Developing Speaking Skills of L2 Learners: A Synthesis of the Current Research

Torrin Shimono

Introduction
Speaking in a second language (L2) is a complex, multi-componential skill that requires long-term practice and deliberate attention to its development. How then do learners develop speaking proficiency in the L2? What are the necessary components to becoming a successful speaker? Extensive research suggests that the development of speaking in another language can be attributed to a multitude of factors. In this paper, I will synthesize the current research into three main categories: cognitive, affective, and social factors. I will conclude by discussing other factors that warrant consideration and further research in the future.

Cognitive Factors

Message Generation: Having Relevant Schematic Knowledge
An individual's cognitive processes serve as the basis for speaking. Levelt (1989) has outlined a language production model that describes the cognitive processes that occur in the production of linguistic output. The first component of the model essentially describes how a semantic message is conceived and generated. The "Conceptualizer" consists of conceiving an intention, selecting the relevant information, and organizing this information for expression (Murano, 2007). The result of these mental activities is a preverbal message.

Implied in the conceptualizing component of Levelt's model is the speaker's use of relevant schematic knowledge. Fundamentally, because speaking is the verbal expression of thoughts, information, and ideas as a result of human cognition, these mental activities derive from pre-existing schematic knowledge of the world and personal experiences. Schema Theory states that all knowledge is organized in units and individuals' schemata is their knowledge of concepts such as objects and the relationship they have with other objects, situations, events, sequences of events, actions, and their sequences (Piaget, 1952). In short, L2 learners must first possess relevant schematic knowledge about a particular topic that
will help them conceptualize the message they wish to convey. Hence, in order to facilitate the development of speaking skills in the L2, language learners can benefit from being presented with topics and situations that are readily familiar to them. Also, if learners’ schematic knowledge is different from the native speakers of the target language, an effective language teacher can point out some of the differences prior to a speaking task. Lastly, reading or listening to a topic prior to speaking helps activate and bolster schematic knowledge which can serve as a wellspring for their linguistic output.

*Message Formulation: Having Sufficient Linguistic Knowledge*

After generating a message in their minds, learners must know how to put their ideas into words. Levelt’s second component in his model of speech production is called the “Formulator” which converts the preverbal conceptions into linguistic structures. This component entails a two-step cognitive process. First, Levelt claims that the message is grammatically encoded. This process entails accessing mental lexicon in the form of lemmas as well as their syntactic and morphological forms. The end result is a surface structure or “an ordered string of lemmas grouped in phrases and subphrases of various kinds” (Levelt, 1989, p. 11) that is stored temporarily in a syntactic buffer. The second step of the formulating phase is the phonological encoding of the surface structure. This includes retrieving or building a detailed phonetic and articulatory plan for lemmas and the speaker’s intended utterance.

Again, assumed within this framework is that learners have adequate linguistic knowledge. For L2 learners, this is not often the case. For spoken production to occur, learners must have sufficient knowledge of the basic grammatical structures. In addition, learners must have access to enough L2 vocabulary, and this includes knowledge of a word’s morphology and pronunciation. For fluent spoken production, this knowledge needs to be automatized to some degree. In order to develop speaking skills in the L2 effectively, learners can benefit by systematically learning the high frequency words and get a handle on the canonical syntactic structures of the language (Nation, 2001). Moreover, they can also pay conscious attention to the pronunciation and intonation of words as their phonological aspects often carry semantic and syntactic meaning (Cutler & Clifton, 2000). Inevitably, this bank of L2 knowledge supplies the linguistic “nuts and bolts” for speech production.
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*Message Articulation: Having Neuromuscular Control*

Learners must then be able to articulate their ideas and language into recognizable utterances. In the third and final processing component of Levelt’s language production model is called the “Articulator.” In this phase, the phonetic and articulatory plan is executed by retrieving chunks of internal speech from a temporary storage called the articulatory buffer and then verbalized through motor functions. The end result is the speakers’ internal linguistic knowledge transformed into audible sounds.

