Acting, thinking, feeling, making, collaborating: The engagement process in foreign language learning

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Introduction

In discussing human learning, one of the key elements is the quality and quantity of action. Theories of practice for developing expertise have indicated guidelines for how much practice is necessary (Ericsson, 2016), as well as what kind of approaches students need to take (see Parkinson & Dinsmore, 2019). Barring the assumption of fixed entity beliefs (see Lou & Noels, 2019), people instinctively recognize this process from other walks of life. Through hours of quality practice with a musical instrument, musicians develop high level skills. With daily strenuous exercise, everyone can build muscle, burn fat, and develop a high degree of fitness. By repeatedly practicing a new language in meaningful ways, with realistic and comprehensible input and output, students develop their communicative and academic skills (Nation & Newton, 2009). This quality and quantity of practice can be summed into a single concept: engagement.

Engagement is what students do to further their learning (Fredricks, Blumenfeld, & Paris, 2004); how they act, think, feel, and interact. In school settings from preschool through

higher education, what students do actively, they think about, and what students think about, they eventually learn (Willingham, 2009). In researching this topic, we should think of engagement as existing in the evident present participle (thinking, feeling, acting) or the active past tense (thought, felt, did). It is the action that people take in order to achieve a goal, expressing motivational energy in the observable world (Fredricks et al., 2004). While this key step is essential to understanding achievement (Reschly & Christenson, 2012), in much of the literature on language learning, it has been overlooked.

In many ways, engagement is what many teachers seek when they express the desire to "motivate their students." In language classes, teachers specifically wish for students to listen and read carefully, remember vocabulary and grammar, write good sentences and paragraphs, and speak actively with their friends. Even though students may be highly motivated to learn a foreign language, they may not always complete learning tasks—in other words, students who wish to learn may not always engage in formal learning. Teachers thus seek and recognize engagement, but may have difficulty recognizing when students are motivated (W. Lee & Reeve, 2012). Instinctively, teachers know that engagement is necessary for learning, but visible action alone is unfortunately not sufficient.

Some argue that there are situations where aspects of learning do not involve visible action. According to this perspective, learners may be listening, thinking, memorizing, or planning without showing the nature of their activity (see discussions on the notion of the "passive Asian learner," Ho & Hau, 2009; Littlewood, 1999). While there may be times where this is true, on closer inspection these situations may be relatively rare. Reading involves putting eyes to the page (a visible action); writing requires producing words and sentences (also visible). Students may think about and process information while staring

into space, but if this condition continues without them producing some evidence of that processing they have just as likely stopped considering the issue at hand. Likewise, notetaking while listening (another visible action) reduces cognitive load and improves retention (Makany, Kemp, & Dror, 2008). While there may indeed be classroom situations where students can be silent but cognitively active, both research and common sense indicate that these situations are short lived, and mark the exception rather than the rule.

In this review, I will define the construct of engagement to differentiate it clearly from other related concepts, present key empirical and theoretical contributions from the realms of education and psychology, and finally propose methodological tools and conceptual models for investigating engagement, that is, what students do, say, think, feel, and make, in classrooms.

Theoretical and Practical Foundations

Defining the Construct

Rather than considering engagement as a grand theory like many other theories presented in this issue (self-determination theory, expectancy-value theory, control value theory, etc.), it is best considered as a flexible set of constructs with many measurement possibilities. Because engagement is about action, researchers from several different paradigms, including self-determination theory, expectancy-value theory, and numerous others, have used this construct to explain learning processes in formal educational settings (Martin, 2010; Reeve, 2012; Svalberg, 2009; Wang & Eccles, 2011; etc.). Key reviews of the construct connect it to numerous positive learning variables, including self-efficacy (Schunk & Mullen, 2012), interest (Ainley, 2012), achievement goals (Anderman & Patrick, 2012),

personal investment (King & Yeung, 2019), and emotions (Pekrun & Linnenbrink-Garcia, 2012). Like emotions (see Shao, Pekrun, & Nicholson, 2019), the engagement constructs can be used to complement many individual difference theories and constructs, including those presented in this special issue (Oga-Baldwin, Fryer, & Larson-Hall, 2019).

