Self-determination for all language learners: New applications for formal language education

Maya Sugita McEown[*], W.L. Quint Oga-Baldwin

Waseda University, School of Education, 1-6-1 Nishi Waseda, Shinjuku, Tokyo, 169-8050, Japan

ABSTRACT

Self-determination theory (SDT; Deci & Ryan, 1985) is an established macro-theory of human motivation, and differentiates two broad motivational orientations: intrinsic and extrinsic motivation. SDT is comprised of 6 mini-theories, each designed to address questions about human motivation and the process that facilitate and harm it. For foreign language researchers, these theories offer a clear, integrated framework for understanding motivation that translates across disciplines. For language teachers, SDT offer integrated principles for how to improve motivational quality. For language learners in formal education settings, these mini-theories offer a comprehensive set of ideas for generating internally regulated motives. This article will provide a comprehensive, up-to-date overview of SDT and how it can be applied to relevant issues in language education research and pedagogy.

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1. Introduction

Self-determination theory is a theory of human motivation and well-being, and as such it touches on many realms, not least of which is language education (Ryan & Deci, 2017). An explicit goal of self-determination theory is to explain how and why sustainable motivation and action occurs. In this framework, autonomous motivation is self-sustaining and requires fewer material rewards and punishments, representing a higher quality of motive. Controlled motivation is less sustainable, and weakens without outside input and support from outside influences (oftentimes teachers and parents); it is therefore of lower quality. While other theories hypothesize that motivation is primarily quantitative in nature (e.g., the L2 Motivational Self System, Dörnyei & Ryan, 2015; Expectancy-Value Theory, Loh, 2019 etc.), self-determination theory proposes that the more important issue is the quality of motivation. In language learning, the goal is therefore to build more high-quality autonomous motivation so that students are willing to use the new language to interact and learn without requiring constant effort from the teacher.

Self-determination theory (SDT) is a well-established theory in language education. Beginning with Noels' work in the 1990s and 2000s (Noels, Clément, & Pelletier, 1999; Noels, Pelletier, Clément, & Vallerand, 2000), SDT has enjoyed continued success and explanatory power for understanding motivation to learn languages in formal settings (McEown, Noels, & Saumure, 2014; Oga-Baldwin, Nakata, Parker, & R. Ryan, 2017), though it has not been as widely adopted in recent years

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* Corresponding author.
  E-mail addresses: msugitamceown@waseda.jp (M.S. McEown), quint@waseda.jp (W.L.Q. Oga-Baldwin).

compared with other SLA individual differences theories (Boo, Dornyei, & S. Ryan, 2015).[1] Researchers continue to use this theory as a means of exploring learning motivation, often using the iconic self-determination continuum, spanning from fully autonomous intrinsic motivation to amotivation. While studies have confirmed the theory in numerous new cultural, linguistic, and educational environments (e.g., Butler, 2014; Jang, Reeve, R. Ryan, & Kim, 2009; Chen et al., 2015; etc.) and brought new understanding of how and why people are motivated, research has yet to explore every aspect of this motivational theory to explain language education.

SDT provides a framework for many different aspects of human motivation using a set of mini-theories, each answering questions regarding the essential who, what, where, when, why, and how of people's behavior. The different mini-theories move together like the gears in a clock, each working to explain how people can be better motivated and lead more fulfilling lives. Each also provides a series of tools that researchers can use to answer relevant questions about how to describe and measure student motivation, which students have good quality motivation, and how we identify students with poor quality motives. While these theories describe dynamic and complex interactions, they are also internally consistent, empirically validated, and personally liberating (Ryan & Niemiec, 2009)—SDT focuses on helping individuals achieve well-being and agency in all aspects of their lives.

Given the universal scope and approach, self-determination theory applies to both second and foreign language classrooms. There are strong and nuanced differences between the realities of Syrian refugees learning French in Quebecois schools, Korean high school students learning English to enter a prestigious university, and Belgian university students studying Chinese as part of an East Asian studies major. At the same time, a strong unifying factor in each setting is that they are happening in classrooms; formal learning the world over offers many similar constraints and affordances, many of which are based on controlled motives (Chanal & Guay, 2015; Ryan & Deci, 2017). In comparing the nature of motivation across settings, a unified framework and terminology allows for assessment of nuanced similarities and differences. In this review, we hope to offer fresh directions for exploration into self-determined motivation using a common perspective that translates across formal education, no matter the language settings.

