .033$) were significant predictors, while Input Monitoring lost its statistical significance.

Table 10
Standardized and unstandardized CFA factor loadings for the two-factor model (Japanese data).

Latent constructs	*β*	*B*	*SE*	*Z*
Input Exposure				
Q6	.46	1.00	—	—
Q14	.54	1.34	0.25	5.46
Q15	.86	2.02	0.40	5.07
Q17	.75	1.65	0.32	5.08
Input Monitoring				
Q5	.58	1.00	—	—
Q3	.75	1.34	0.17	8.02
Q7	.77	1.18	0.17	7.20
Q9	.79	1.28	0.17	7.36
Q11	.73	1.15	0.18	6.37
Q13	.75	1.14	0.16	6.97

Note. $N = 148$. All coefficients significant at the $p < .001$ level.

Table 11
Comparison of measurement model fit indices (Japanese data).

Model	χ^2 (*df*)	CFI	TLI	RMSEA [90% *CI*]	SRMR	AIC	SBIC
Two-factor Model	49.80 (34)	.962	.950	0.07 [.015, .104]	0.06	4761.10	4755.913
Single factor Model	.97.80 (35)	.848	.805	0.13 [0.101, 0.162]	0.08	4828.21	4823.19

Note. Chi-square ratios and other coefficients are significant at the $p < .01$ level. Akaike information criterion (AIC) and sample-size adjusted Bayesian information criterion (SBIC) values obtained with robust ML estimator using Monte Carlo integration.

Table 12
Descriptives and reliabilities of final scales in the two-factor model.

	k	*M*	SD	α	ω	CR	AVE
Factor 1 (Input Exposure)	4	3.49	1.10	.75	.76	.76	.45
Factor 2 (Input Monitoring)	6	3.85	1.12	.87	.87	.87	.53

Note. k = number of items. α = Cronbach's alpha; ω = McDonald's omega; CR = composite reliability; AVE = average variance extracted. McDonald's omega is a reliability coefficient that does not assume tau-equivalence and is therefore often preferred when factor loadings differ across items.

The model explained 22% of the variance in Listening Proficiency: $R^2 = .22$, $F_{(3144)} = 13.39$, $p < .001$. Taken together, these results indicate that both input-seeking variables predict Listening Proficiency beyond the effect of Length of L2 Study, with Input Exposure accounting for a larger share of the explained variance.

5. Discussion

In SLA, input refers to the language data that learners use to acquire the target language. It is, therefore, not surprising that it has been characterized as the most important concept in the field (e.g., Gass, 1997; Krashen, 1982). However, input alone cannot account for language learning; an equally important consideration is the learner who seeks, notices, processes, and ultimately utilizes that input. In other words, whereas input provides the raw material for learning, it is the learner who transforms the input into linguistic knowledge and skill. Learning, therefore, depends not only on the availability of input but also on learners' proactive engagement with it.

Nonetheless, the field of SLA has been predominantly concerned with the characteristics of input and the cognitive mechanisms through which input is converted into intake, whereas the learner, as the primary architect of learning, has received considerably less attention. Therefore, questions such as how learners seek and use input have remained marginal in SLA research and theory. This is not because SLA researchers view the learner as unimportant (e.g., Li et al., 2022). Rather, what has been lacking is a theoretical lens that conceptualizes learners as agents who actively seek, create, select, and exploit learning opportunities to achieve optimal learning outcomes. To introduce a learner-centered behavioral perspective on oral L2 input, the present study drew on PLLT (Papi & Hiver, 2025a) to conceptualize and operationalize oral input-seeking behavior in SLA. Rather than viewing learners as passive recipients of input, the study conceptualized them as active agents who intentionally and strategically seek and use L2 input to facilitate language learning.

In response to the first research question (RQ1: How do learners seek out and use oral L2 input in support of their L2 learning?), interview data were collected and analyzed in the first phase of the study to develop a range of items representing learners' oral input-seeking behaviors. The analysis of the qualitative data revealed two major themes: Proactive Input Exposure, which represents learners' efforts to maximize their exposure to meaningful oral L2 input, and Proactive Input Monitoring, which represents learners' cognitive engagement with the input to extract semantic, lexical, grammatical, pragmatic, and cultural knowledge.