Research on engagement to date has been largely concerned with predicting student achievement (Reschly & Christensen, 2012). Likewise, models including engagement have all largely used student behaviors to predict outcomes. In many studies, engagement has been defined as students' in-class activity toward learning goals, e.g. achievement (Fredricks et al., 2004; Reeve & W. Lee, 2014; Skinner, Kindermann, & Furrer, 2009; Wang & Eccles, 2011). Some researchers have included constructs such as persistence, time-management, and planning as signs of engagement (Martin, 2010), all of which indicate students' effort in and out of class. These studies from multiple paradigms return to a single idea: engagement is about the energy learners actually spend toward their achievement.

This marks engagement as perhaps one of the most crucial steps in predicting how students succeed at languages in formal education settings. The contextual model of engagement most researchers in educational settings currently use is some form of that outlined by Lam and colleagues (2012), where engagement is the central mediator between the external world that students experience, their internal processes, and their degree of achievement. This model largely overlaps with the conceptions of a process phase in the learning process as envisioned by Biggs & Telfer (1987), or in the actional phase of the process-oriented model presented by Dörnyei (2000). Within both of these models, engagement could be used as the point of action where students perform the learning tasks, activate their emotions, and engross their minds in the material.

A basic summary outline of these previous models (Biggs & Telfer, 1987; Dörnyei, 2000; Lam et al., 2012) is presented in Figure 1. For the purpose of the current discussion, ability represents prior knowledge, grades, test results, and other measures of cognitive achievement. The learning environment includes teacher and peer relationships, physical classroom organization and classroom management, and instructional styles and interventions including digital learning and other new instructional programs. Attitudes are variables related to learners' beliefs and orientations toward the world, including interests, self-efficacy, motivation, and mindsets. The model is necessarily longitudinal, illustrating reciprocal effects over time, and thus may remedy some of the methodological issues that plague many studies (Ioannidis, 2005). Engagement is thus a result of environmental facilitators such as classroom interpersonal relations and instructional quality, as well as personal factors such as motivation and aptitude. This mirrors Lewin's classic construction of behavior as a function of the person and the environment (Sorrentino, 2013) or Bandura's later reciprocal triad of the environment, the person, and their behavior (Bandura, 1986). In this model, students' actions influence their own future attitudes and achievement, and in the best situations may also have a positive effect on teacher-student relationships (Skinner & Belmont, 1993; Skinner et al., 2008) and on the instructional environment (Reeve, 2013). The indicators of engagement and disengagement are likewise numerous and varied, including affect / emotion, behavior, cognition, and agency.

Engagement is clearly an emerging variable of interest in both formal education and language education. At the same time, engagement has gone by various names in what is known as a "jingle-jangle" problem (Reschly & Christenson, 2012): jingle, meaning that concepts which differ from engagement as action toward learning outcomes are sometimes

called engagement, and jangle, meaning that constructs that are clearly related to and subsumed by engagement are called by other names.