Applying this component to L2 speakers, this stage assumes that learners have some knowledge the sound system of the target language and some neuromuscular control over the oral production of that sound system. To develop speaking abilities of Japanese learners of English, for example, this signifies making learners aware of English phonology and actively practicing the verbal articulation of segmentals (individual phonemes such as /l/ versus /r/) and suprasegmentals (intonation, rhythm, and stress). Because English is a stress-timed language and Japanese is a syllable-timed language, “Japanese speakers may have difficulty both producing and perceiving the characteristic stress patterns of English” (Avery & Ehrlich, 1992, p. 134). Moreover, on a segmental level, Japanese has a five-vowel system with fewer consonant sounds than English signifying that many Japanese learners must learn to perceive new consonant and vowel distinctions. Hence, consonant clusters and closed syllables are problematic for Japanese learners and need to be practiced (Avery & Ehrlich, 1992, p. 134). While research has shown that L2 learners often cannot converge 100 percent like a native speaker in terms of pronunciation, it does not mean practice should be avoided because improvements are feasible (Saito, 2013). Ultimately, the goal for L2 speakers is having sufficient knowledge and neuromuscular control to make their audible sounds intelligible (Munro & Derwing, 1995).

*Output Practice: Having Opportunities to Develop Fluency, Accuracy, and Complexity*

According to Muranoi (2007), the biggest difference between L1 and L2 production is in the Formulating and Articulating stages of Levelt’s model. For L2 speakers, Formulating and Articulating are likely to be controlled processes. In other words, these processes are automatic (proceduralized) for L1 speakers and are not for L2 learners. These deficits in processing speed and ability in the
Formulator and Articulator can negatively affect fluency, accuracy, and complexity of output. However, research has illustrated that such deficits can be minimalized with the right kind of practice.

With regard to fluency, research has shown that treatments that aim to develop speaking fluency are effective and necessary for L2 learners as they help them proceduralize formulating and articulating processes. For example, de Jong and Perfetti (2011) have shown evidence of fluency gains and proceduralization from pretest to posttest among ESL learners who had repetitious practice of speeches according to Nation's 4/3/2 fluency task. Transfer of fluency to new topics was also observed. Although it was unclear what processes were proceduralized, participants in the treatment group were able to produce fluent runs of similar lengths on new tasks but filling more time with speech and pausing less. Hence, task repetition under time pressure can aid in helping L2 learners formulate and articulate speech more automatically.

Technology has also been used effectively to help L2 learners proceduralize speaking abilities. Müge Satar and Özdener (2008) illustrated that voice chat and text chat are useful platforms for learners to proceduralize their linguistic knowledge that ultimately helps general speaking proficiency. The study showed a transfer of skills from voice chat and text chat to speaking skills is possible because such treatments affords learners thinking time and the opportunity to notice facets of their input under less stressful face-to-face, real-time conditions. Text chat may be particularly helpful for learners at lower proficiency levels as they probably need more time to construct their utterances and the text chat lightens the cognitive burden of production. Intermediate to advanced learners can benefit from voice chat as it helps with the production of fluent speech and vocabulary recall.

Studying abroad has been shown to be an effective way to help learners proceduralize cognitive processes. Du (2013) showed that American students who studied abroad in China all made significant fluency gains in terms of speech rate, total words spoken, and longest turn. Participants who faithfully observed a language pledge not to speak English during their time in China made greater gains. While the data collection methods of this study were questionable, it does suggest that concentrated and extensive time on task is a contributing factor in fluency development. Ultimately, L2 learners need to commit to spending concerted time
and conscious effort into developing their speaking skills, even in an immersion environment.

The findings in Du's (2013) study are corroborated with Towell et al. (1996). The authors report that advanced learners of French who spent at least six months in a French-speaking country also made increases in fluency. The results of both quantitative and qualitative analyses of the learners' performance data showed that gains in fluency are attributable to increases in the degree of proceduralization of linguistic knowledge. The authors posit that L2 learners who spent a period of residence abroad increased fluency because proceduralization occurred in the Formulator. This finding suggests that L2 learners can greatly benefit from learning environments that targets the formulating component, especially with regards to grammatical and phonological encoding. The authors also conclude by suggesting that task-based instruction which emphasizes planning and repetition of tasks can be beneficial in promoting proceduralization in the Formulator as this type of instruction can facilitate the development of learners' spontaneous productive skills.

As Towell et al. (1996) alluded to task-based instruction that included planning as an efficacious method to develop proceduralization of spoken cognitive processes, Ellis (2009) reviewed many studies about strategic task planning and how it affects fluency accuracy, and complexity. Overall, Ellis confirmed Towell's suggestion that strategic planning clearly benefits fluency. However, the results were more mixed concerning complexity and accuracy, possibly because of potential trade-off effects between these two aspects. That is, learners will tend to prioritize either complexity or accuracy when given planning time. That being said, it is likely that planning has the weakest effect on accuracy. Overall, within-task planning and rehearsal can benefit complexity and to a lesser extent accuracy without having a detrimental effect on fluency.