Table 13
Multiple regression analyses predicting listening proficiency.

		β	*t*	Tolerance	VIF
Model 1	Length of Study	.37	4.92***	.964	1.04
	Input Exposure	.32	4.22***	.964	1.04
Model 2	Length of Study	.38	4.95***	.946	1.06
	Input Monitoring	.30	3.90***	.946	1.06
Model 3	Length of Study	.40	5.10***	.944	1.06
	Input Exposure	.22	2.16*	.539	1.86
	Input Monitoring	.16	1.52	.529	1.89

Note:
* $p < .05$, ** $p < .01$.
*** $p < .001$.

In response to the second research question (RQ2: What is the underlying factor structure of oral L2 input-seeking behavior?), a questionnaire was developed based on the qualitative findings to collect data from three different samples: Spanish learners in Florida and English learners in Iran and Japan. Consistent with the qualitative themes, factor-analytic results (EFA and CFA) confirmed the validity of a two-factor solution across all three contexts. Our results also supported the convergent and discriminant validity of the constructs and the reliability of the scales. The consistent emergence of Proactive Input Exposure and Proactive Input Monitoring in such culturally, linguistically, and educationally distinct contexts supports the generalizability of the conceptualization, although the operationalization of each construct may vary across contexts.

Finally, in response to the third research question (RQ3: To what extent is learners' oral L2 input-seeking behavior associated with measures of their L2 proficiency?), hierarchical multiple regression analyses revealed that Proactive Input Exposure and Proactive Input Monitoring, along with Length of L2 Study, accounted for 21% of the variance in Iranian participants' self-assessed oral L2 proficiency and 22% of the variance in Japanese participants' performance on a standardized L2 listening comprehension test. These findings provide preliminary evidence for the predictive validity of the proposed input-seeking model with respect to L2 proficiency. Although Proactive Input Monitoring emerged as the stronger unique predictor in the Iranian sample, both dimensions contributed to explaining proficiency across the examined contexts.

Proactive Input Monitoring represents learners' intentional efforts to extract semantic, grammatical, lexical, phonological, pragmatic, and sociolinguistic information from the L2 input they are exposed to. Although mainstream SLA perspectives have primarily focused on the characteristics of input and the cognitive processes through which it is processed, implicit in their views is the assumption that learners are agents of learning, that is, they are "actively engaged in a process of creating a second language, not in faulty imitation" (Gass, 1997, p. 60). Conceptually, Proactive Input Monitoring is closely aligned with Leow's (2015) notion of depth of processing, which refers to "the relative amount of cognitive effort, level of analysis, and elaboration of intake, together with the usage of prior knowledge, hypothesis testing, and rule formation employed in decoding and encoding the same grammatical or lexical item in the input" (p. 205). Implicit in these notions is the idea that L2 acquisition does not occur simply as a consequence of passive exposure to input. Rather, learners deliberately attend to, analyze, and make sense of the input, transforming it into L2 knowledge. Proactive Input Monitoring frames these learner-driven cognitive processes as learning behaviors that can be conceptualized, measured, and empirically examined. By doing so, the present conceptualization extends the focus beyond the properties of input itself to how learners intentionally engage with, process, and learn from L2 input through Input Monitoring, as one of two dimensions of Oral Input Seeking Behavior.

Input Monitoring should be distinguished from traditional notions of input processing. Within mainstream SLA, input processing primarily concerns the cognitive mechanisms and constraints involved in learners' processing of linguistic input during comprehension and how such processing transforms input into intake. By contrast, Input Monitoring conceptualizes learners' intentional efforts to attend to and analyze spoken input to extract lexical, syntactic, semantic, pragmatic, and phonologial information lexical, synt from spoken input as a proactive learning behavior, thereby complementing existing theories by providing a theoretical lens for investigating individual differences in how learners engage with input and how such engagement may influence subsequent language learning (see also Leow, 2015).