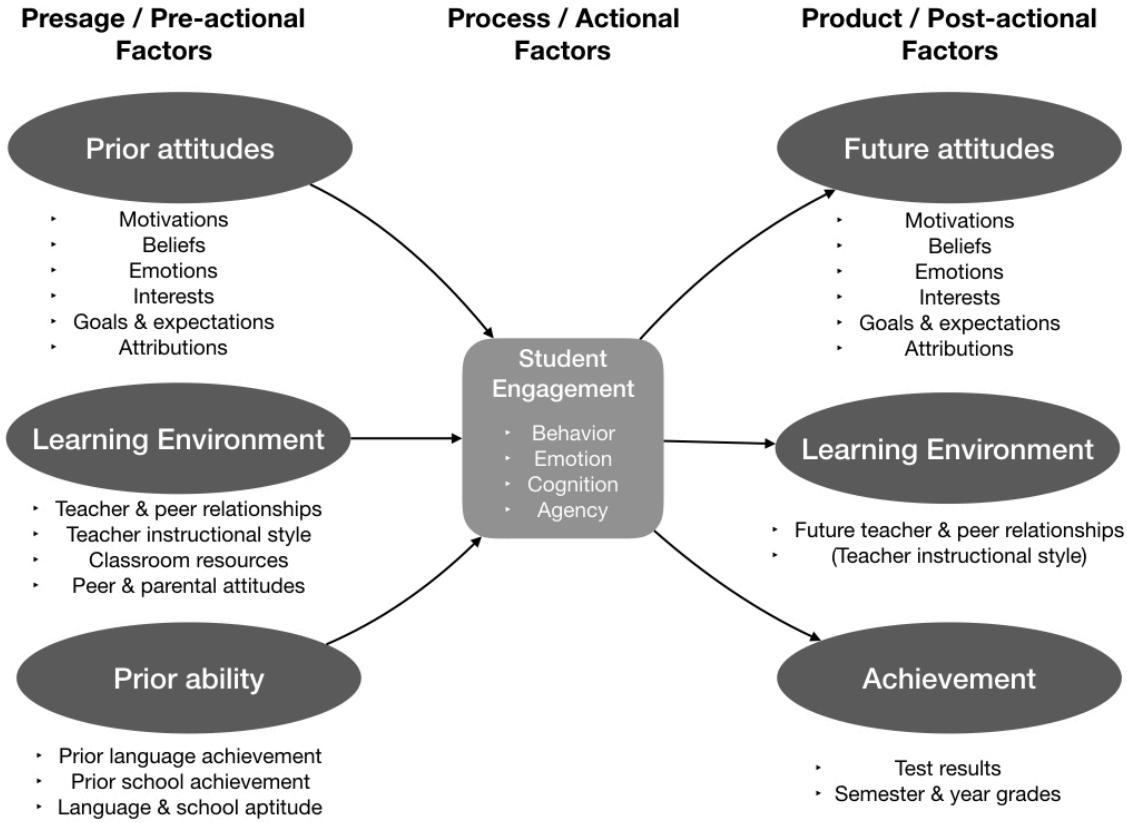

Figure 1. A contextual model of engagement.

With regard to the jingle side, Svalberg (2009; 2017) discusses the idea of "engagement with language," which uses the idea of a cycle of language use leading to language awareness. Likewise, "engagement with feedback" (Ellis, 2010) represents a similar usage of the term of engagement. In this conception, engagement with language / feedback involves how learners use their linguistic resources to develop awareness, often grammatical awareness, of the new language. While this concept may be an example of engagement, it is not the only form of engagement that students display in school language classes. Given that much of the research on language learning is based in formal educational contexts, this

definition may be too narrow to be appropriate or applicable; Svalberg (2017) herself admits that the larger contextual engagement referred to in the educational literature represents a broader, and in many ways more flexible and robust, construct. “Engagement with language” and “engagement with feedback,” should thus be understood as substrata of the behavioral, cognitive, and agentic subcomponents of engagement described later, and therefore are likely too specific to describe more general language achievement in school settings.

We must also be careful to differentiate engagement from often confused or potentially confounding constructs. Engagement differs significantly from motivation and “intended effort” (), as will, intention, and action are different. Students may have a large quantity of motivation (in the lay sense of feeling excited to work and achieve), but it might not result in active learning or achievement. The experience is familiar to many; students start a class, and at the beginning of the semester, feel they will achieve great results. They really want to succeed. “This is going to be a good semester,” they tell themselves. However, by week 5, they may skip homework for time with friends, part time jobs, video games, sports, or a plethora of other reasons depending on their situation. In class, they may be distracted, bored, or otherwise uninterested. They started feeling “motivated;” if asked at the middle and end of the semester, they will probably still say they are motivated to learn the material and do well (and may thus ask for extra credit assignments at the end to boost sagging grades). Their actual engagement showed otherwise, and the “intended effort” thus led to very little actual achievement. The key issue is whether action, thought, emotion, or agency happened or did not. Just so with engagement. If students do not complete the intended task, they cannot improve toward the intended goal. Action might not consistently lead to

the desired result, but it brings students closer than wanting alone. If motivation is will and intention, wanting and wishing, engagement is the moment when word turns to deed.

Likewise, engagement is often connected with the idea of flow (Cziksentmihalyi, 1996). Like the engagement with language construct, we might think about flow as a special case of high quality engagement. Where flow describes a state of optimal focus, enjoyment, and action, it comes about rarely, and may not be the ideal state for formal educational settings. Given that flow requires learners to be working on tasks that are at the perfect level of difficulty with the perfect level of enjoyment, many factors must align to achieve this state. While flow may indeed be a state of optimal engagement, learners can be engaged in learning tasks without being in flow. Additionally, the flow state does not have a negative counterpart, while engagement has a clear opposite pole: disengagement. Where flow is often treated as binary (in flow / not in flow), engagement happens along multiple continua that allow for finer measurement and comparison.