With its focus on the universal aspects of motivation, self-determination theory does not have specific mechanisms for modeling these different cultural realities, instead treating culture as an exogenous moderating force. Recognizing this, studies comparing the universal claims of SDT have been conducted (e.g., Chen et al., 2015; Chirkov, R. Ryan, Kim, & Kaplan, 2003). Importantly, researchers have found that across multiple disparate cultural settings, SDT applies consistently, though sometimes in ways that require specific localizations (Katz & Assor, 2006; Oga-Baldwin & Nakata, 2015). In essence, the principles, tenets, and assumptions of SDT appear to apply universally across multiple cultures, but do not apply uniformly. Regardless of cultural setting, language learners benefit from more autonomous motivation, though how teachers can develop said motivation differs across specific cultural and educational settings.

Self-determination theory studies in language education to date have primarily focused on only a few of the questions and mini-theories. While work to date has broken ground and helped clarify aspects of learning a language related to reasons why students are motivated and how to motivate them, future studies can offer a clearer and more nuanced understanding of all aspects of the theory, as well as language learning motivation generally. SDT is once again gaining recognition as a framework for exploring new topics in language education (Mercer, 2019). As such, in this review we seek to update the discussion on SDT in language education by outlining five mini-theories that comprise the larger theory. We will highlight recent key papers in both language education and general education, focusing on their implications for classroom learning and future research. For researchers hoping to continue work in this tradition, we will also provide several survey instruments in the appendices that have demonstrated adequate psychometric properties.

1.1. The mini-theories

As mentioned, self-determination theory includes six mini-theories, each addressing a different aspect of human motivation relevant to language learning. Of these, five theories offer the most to formal language education: cognitive evaluation theory, organismic integration theory, basic psychological needs theory, goal contents theory, and causality orientations theory.[2] We submit that these five offer relevant suggestions to formalized language education. We will outline each of the remaining mini-theories in its own section, and provide examples of empirical work related to language and education where possible, or draw connections to potential classroom implications and applications, as well as new research opportunities.

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[1] Though intrinsic motivation as a concept has continuously appeared in numerous SDT studies throughout the past several decades, the concepts of intrinsic and extrinsic motivators are not exclusive to self-determination theory. Expectancy-value theory (see Loh, 2019 this issue) uses intrinsic motivation and value, and books which include self-determination theory as just one perspective on intrinsic and extrinsic motivation have been written (Sansone & Harackiewicz, 2000). We have elected to only consider studies that specifically relate to self-determination theory in language and general education.

[2] Relationships motivation theory is not considered because it does not specifically relate to language learning in the formal classroom settings. Though the motivation to develop high quality interpersonal relationships undoubtedly plays a role in more generalized SLA, the scope and breadth of this aspect is less salient in formalized learning settings.

2. Cognitive evaluation theory

Arguably, cognitive evaluation theory (CET) is the most fundamental aspect of self-determination theory, and most relevant to formal language education. This mini-theory concerns how people interact with their environment. In many contexts, the environment of language classrooms may be compulsory and/or threatening; immigrant children may face discrimination and bullying in schools, while students learning a foreign language may feel that it is unwanted or an unnecessary threat to national or gender (Chaffee, Lou, Noels, & Katz, 2019) identity. Teachers' responsibility is thus to nurture students and help them to develop positive educational outcomes despite these potential hazards. CET represents how teachers may use the principles of autonomy support, structure, involvement, and external control (defined hereafter) to help or harm students' autonomous motives. Through this process, students will either develop more internalized, autonomous motives, or will move towards more externally controlled motives.

Autonomy Support. Autonomy support represents how teachers, parents, and peers nurture students' inner motivational resources. Teachers provide this through listening to students and their ideas, allowing students to work in ways that suit them, increasing opportunities for students to talk with each other and to the whole class, offering hints and encouragement rather than answers, giving a rationale for activities and assignments, and acknowledging that students have their own perspectives on how classes should be run (Assor, Kaplan, & Roth, 2002; Jang, Reeve, & Halusic, 2016b; Reeve & Jang, 2006; Reeve, Jang, Hardre, & Omura, 2002). Though some researchers have emphasized the value of choice as a motivating practice (Dörnyei & Csizér, 1998), note that autonomy supportive teaching does not necessarily involve offering choices. Instead, choice should be considered within the framework of practices of a specific culture, recognizing that choice itself does not always support autonomy (Katz & Assor, 2006). Instead, meaningful choice within the normally accepted cultural affordances and constraints of a region may help to nurture inner resources (Chirkov, 2009).