Kormos and Trebits (2012) echoed Ellis' general finding of the trade-off between complexity and accuracy. In this study, the researchers compared tasks at differing levels of complexity and in both written and spoken modes and how students' aptitude interacts with these features. Focusing on the results for oral output, students used fewer correct verb forms but more varied vocabulary in the cartoon description task (less demanding conceptually/more demanding linguistically) than in the picture narration task (more demanding conceptually/less
demanding linguistically). For the cartoon description task, it seems plausible that there was a trade-off effect between lexical and grammatical encoding in Levelt's Formulation phase of speech production. In the picture narration task, the simultaneous demands on the Conceptualizer and Formulator acted as a resource-dispersion factor. While the students were free to use their own linguistic resources which caused them to be more accurate, students did not seem to have sufficient attentional resources for producing syntactically complex language. As for fluency, there was no difference found between the two tasks. The researchers' findings also indicated that the components of aptitude that were most strongly related to the complexity and accuracy of production were inductive ability and grammatical sensitivity. Hence, to develop speaking abilities in terms of complexity and accuracy, teachers and researchers can design inductive grammar tasks that attempt to proceduralize accuracy, as well as vocabulary-building and sentence-combining tasks that target complexity.

Looking more specifically at complexity and accuracy and the proceduralization of these skills, Spoelman and Verspoor (2010) examined a Dutch learner of Finnish longitudinally under the Dynamic Systems approach. While the data were written output, the study showed that complexity and accuracy measures did not remain constant over time and were not collinear. Rather they were characterized by peaks/regressions, and progress/backsliding. This evidence seems to show that the proceduralization process for complexity and accuracy is often unstable and constantly in flux for many L2 learners. Thus, L2 learners need continued and systematic practice to solidify these skills.

Polat and Kim (2013) also did a fine-grained Dynamic Systems analysis of one Turkish immigrant to America named Alex who learned English in a naturalistic setting without any tutoring. Looking at the progress of his oral production in terms of syntactic complexity, accuracy, and lexical diversity, the researchers found that the participant's developmental process over one year echoed the findings of observed by Spoelman and Verspoor (2010) in that it was unique and nonlinear in three different aspects. First, the participant demonstrated growth in the syntactic complexity showing his capability of producing longer syntactic structures in terms of length, subordination, and phrasal elaboration. Second, the participant demonstrated the clearest improvement of lexical diversity as there was a consistent upward trend. Third, in terms of accuracy, there was no clear
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development during the study. The researchers discussed how often untutored lan-
guage learners have limited opportunities to improve their grammatical accuracy. Feedback is often unavailable or not provided in naturalistic setting. All in all, left untutored, Alex’s state of acquisition reflects a simplified and pidginized L2, also known as the Basic Variety (Klein & Perdue, 1993).

*Interaction Practice: Having Opportunities for Feedback and Formal Instruction*

A trend seen in speaking studies so far is that fluency and complexity can be enhanced with various types of tasks and conditions, but accuracy seems to be stubbornly problematic. But differently, L2 speakers often tend to prioritize meaning before form in spoken output. Because messages can be successfully communicated without perfect form, errors in speech tend to be glossed over in the classroom and in real life situations. Hence, output practice framed within interaction between the learner and an instructor or interlocutor can provide meaningful opportunities for feedback that explicitly targets the development of spoken accuracy.

Output can serve to make an L2 learners’ speech more accurate as it calls on learners to be more precise with their language. Swain (1985) concluded that “output...extends the linguistic repertoire of the learner as he or she attempts to create precisely and appropriately the meaning desired” (Swain, 1985, p. 252). Swain’s Output Hypothesis says output has 3 functions: noticing, hypothesis formulation and testing metalinguistic function, as well as syntactic processing (Murano, 2007).

First, when learners are confronted with the task of having to verbalize their thoughts, they potentially can notice two things. First, they can notice the differences between the target language and their own interlanguage. Swain defines this as “noticing a gap.” When learners realize they cannot say something precisely, they “noticing a hole” in their interlanguage. Both types of noticing can cause learners to be more accurate with their output because it forces them to fill in the gaps and holes of their interlanguage with new knowledge.