On the jangle side, concepts that refer to engagement, but have been called different names at different times, prior researchers and theorists have referred to constructs such as "time on task" (Good & Brophy, 2008; Hattie, 2009), "on-task behavior" (Butler & J. Lee, 2006), "motivated behavior" (Guilloteaux & Dörnyei, 2008; Nakata, 2006), and an "actional phase" (Dörnyei, 2000) in the learning process. Broadly, theorists and teachers often understand engagement as "effort" (Mercer, 2011), though this terminology may be misleading. Hard work does not always predict results, and engagement is not always strenuous or effortful. At the same time, these concepts have strong and meaningful effects on educational achievement, measured as an effect size greater than .4 in the meta-analyses conducted by Hattie (2009). Another key watchword now is "active learning"

(Bonwell & Eison, 1991), where teachers aim to create active classrooms where students discuss ideas and enjoy content, which has been tied to the idea of teaching for engagement (Cornelius-White & Harbaugh, 2009). All these ideas refer to the same thing: students paying attention in class, interacting with their teacher and classmates, and thinking about learning material. These phenomena can be grouped under a single umbrella concept of engagement as visible and invisible actions that learners take toward learning. This definition and grouping allows refinement, new directions for investigation, and pedagogical interventions.

Key Subcomponents of Engagement

As discussed in other articles of this special issue, motivation is both a qualitative and quantitative phenomenon (McEown & Oga-Baldwin, 2019; Fryer, 2019; Loh, 2019) that promotes language learning. Similarly, good quality and high quantity engagement, as a form of practice (Ericsson & Pool, 2016), should theoretically lead to achievement. Good quality engagement in a language class involves a combination of factors, defined in previous literature as behavioral, emotional, cognitive, and agentic engagement. These variables are interrelated, and each contributes to the others; it is hard to imagine students' emotions and thoughts moving in a positive direction if they are not paying attention to and performing the classroom tasks.

Each of these variables follows a continuum from engagement to disengagement. The engagement and disengagement continua come from robust theoretical and empirical work on the nature of how students act and interact in their classrooms (H. Jang et al., 2016; H. Jang, Kim, & Reeve, 2012; Martin, 2010; Oga-Baldwin & Nakata, 2017; Oga-Baldwin, Nakata,

Parker, & Ryan, 2017; Skinner et al., 2009; Wang & Eccles, 2011). This conception follows the logic that while students with low engagement may not be active in their learning, they are also not actively disengaged (Reschly & Christenson, 2012). Thus when measuring student engagement, it is important to remember that both engagement and disengagement as volitional acts may represent clear indications of implicit attitudes and thus may help predict outcomes (H. Jang et al., 2016). In researching and measuring learning engagement, care needs to be taken to understand both the effects of positive engagement and negative disengagement on how learning happens.

Behavioral

Behavior is the most visible and recognizable markers of engagement. Body language, gaze, and response to instructions all signal the crucial elements of behavioral engagement. Likewise, observers can tell when students have elected to disengage. Disengaged students stare out the window, slump in their chairs, fidget, or might even place their head on their desks and sleep. Thus, the key behaviors for recognizing the origins of learning come through the observable moments when students look at the speaker, nod with the key points, write down notes from a teachers' lecture, and raise their hand to answer questions, among other key behaviors. Along with other visible signs of engagement, these behaviors appear to catalyze other aspects such as emotion, cognition, and agency (the changes students make to suit their needs), and thus behavioral engagement may be understood as a key step in the learning process. Teachers who can promote a high level of activity are more likely to reach students emotionally and cognitively. These behaviors can then become habits.

Meta-analyses indicate the connection between behavior and cognitive outcomes. Behavioral intervention programs, behavioral organizers in classrooms, and study skills training all emphasize how the actions students take can have a direct effect on their success (Hattie, 2009). This means that behavioral engagement might play a larger role in learning engagement than previous models have indicated. While the conditions facilitating action are necessarily complex and have multiple environmental and intra-individual antecedents, as seen in the 3P and Process Models (Biggs & Telfer, 1987; Dörnyei, 2000), behavior appears to be the logical ignition moment for the other aspects of engagement, including emotion, cognition, and agency. Thus, the largely subconscious decision to participate in class may precede and promote enjoyment and thought.