Structure. Veteran teachers usually have a good sense of how to structure a classroom environment to maximize learning. Structure describes how teachers provide clarity, support the development of knowledge, move classes forward at an appropriate pace, and balance learning activities to maximize student understanding (Jang, Reeve, & Deci, 2010). Through these practices, teachers reduce the difficulty that students would experience trying to learn the material on their own or with minimal guidance (Kirschner, Sweller, & Clark, 2006). Given the need for a rich interactive environment in language classes (Nation, 1996), structure may be the key component for achievement in language learning. These practices may broadly be understood as supportive of the development of competence (R. R. Ryan & Deci, 2017), and help to move students towards feelings of accomplishment, achievement, and confidence in their abilities. Providing students with the feeling that they can positively influence their environment and learning is a powerful way to feed into the basic need for competence (Skinner, 1996).

Involvement. Involvement should be understood as the interpersonal warmth and caring that teachers demonstrate toward their students (Furrer & Skinner, 2003). Students who perceive that their teachers are willing to spend time with them, form caring bonds, and offer emotional support and security ultimately display more autonomous motivation and engagement in formal learning environments (R. Ryan, Stiller, & Lynch, 1994). Perhaps especially in schools, learning a language can induce anxiety for many students (MacIntyre, Baker, Clément, & Donovan, 2002), and thus the emotional support of the teacher is a crucial element in providing a sense of interpersonal safety, allowing students to perform language tasks.

Teachers also need to provide warmth and respect in the learning environment to support relatedness, and limit conditional regard (Deci & Ryan, 2014). Conditional regard refers to the practice where teachers, parents, or other authorities offer positive affection and connection exclusively when children are agreeable or obedient, and withhold it at other times. According to Assor, Roth, and Deci (2004), parental conditional regard predicted various negative affective outcomes, such as feeling shame after failure, lack of self-esteem, coping skills and self-worth and so forth. A study of teacher conditional regard conducted by Kaplan (2018), found that perceived teacher conditional regard was negatively associated with perceived psychological need satisfaction among students.

External control. External control represents students' feeling that their environment is not one that they can influence (Reeve & Jang, 2006). Teachers often use rewards and punishments (grades, demerits, privileges and their removal, etc.) to elicit desired behaviors, which can lead to students feeling controlled. Students may also feel that they are being forced to comply with unwanted, unnecessary, or uncomfortable rules. Some teachers seem unreasonable, while others appear to monopolize time and educational resources. Still other teachers may not appear responsive to student ideas and opinions. In any of these and other cases of control, students may perceive that the learning environment is not one that represents their inner goals, dreams, desires, and values. This may induce them to exert fewer internal resources toward learning, and thereby begin to exhibit more controlled motives (detailed below).

2.1. Applications for language education research

Investigations of ideal behaviors for autonomy support, structure, and involvement have been made (Furrer & Skinner, 2003; Hughes, Bullock, & Coplan, 2013) in non-language related educational environments. Indeed, this is one of the most teacher-oriented aspects of the theory, as it offers clear guidelines on what teachers can do and say to promote better quality motivation (Reeve & Jang, 2006).

One of the first tasks for language education researchers interested in expanding this aspect of SDT would be to define the second- or foreign-language education relevant practices that positively (and negatively) influence students' motivation and

achievement in formal settings. Some work has been done toward this end (e.g., Dörnyei & Csizér, 1998; Sakai & Kikuchi, 2009), though these studies have not adequately measured any predictive effect on student language learning, achievement, or long-term motivation, nor have they made use of any effective unifying theoretical principles, increasing the difficulty of replicating these findings and comparing with results from other studies. The suggested individual strategies from the language learning literature (Dörnyei & Malderez, 1997) are primarily based on teachers' self-reports of what they believed to be effective (Dörnyei & Csizér, 1998), most of which do not empirically change students' motivation and behavior when used as individual predictors (Sugita & Takeuchi, 2010).