Secondly, the result of noticing can cognitively stimulate the learner to make hypotheses about the linguistic rules of the target language. Through a process of hypothesis formulating, testing, confirming, modifying, and rejecting, output serves to verify the learner’s knowledge of the L2. Moreover, with various types of feedback, learners can be alerted about the success of their utterance. Positive
feedback is when the interlocutor reformulates the learners’ utterance into a correct one. Negative feedback alerts the learner that there was something problematic in his or her utterance and the feedback includes information about the content of the production or the accuracy of it (Mackey, 2007). Feedback can also come more or less explicitly, such as overt metalinguistic corrections or through more indirect means such as clarification requests, confirmation checks, overt failures to respond appropriately, misunderstandings, delays, and laughers (Schachter, 1986). By getting feedback from an interlocutor, learners can negotiate for meaning with the interlocutor. The end result of this interaction is the learner produces modified, and often times more accurate output.

Third, as the process of generating output encourages the learner to notice and receive feedback, they are then prompted to move from semantic processing to syntactic processing. Framing that in Levelt’s (1989) terminology, output facilitates the occurrence of grammatical encoding in the Formulator. Thus, giving students many opportunities for meaningful output production and can stimulate what Long (1996) calls “grammaticization.” In essence, Swain (1993) has claimed that output benefits L2 development because learners need to be pushed to make use of their linguistic resources, reflect on their output, and consider ways of modifying it to enhance comprehensibility, appropriateness and accuracy.

Some researchers have pointed out that feedback in the form of recasts do not always make participatory demands on the learner and they may not be perceived by the learner as an optional and alternative way to say the same thing. Hence, learners may not repeat or rephrase their original utterances following recasts. In fact, they may not even perceive recasts as feedback at all, casting doubt on its general effectiveness (Mackey et al., 2000). To answer those concerns, Lyster and Saito (2010) investigated corrective feedback in a meta-analysis of 15 quasi-experimental studies in classroom settings. Overwhelmingly, the preponderance of evidence shows that corrective feedback is indeed effective on L2 development. Regarding the types of feedback, recasts, prompts, and explicit correction were all significantly effective in both within- and between group contrasts. Prompts yielded large effect sizes and proved to be significantly more effective than recasts in within-group contrasts. Explicit correction’s effects could not be distinguished between recasts and prompts. They also noted that the longer the treatment length, the better the effects were for corrective feedback.
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In sum, feedback is a necessary component of developing the accuracy of speaking skills.

Lastly, in addition to feedback, formal instruction has shown to be effective in producing more accurate speakers. However, explicit grammar instruction and explanation made preemptively or reactively remains open to debate. Stafford, Wood Bowden, and Sanz (2012) thus investigated the comparative effectiveness of four instructional treatments that differed in their degree of instructional explicitness as well as the timing of instruction on initial learning of Latin. Focusing only on the written output production of this study, there was a significant time × treatment interaction and post hoc t-tests show that prepractice explanation promoted immediate gains in productive abilities but that sustained improvement required a combination of prepractice explanation and metalinguistic feedback. For cue use in written production, an ANOVA indicated no independent advantage for prepractice grammar explanation provided by the computer-based language lesson. In contrast, results suggest that explicit metalinguistic feedback provided during practice was beneficial, although the benefits appeared to be limited to accurate production of Latin case morphology. All in all, in terms of accuracy, learners greatly benefitted from explicit instruction and feedback.

Affective Factors

Time on Task: Having Motivation and Willingness to Communicate

For L2 learners, a key variable in the process of becoming proficient speakers are their affective feelings. For language learning, a large quantity of motivation is necessary because the development of speaking often takes years to become proficient. For any complex skill, it is often said that 10,000 of concerted practice are required (Gladwell, 2008). Hence, research suggests that learners who interested in the target language have a smoother path to becoming proficient speakers.

Certain types of motivation and high levels of Willingness to Communicate (MacIntyre et al., 1999) have been shown to facilitate time on task. Hernández (2010) looked at the motivation of American study abroad students in Spain. The results highlight three main points. First, students improved their L2 speaking proficiency during a 1-semester study-abroad program. In an immersion environment, the conditions were suitable for students to spend large amounts of time on
task. Under such conditions, it is highly plausible that proceduralization of speaking skills could be improved upon efficiently. Second, there was a positive relationship between students’ integrative motivation and their interaction with the L2 culture. Essentially, these students’ integrative motivation increased their willingness to seek out opportunities for meaningful interaction in the target language. Third, student contact with the Spanish language had a significant effect on their speaking improvement. With a high degree of willingness to communicate and interact in the target language with members of the target culture, students in a sense became their own teachers outside the classroom - their own autonomous “input/output generators.” Naturally, the more learners wanted to participate in the culture of the target language, the more opportunities they will have had to practice. The data from this study confirms the importance of focusing on learning activities that enhance students’ integrative motivation and interaction with the L2 culture in both the formal classroom and in the study-abroad program. However, Du (2013) points out that individual differences in personality may significantly affect time on task in a study abroad context. Language educators should also take into account differences in personality types such as extroversion and introversion and suggest how those types of students use their time abroad efficiently and effectively.