Where prior empirical models have measured the multiple facets of engagement together (H. Jang et al., 2012; 2016; Martin, 2010; Oga-Baldwin et al., 2017; Oga-Baldwin & Nakata, 2017; Wang & Eccles, 2011; Winne & Nesbit, 2010), we might consider a potential hierarchy of relationships within the engagement constructs, with behavior correlated with and predicting the other processes. Thus, engagement in class at least partially begins with behavior, and the other parts of the process, including cognition, agency, and emotion, all result in part from students' initial, subconscious decision to engage or disengage behaviorally.

Emotional

Like behavior, teachers also broadly recognize emotional states in class. They develop positive relationships with learners, and so can sense when students are happy and enjoying class, when students are upset by recent events, and when they are bored and uninterested. Like behaviors, emotions can be observed, though perhaps not always to a

high degree of precision as actions. Unlike behaviors, students may not always have clear habits and actions that they take in order to regulate their emotions.

Robust research has shown that emotions are crucial for learning (see Shao & Pekrun, 2019). Given the depth and detail of the work on activating and deactivating emotions and their relation to learning, some have questioned the appropriateness of using emotional engagement as a construct in classrooms (Reeve, 2016). Indeed, when compared to the work on emotions (Shao & Pekrun, 2019), much of the engagement work on the subject of emotional engagement does not achieve the same level of depth. The discussion is often limited to positive emotions, such as enjoyment and situational interest, for emotional engagement, or negative emotions, such as boredom or irritation, for emotional disengagement.

With the construct of emotional engagement, the goal is not to absorb or subsume the work on emotions, nor to reinvent the wheel using different terminology. Instead, engagement offers a much simplified spectrum of situational classroom emotions that ranges from positive emotions that facilitate learning to negative emotions which may hinder learning. Given the finding that actions may be used to induce behavior in classroom settings (Marsh et al., 2018; Reeve, 2012; Reeve & Tseng, 2011), it seems likely that activities which promote behavioral engagement in classroom situations are also likely to result in more positive emotional engagement. Likewise, classrooms which do not promote behavioral engagement but rather sedentary distraction (i.e., disengagement) are more likely to also induce greater emotional distance from both the classroom and the learning material.

Cognitive

Cognitive engagement is represented by the intentional thought that students put into their school work. Working from the ideas presented above, this element reflects the slow, deliberate part of thinking (Tversky & Kahnemann, 1974; 1992). In the ideas popularized by Willingham (2009), it is active thought that leads to the formation of memories. What students think about, they eventually retain and learn.

Unlike behavior and some aspects of emotion, cognition is difficult to measure or observe directly. Even with modern brain research methods (EEG, fMRI, PET, etc.), we can only approximate and generate assumptions about depth and degree of cognition regarding a topic. While these markers grow ever more exact in their potential, the direct measurement of cognition still eludes education researchers working in situ. This means that while we can observe behavior and to some extent emotions, we can only measure cognitive engagement through what students produce.

According to one definition, learning is what students make (Winne & Nesbit, 2010). Cognitive engagement is most apparent in the quality of the work they produce: does it show active thought, does it use the language presented in class, does it demonstrate comprehension of the language. In-depth studies have indicated that students learn material best when they interact with the full body of information at least three times (Nuthall, 2005). Even with these simplified heuristics, cognitive engagement remains the most difficult both to quantify or describe qualitatively. In natural settings, we are left measuring cognitive engagement primarily through some form of self-report. Think aloud protocols and retrospectives on filmed action describe their learning processes after the fact, but these more invasive methods still leave much to be desired. Students' cognitive

engagement in its purest sense may be a "black box;" at the same time, teachers can reach it by promoting conscious effort in students by engaging their learning behavior, increasing time on task, and providing clear direction and feedback for learning (Winne & Nesbit, 2010).