Proactive Input Monitoring is also different from listening strategies. Whereas listening strategies generally refer to cognitive and metacognitive techniques used to facilitate comprehension during a particular listening task, Proactive Input Monitoring concerns learners' broader tendency to intentionally attend to, analyze, and learn from spoken L2 input across contexts. Listening strategies, therefore, describe how learners approach a specific listening task, whereas Proactive Input Monitoring reflects individual differences in learners' patterns of engagement with oral input over time.

Proactive Input Exposure is characterized by learners' strategic efforts to maximize meaningful exposure to the target language in both real-world and media-based contexts. It involves purposeful participation in social gatherings, group activities, interpersonal interactions, and public spaces, as well as engagement with various audio and audiovisual resources to enhance their comprehension of the target language across different situations. Proactive Input Exposure took different forms across contexts, attributable to digitally mediated and instructional opportunities for EFL learners in Iran and Japan versus the naturalistic opportunities for Spanish learners in Florida. More specifically, in the L2-Spanish context of the United States, Proactive Input Exposure was primarily composed of interpersonal and social activities and, to a lesser extent, exposure to L2 input in digital spaces. This difference likely reflects contextual variation in opportunities for L2 use. Unlike Spanish learners in Florida, learners in Iran and Japan have relatively limited access to English in everyday social contexts, leading oral input-seeking behavior to be expressed primarily through digital media in Iran and academic settings in Japan.

The importance of proactive exposure to input has been highlighted in different SLA perspectives. For instance, Krashen (1982) highlighted this dimension by arguing that learners with positive attitudes to L2 acquisition "seek and obtain more input" (p. 31). Similarly, Gass et al. (2025) emphasized the importance of input frequency for L2 acquisition but argued that its impact depends on whether the learner notices and pays attention to the input (input monitoring). Ullman (2025) views input as not only necessary for L2 acquisition but also asserts that "both greater exposure […] and implicit, immersion-like experiences […] seem to facilitate the proceduralization of the grammar and the attainment of L1-like neurocognitive grammatical processing" (p. 148). Such a view has also been more vocally echoed by researchers who take an ecological or sociocultural perspective, emphasizing that "not all of cognition and learning can be explained in terms of processes that go on inside the head" because "the perceptual and social activity of the learner […] are central to an understanding of learning." (van Lier, 2000, p. 246). Similarly, this behavioral dimension in different forms has been the subject of a growing number of studies exploring learners' self-directed engagement with the target language in different subfields such as informal digital L2 learning (Liu & Zhao, 2025), extracurricular English (e.g., Schurz & Sundqvist, 2025), classroom engagement (e.g., Hiver et al., 2020), and L2 learning strategies (e.g., Oxford, 2018). The widespread attention to the

behavioral dimension of L2 learning, in general, and to L2 input in particular, is evidence of its importance in the L2 acquisition process. The concept of Proactive Input Exposure is a broad construct that encompasses all types of behaviors designed to enhance meaningful exposure to the target language in various digital and non-digital environments, whether in the classroom or beyond, in a theoretically unified manner.

Although input-seeking behavior shares conceptual commonalities with constructs such as learner autonomy, self-regulated learning, informal digital learning of English (IDLE), and listening strategies, it differs in its primary focus. Learner autonomy and self-regulated learning concern learners' capacity to take control of and regulate their learning; IDLE mainly describes behavioral engagement in technology-mediated informal language learning activities; and listening strategies refer to the cognitive and meta-cognitive procedures learners employ to facilitate listening comprehension during task or test performance. By contrast, input-seeking behavior specifically concerns learners' patterns of proactive efforts to create, access, and exploit input opportunities for L2 acquisition. Thus, it is conceptualized not as a replacement for these constructs but as a domain-specific learning behavior within PLLT. Input-seeking behavior may be supported by learners' autonomy and self-regulatory capacities and may be manifested across a wide range of learning contexts, including both digital and non-digital environments.