Paying Attention to Learner Anxiety

Generally, having to speak a foreign language can cause some learners discomfort-in the worse case, debilitating anxiety. Obviously, large amounts of debilitating anxiety can hinder spoken production and interfere with spoken language practice. Ultimately, such feelings could inhibit language progress because it “makes the individual unreceptive to language input” (Horwitz, Horwitz, & Cope, 1991, p. 30). Without input, there is hardly a chance for output.

To facilitate output practice, especially among anxious and low level learners, Müge Satar and Özdener (2008) have shown that the use of synchronous computer-mediated communication tools (CMC) such as text and voice chat can be effective as it is less face-threatening compared to real face-to-face interaction. Moreover, the researchers have also shown that pair/group work can lower students’ anxiety levels, especially in the text chat condition. Kern (1995) has claimed that such computer-mediated platforms provide a “freeing experience,” whereby students are less concerned about making mistakes, feel less anxious, and
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ultimately produce more. Hence, to develop speaking skills, language teachers should be cognizant of the anxiety of their students and if necessary, seek out alternative methods to traditional forms of interaction. The type of output practice that is sensitive to learners’ anxiety levels has the potential to break the “vicious circle” characterized by a reluctance to speak and low self-confidence among L2 learners (Compton, 2002).

Social Factors

Using Language to Self and Other-Regulate

According to Sociocultural Theory, in addition to a communication tool, spoken language can also serve as a tool for regulation. That is, language can be used to help exercise control over others as well as ourselves. Gáñem-Gutiérrez (2009) looked at the role of repetition, use of L1, and reading aloud as semiotic mediational mechanisms during collaborative activity in computer assisted language learning (CALL) classroom. The results showed that repetition appeared to be particularly useful in establishing and maintaining socio-affective rapport between participants while completing the tasks. With regard to L1 use, it was suggested that individual learners’ learning style preferences might play a more prevalent role than task characteristics and medium of implementation of a task. Finally, reading aloud was task dependent, with learners primarily using it as a working tool for the completion of gap-fill exercises. In addition, reading aloud was also very important for learners to establish and maintain an atmosphere of collaboration and to focus on form. These social functions of speech show that using language to facilitate rapport can create a learning atmosphere conducive to L2 learning and use. For example, teachers with an “English only” policy in their classroom can take pause and reconsider how different kinds of speech, such as L1 use, plays a facilitative social role in language classroom.

Scaffolding: Having the Right Interlocutor/Classmate/Friend

Social constructivism, in particular, stresses the importance of social interaction in the process of language production. That is, learning occurs through collaboration with more capable peers (Vygotsky, 1978). Often times, a communicative language classroom is characterized by group and pair work. During these times, scaffolding can occur. Scaffolding is a dialogic process through which one interactive participant helps another to do a task they cannot
do alone. The interaction provides no less and no more assistance than the learner needs "to function at his or her potential level of ability" or in his or her "zone of proximal development" (Aljaafreh & Lantolf, 1995, p. 468). Ultimately, scaffolding functions to arouse interest in the task, lower anxiety levels, simplify the task, note differences between what is produced and the ideal solution, control frustration during learning, and demonstrate an ideal solution (Mitchell & Myles, 1998). To maximise learning, education should be aimed at the upper boundary of what the learner can manage if assisted (Ellis & Barkhuizen 2005). For speaking class, a language teacher can pair up a less proficient speaker with a more proficient speaker so the chance for scaffolding for speaking development can take place.

**Conclusion**

In summation, developing speaking skills in the L2 is a complex process that needs concerted time, attention, and effort for speaking in another language to come to fruition. This paper outlined key cognitive, affective, and social factors that need to be considered in the spoken production in the L2. Other factors that could have been included were the use of speaking strategies, paying attention for formulaic phrases, practicing connected speech, using appropriate tones and registers, studying interactional pragmatics, and making learners aware of general communicative competence. These factors must also be considered in developing L2 learner's speaking skills. Unfortunately, due to word count constraints, these aspects of speaking could not be addressed in this paper.

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