Agentic

According to the conception of agency as a form of engagement (H. Jang et al., 2012; 2016; Reeve, 2012; 2013; Reeve & Tseng, 2011), this is how learners contribute to the learning environment and the quality of instruction. According to social cognitive theory, this is the reversed arrow in the reciprocal triad leading from behavior toward the environment (Bandura, 1986), indicating that the learner's willful action has influenced their surroundings. Learners may ask for clarification from their teacher, or seek to have teachers explain a concept again from the start—a key step in developing deep understanding (Nuthall, 2005; Skinner et al., 2008). Researchers working with engagement as a construct have recognized the reciprocal relationship between what teachers do and how students respond (H. Jang, Reeve, & Deci, 2010; Oga-Baldwin et al., 2017; Skinner et al., 2008; Skinner & Belmont, 1993). The degree to which students may react positively to teachers' bids for students' attention and compliance may have an important effect on how the teacher perceives individual students. It is therefore only natural that learners who display effort to improve the learning environment by clarifying the learning material, expressing ideas and opinions, and asking for meaningful inputs might develop positive relationships with their teachers while improving their own understanding.

Without wading into the miasma of sophistic, philosophic, and political definitions of language learner autonomy (*cf*. M.-K. Lee, 2016; Oxford, 2003; Benson, 2013), this discussion of agency is limited to the actual actions learners take in the classroom. Though

related to autonomy, it is separate from strategies, self-regulation, or any of the corresponding attitudes comorbid to self-regulated learning (Nakata, 2010), and does not include any philosophical conception of what students "should" do—in this model, agency in the classroom is not an end in and of itself. It is instead treated as an empirical issue: do learners who actively request more changes to their learning environment measurably succeed at greater rates.

Agentic engagement may not be representative of the image many hold for learners in formal language learning contexts. Especially in East Asian Confucian contexts, learners are often expected to remain quiet and passive, receiving wisdom from the teacher (Hau & Ho, 2010), though this should. At the same time, the instruments and theory were developed within collectivist (Hofstede, 2001) contexts such as Taiwan (Reeve & Tseng, 2011), South Korea (Reeve, 2013), and now Peru (Matos, Reeve, Herrera, & Claux, 2018). The agentic perspective is consistent with Confucian thought on leadership as co-constructed and dialectic rather than unidirectional (C. C. Chen & Farh, 2010), and matches existing commentaries regarding the development of more autonomous learners within this cultural context (Littlewood, 1999). This indicates that agency, as demonstrated through the changing of the environment to suit the individual, functions across theoretical and cultural boundaries.

Measurement and Evaluation

With each of the key elements defined, we must also consider how best to measure each sub-construct. This is of special interest to empirically demonstrating the situated model of engagement; given the normal need to measure each aspect of engagement

simultaneously on the same survey or within the same class, these methods are unable to demonstrate causal ordering (Shadish, Cook, & Campbell, 2002). While at present survey instruments are commonly in use, there are also new alternate methods that show promise for demonstrating the explanatory power of engagement in formal language learning.

Existing Instruments

To date, survey instruments have been the most commonly used to measure engagement. Some of the best established have been pioneered, refined, and well-publicized by Skinner, Reeve, and Jang (H. Jang et al., 2012; 2016; Reeve, 2013; Reeve & Tseng, 2011; Skinner & Belmont, 1993; Skinner et al., 2008; Skinner et al., 2009). The constructs presented in these include the ones listed in the above sections. The items and their psychometric functioning are well delineated in these studies, and these instruments provide a starting point for researchers looking to investigate these constructs. While other studies have used the same constructs, their items wordings and factor analysis coefficients were not presented, or does not clearly differentiate engagement and other motivational variables (Martin, 2010), and so cannot be used as an example. Commonly used items in this pool for researchers looking to measure behavioral, emotional, cognitive, and agentic engagement are presented in Appendix 1.