6. Practical implications

Although the present findings are preliminary, they may have implications for a range of stakeholders, including learners, teachers, teacher educators, curriculum developers, and policymakers. For learners, the proposed input-seeking model may serve as a useful framework for reflecting on ways to identify opportunities to enhance both their exposure to and monitoring of language input. For teachers and teacher educators, the model provides a preliminary conceptual basis for encouraging learners to enhance their exposure and analysis of L2 input, not only in the context of the classroom but also beyond the classroom in informal digital or non-digital environments (e.g., Liu & Zhao, 2025) or extracurricular activities (Schurz & Sundqvist, 2025). At the curricular level, the findings suggest that learning environments could be designed to provide more structured opportunities for learners to engage proactively with meaningful L2 input. However, these implications should be interpreted cautiously. Additional research using longitudinal, observational, and intervention-based designs is needed to determine the extent to which input-seeking behavior contributes to L2 development and to identify effective ways to foster it in instructional settings.

7. Conclusion

This study represents an initial effort to reconceptualize L2 input from something learners merely receive to something they proactively seek and use. Drawing on PLLT (Papi & Hiver, 2025a), it conceptualized and operationalized oral input-seeking behavior as one of four dimensions of proactive language learning. The findings of the study support the validity of oral input-seeking behavior as a measurable construct with two core components, Proactive Input Exposure and Proactive Input Monitoring. The replication of this two-factor structure across three distinct learning contexts suggests that the proposed conceptualization may be applicable across diverse language-learning environments, although additional cross-cultural and longitudinal research is needed to establish its generalizability.

More broadly, the study contributes to an emerging trend in SLA toward viewing learners as active architects of their own learning environments rather than passive recipients of L2 input (Michel et al., 2025; Papi & Hiver, 2025a; van Lier, 2000). Although cognitive and ecological perspectives have long emphasized the importance of learner engagement with input (e.g., Atkinson, 2011; Larsen-Freeman & Hiver, 2025; van Lier, 2000), the present study provides a framework for conceptualizing and measuring these behaviors. From this perspective, L2 acquisition depends not only on the availability of input but also on learners' proactive efforts to seek out and engage with it. In doing so, it extends previous work on proactive language learning behaviors (e.g., Papi et al., 2019, 2026a) and advances the broader goal of PLLT to explain how learner agency shapes language development.

This study developed a psychomtrically supported instrument for examining how learners seek and engage with L2 input, encompassing not only cognitive engagement with input but also learners' physical efforts to be exposed to meaningful input in various contexts. However, the value of the present study lies not only in the development of a measurment tool but also in the introduction of a theoretically grounded conceptualization of learners' behavior in relation to L2 input. By conceptualizing oral input-seeking behavior as a dimension of proactive language learning, this work lays the foundation for future research examining how learners intentionally shape the quantity, quality, and use of the input and how such behaviors contribute to their L2 development.

8. Limitations

Although the findings provide encouraging evidence for the construct's psychometric properties across three contexts, further research employing diverse methodologies and learner populations is needed to refine the construct and further establish its role in L2 acquisition. Future studies would benefit from incorporating a longitudinal design to provide a more precise account of how such behavior influences L2 acquisition over time. The context of this study was limited to oral input-seeking behavior. Other studies can explore such behavior in the context of textual or signed input. The generalizability of the findings is limited until evidence in other socio-geographic contexts and learning environments (e.g., informal, study abroad, heritage) is provided. Because some Proactive Input Exposure items were adapted to reflect context-specific affordances, the present study did not establish measurement equivalence across contexts. Rather than viewing this solely as a limitation, we consider such adaptations to be theoretically consistent with the construct, as Proactive Input Exposure necessarily depends on the opportunities available in a given learning environment. Future

research should continue to examine the comparability of contextually adapted measures while balancing contextual validity with cross-context comparability. Finally, because the qualitative phase relied on information-rich participants with substantial L2 experience, the initial item pool may emphasize behaviors more commonly reported by highly engaged learners. Future research can examine whether the construct and its measurement function operate similarly across learners with varying levels of proficiency, achievement, and engagement.