While surveys are the generally accepted method used in many studies, self-report as a method is not without its faults. Unlike motivation, aspects of engagement exist outside of the learners' heads and in the visible world, and thus observational instruments have also been used to rate students' engagement in class. Some observational measures have rated individual students at multiple time points alongside survey instruments (K.-C. Chen & S.-J. Jang, 2010; Fryer & Bovee, 2016; Fryer, Bovee, & Nakao, 2014; Skinner et al., 2008), while

others used a generic measure of collective engagement matched with retrospective self-reports (H. Jang et al., 2010; 2016; Oga-Baldwin et al., 2017; Oga-Baldwin & Nakata, 2017; Skinner et al., 2008). In all cases, the external ratings of classrooms have demonstrated acceptable correlation with students' retrospective and current self-reports, demonstrating parity between the self-report and the external world. Other studies have shown agreement between teachers' assessments of students' engagement and students' own perceptions, but no significant agreement for students' self-reports and teachers' assessments of student motivation (W. Lee & Reeve, 2012). Given these discrepancies and the partially external nature of engagement, external measurement is necessary to verify and confirm self-reports.

New Ways to Measure

New technologies offer a number of avenues for exploration for external engagement measures. Eye-tracking, through portable eye tracking glasses, now allows researchers with the resources to measure students' gaze, attention, and time on task in a real-time fashion (Lai et al., 2013). Biometric wearables measuring heartrate also give real-time measures of students' reactions to classroom instruction and activities. Other methods, such as reaction times (Al-Hoorie, 2016) and the idiodynamic method (MacIntyre, 2012) help to triangulate retrospective and concurrent self-reports. Combined together and with existing self-report instruments, these methods can and likely will provide new measures of behavior, emotion, and cognition, and offer more accurate ways to model for the engagement constructs.

Online learning environments also offer new measures of engagement. Rate and accuracy of questions answered, mouse movements, number of log-ins and log-in time, keystrokes, and other measures of actual behavior beyond reported behavior, can help us understand what students actually do during the learning process (K.-C. Chen & S.-J. Jang,

2010; Fryer et al., 2014; Fryer & Bovee, 2016). By linking attitudes, instructional practices, and actual performance in a logically causal fashion (see Shadish et al., 2002), we can create more accurate models for how students interact with learning material.

Potential for Formal Language Learning

Engagement in Language Education Research

As mentioned, engagement can be integrated into multiple grand theoretical frameworks. While some constructs are central to defining a larger theory (*cf*. self-efficacy for social cognitive theory; intrinsic motivation and autonomy need for self-determination theory; etc.), engagement can be worked into any existing models and help add to the explanatory power.

Each of these elements interacts and contributes to the model outlined in Figure 1. This elements of the model have been tested in previous longitudinal empirical work (H. Jang et al., 2016; Oga-Baldwin et al., 2017; Skinner et al., 2008), and indicate engagement as the turning point of classroom learning. The individual pieces of the model should be familiar to both language learning and educational researchers; they largely mirror the process model of motivation proposed by Dörnyei (2000) and the 3P model put forward by Biggs (Biggs & Telfer, 1987). The hypothetical relationships represent natural temporal and environmental constraints, and so this model simply offers a shorthand framework for describing hypotheses while placing learners at the center of action.

Likewise, a contextualized model offers researchers using the L2 Self System opportunities to measure the effects of imagery training on learners' classroom engagement. Rather than employing the commonly used measure of "intended effort" as a

stand in for what learners do, a superior approach would be to survey responses to the L2 self-systems questionnaires (Taguchi et al., 2009), use engagement as a mediator at a separate time point, and then measure language achievement . As detailed previously, simple intent cannot and should not be used as a means to indicate what learners do. Until now, research in this line has used single surveys (e.g., Taguchi et al., 2009; You et al., 2015), which fails the crucial test of temporality in predicting outcomes (Shadish et al., 2002), and therefore the hypothesized variables such as ideal and ought-to L2 selves should not be considered to display any level of directional effect. Surveys need to be staggered and considered alongside a mediated predictor of achievement variables in order to represent the appropriate theoretical position of engagement as mediating the motivational presage / pre-actional variables and outcome / post-actional product variables, following Dörnyei's (2000) process model. As of yet, engagement has not been effectively used to measure the mediating, long-term effects of this or any other L2 motivation specific model.

All of the ideas above describe a more quantitative approach to investigating engagement. Qualitative approaches may also offer clear understanding of engagement, especially when looking at the social and agentic sides. The construct of engagement with language (Svalberg, 2017) may offer some insight into the actions learners take towards language achievement. At the same time, engagement with language is best regarded as a subcomponent of behavioral engagement, and perhaps a correlate of cognitive engagement under the currently proposed framework.

Other subcomponents, such as agentic engagement, have shown promise for helping explain how learners may positively shape the learning environment (Matos et al., 2018). Rather than asking students about their interpersonal engagement with their peers,

researchers might look at the interactions highly (or poorly) motivated students use when talking to their classmates during group activities. Agency can be documented through mixed methods, matching student survey responses with observed behaviors, or investigated qualitatively by documenting the types of questions that students ask when seeking help and clarification.

Finally, disengagement offers a potential explanation for decreases in motivation indicated in the "demotivation" literature (see Sakai & Kikuchi, 2009), which deals with the process of why language students feel a waning desire to learn. For many students, the lack of opportunity to act and interact in class is what leads to a decrease in motivation (Kikuchi, 2009). By comparing the engagement / disengagement levels of similar classrooms, opportunities for pedagogical interventions may become clear. If, as the literature indicates, students are frustrated by their lack of opportunities for language use and demonstrate weaker achievement as a result, there are strong grounds for positive intervention.

Caveats

As a theoretical construct, engagement must be tied to real world practices and observations. This means that relying solely on self-report without external triangulation somewhere in the model is unlikely to carry convincing weight as evidence. Measuring engagement in real settings needs to involve visible and observable outcomes. Thus, the issue of engagement comes back to one of methods, and requires that researchers develop new and more effective ways to document and measure engaged behavior, emotions, agency, and cognition. Self-report is the beginning, but it should not be the only or even the default method to measure engagement.

Likewise, engagement, and its instrumentation, needs to refer to specific classrooms and events. Evidence has shown that the farther students are from the point being measured, the less accurate their judgements become (Butler & J. Lee, 2006). This means that measuring engagement as a series of trends (i.e., "I enjoy learning new things in class," "I try very hard in class,") may not be the ideal measurement format. Instead, item wordings are best when they refer to a specific lesson at a specific time, preferably directly after the conclusion of that lesson (i.e., "I tried very hard in today's class," "I enjoyed learning new things in this lesson"). This will further help to differentiate engagement from other attitudinal variables. Engagement is a state, not a trait, and the instrumentation should reflect this.

Finally, engagement needs to be measured in such a way to separate the construct from motivational variables. If researchers are longitudinally measuring engagement together with other motivational variables, care must be taken to prevent the theoretical muddying, or to demonstrate that the measurements are clearly different. This might be accomplished through mixed measurement styles (e.g., observer rating used to triangulate self-reported engagement, etc.), or through demonstrating appropriate statistical differentiation via factor analysis or exploratory structural equation modeling. Engagement represents both an outcome and predictor of student attitudes, experiences, and abilities, so care must be taken to appropriately measure it separately.

Engagement in Language Pedagogy

The implications for classrooms are straightforward: learning focused classrooms promote student activity, not passivity. Engaging classrooms focused on games, enjoyment, and communication can have a positive impact on younger students' motivation and

learning (Oga-Baldwin et al., 2017; Oga-Baldwin & Fryer, 2018). This effect is likely to continue across formal learning contexts, regardless of foreign or second language context. Teachers looking to increase the engagement in their classroom must consider what elicits positive, learning oriented student behavior. This means creating a space where learners can act and interact.

One option for this is Nation's Four Strands instructional concept (Nation & Newton, 2009). If students are getting high quality input, producing regular output, repeating their practice, and being instructed on the form of the language, they are likely engaged in learning behaviorally, cognitively, emotionally, and agentically. This instructional environment might elicit more positive learning behaviors than less communicative classroom approaches, thus improving motivation and learning.

Conclusions

As outlined, students' actions toward their learning are a necessary part of any model of individual differences in formal language learning. The engagement constructs are flexible, and belongs to all models of learning. Researchers hoping to improve the explanatory power of their models have well-functioning tools and methods at their disposal when investigating engagement.

Crucially, engagement functions much the same in second as foreign language settings. If behavior can truly be used to predict thought and emotion as indicated in the neuroscientific and psychological literature (Libet et al., 1983; Marsh et al., 2018), promoting learning becomes a matter of increasing classroom activity. Though methods for inciting students toward this action is beyond the scope of this review, one of the key goals

in promoting learning becomes creating opportunities for students to act. Engagement is thus the doorway that teachers open for students; by taking action and stepping through, students may enter into new linguistic worlds.

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