9. Future research directions

Learners' input-seeking behavior can be examined in a variety of mainstream L2 research paradigms. Learner-related factors such as dispositional, motivational, affective, cognitive, and demographic variables, can be among the most important predictors of input-seeking behavior (see Papi & Hiver, 2025a, 2025b). Input-seeking behavior can be explored in relation to contextual factors at macro (e.g., social, cultural, political, educational), *meso* (e.g., families, institutions, communities, instructional context), and micro levels (e.g., access to input, quality of input, source of input, input environment, interpersonal relations). As an independent variable, input-seeking behavior can be studied in relation to different learning outcomes. For instance, it can be explored how learner engagement in Input Exposure versus Monitoring plays out across implicit, explicit, incidental, and intentional learning, and how these behaviors contribute to different measures of L2 proficiency and various L2 outcomes, such as vocabulary, grammar, pronunciation, and pragmatics.

We have no known conflict of interest to disclose.

CRediT authorship contribution statement

Mostafa Papi: Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Phil Hiver:** Writing – review & editing, Writing – original draft, Formal analysis. **Michael Leeser:** Writing – review & editing, Writing – original draft, Conceptualization. **Hitoshi Mikami:** Writing – review & editing, Writing – original draft, Formal analysis, Data curation.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A

Interview questions

- How do you try to improve your English skills?
- What resources and activities do you engage with to improve your English skills?
- What kinds of activities or resources do you use to improve your listening skills? How often or how frequently?
- Do you actively seek opportunities to listen to English in your daily life? If so, how and what kind of opportunities? How often or how frequently?
- What do you do when you don't understand something in spoken English?
- What do you try to learn from the input that you are exposed to?

Appendix B

Oral Input-Seeking Behavior Questionnaire

Never or Rarely	Occasionally	Sometimes	Often	Frequently	Constantly					
1	2	3	4	5	6					
Q1. I listen carefully to understand what people say when they speak Spanish.					1	2	3	4	5	6
Q2. I immerse myself in Spanish-speaking environments to enhance my oral Spanish comprehension.					1	2	3	4	5	6
Q3. I listen carefully to understand what people mean when they speak Spanish.					1	2	3	4	5	6
Q4. I spend time at public places (such as coffee shops, bars, restaurants, etc.) where people speak Spanish to improve my Spanish comprehension.					1	2	3	4	5	6
Q5. I listen carefully to discover Spanish grammar rules based on how people speak Spanish.					1	2	3	4	5	6
Q6. I attend different Spanish-language academic events (such as workshops, conferences, classes, etc.) to improve my ability to understand Spanish lectures, speeches, etc.					1	2	3	4	5	6
Q7. I listen carefully to learn Spanish pronunciation based on how people speak Spanish.					1	2	3	4	5	6
Q8. I join groups, teams, or clubs where people speak Spanish to improve my Spanish comprehension.					1	2	3	4	5	6

(*continued on next page*)

(*continued*)

Never or Rarely	Occasionally	Sometimes	Often	Frequently	Constantly					
1	2	3	4	5	6					
Q9. I listen carefully to learn the new Spanish vocabulary and idioms that people use when they speak Spanish.					1	2	3	4	5	6
Q10. I attend public events (such as festivals, concerts, exhibitions, sports games, etc.) to improve my comprehension of spoken Spanish.					1	2	3	4	5	6
Q11. I listen carefully to make sense of how people use cultural norms like politeness and friendliness when they speak Spanish.					1	2	3	4	5	6
Q12. I participate in social gatherings (such as parties, game nights, etc.) where people speak Spanish to increase my exposure to spoken Spanish.					1	2	3	4	5	6
Q13. I listen carefully to how people speak various varieties of Spanish (slang, formal, informal, accents, dialects, etc.) to improve my ability to understand Spanish in different contexts.					1	2	3	4	5	6
Q14. I spend time with friends, colleagues, family members, or peers who speak Spanish to enhance my comprehension of spoken Spanish.					1	2	3	4	5	6
Q15. I listen to Spanish-language songs, radio programs, podcasts, audiobooks, etc., to improve my listening comprehension skills.					1	2	3	4	5	6
Q16. If you're reading this sentence, please choose "constantly" for your response.					1	2	3	4	5	6
Q17. I watch Spanish-language music videos, TV shows, movies, films, videos, reels, etc., to better understand spoken Spanish in different contexts.					1	2	3	4	5	6
Q18. I use social media, digital games, language learning apps, or AI tools such as ChatGPT to enhance my understanding of spoken Spanish.					1	2	3	4	5	6

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