Instead, strategies appear to relate more in the aggregate. Guilloteaux and Dörnyei and Malderez (1997), indicated that an observed higher frequency of motivational strategy use correlated with higher observed student engagement in a large population of South Korean secondary school students. Thus, a series of practices that drew student interest, promoted student-teacher interaction, and elicited student activity co-occurred with better student classroom behaviors, one potential indication of motivation. This supports the idea that generalized approaches such as CET offer an organizing heuristic for teachers and researchers. Using ideas from SDT as a unifying framework, language learning researchers could better communicate across contexts and even across subject domains to provide insight and advice on pedagogical practices in other areas.

We should note here that there is still debate regarding the cross-cultural, cross-national, and age-related features of autonomy support, structure, and involvement. Elementary school students in Japan had difficulty separating perceptions of autonomy support and structure (Oga-Baldwin & Nakata, 2015). In this study, both exploratory and confirmatory factor analysis indicated that a single factor, labeled supportive teaching, better explained students' attitudes. Results have been replicated in Japanese secondary schools as well (Fryer & Oga-Baldwin, 2019), with students perceiving a clear difference between support and external control across mathematics, national language, and English as a foreign language classes, but no consistent difference between autonomy support and structure. Though not focused on language education, another survey of South Korean elementary school students confirmed these results (Ahn, Patrick, Chiu, & Levesque-Bristol, 2018). Comparing a series of empirical factor analytic models, students' rating of teacher autonomy support, structure, and involvement was best explained by a single factor. Taken together, these results indicate that students in formal settings might be rating the general learning environment created by the teacher, rather than more fine-grained contributions from each of the factors. Other researchers maintain that autonomy support, structure, and involvement should remain separate (Aelterman et al., 2013; Reeve, 2012). Future research on this topic in language learning needs to investigate and help resolve this debate through empirical findings.

3. Organismic integration theory

Organismic integration theory (OIT) is likely the most recognizable of the mini-theories, and has the longest history in language learning. OIT describes the reasons that learners choose to engage in their schoolwork. Its first substantial treatment in formal language education came with Noels' and colleagues' (2000) seminal paper on why Canadian university students were studying a foreign language. Since then, a number of studies have made use of this continuum to describe the quantity and quality of motivation (Carreira, 2012; Kozaki & Ross, 2011; McEown, Noels, & Chaffee, 2014; Oga-Baldwin, Nakata, Parker, & Ryan, 2017). As this theory has been well-described and well-established in numerous language learning articles, we will provide a bare-bones introduction only; researchers wishing for a more in-depth treatment of this theory should refer to the original work (Noels et al., 2000).

The organismic integration theory continuum of motivation spans from amotivation to controlled motivations to autonomous motivation. This continuum is presented in Fig. 1. Amotivation describes an impersonal orientation to learning a language, indicated by a belief that the effort required to learn the language would be too great, that the time used toward achieving proficiency would not be well spent, or that the person's ability to learn the language was poor. Next on the continuum, controlled motivation requires greater external intervention from teachers, parents, or significant others to maintain. It is represented by external regulation and introjected regulation. External regulation is indicated by a belief that the person has no other choice but to comply. Students here might fear that their teachers will get angry if they do not speak out in class or answer questions correctly on a language test; they might be taking a language class to fulfill curricular requirements for a foreign language and seek only to get a passing grade; or a second or foreign language may be required for to pass a high-stakes entrance examination. Slightly more autonomous (though still clearly controlled) is introjected regulation, where students perform in their language class for fear of ego-threat: either a fear of loss of face for failure to achieve, or a desire to please parents, teachers, or peers. Rather than a response to an external contingency, this type of regulation is marked by the need to resolve feelings of socially oriented pressure stemming from within the learner.

Requiring less external effort to maintain, autonomous motivation is represented by Identified, integrated, and intrinsic regulations. Identified regulation is when learners recognize the value of learning a language and endorse it as a personal goal. Integrated regulation is seen where learners have begun to internalize positive attitudes toward the task and assimilate them into the personal self-system. Finally, intrinsic regulation is a representation of fully intrinsic motivation, where learners feel interest, joy, and purpose when learning a language.

It is important to remember that the different regulations are not unconnected; students act for a variety of reasons. Their behavior is always a result of a configuration of regulatory factors. In other words, students' motivation is always simultaneously autonomous and controlled (e.g., see Nishida & Yashima, 2017), but the key question is the configuration of that

Adapted from Deci & Ryan, 2000; Ryan & Deci, 2017

Controlled Motivation	Autonomous Motivation
Lower motivational quality Poor performance & personal wellness	Higher motivational quality Good performance and personal wellness

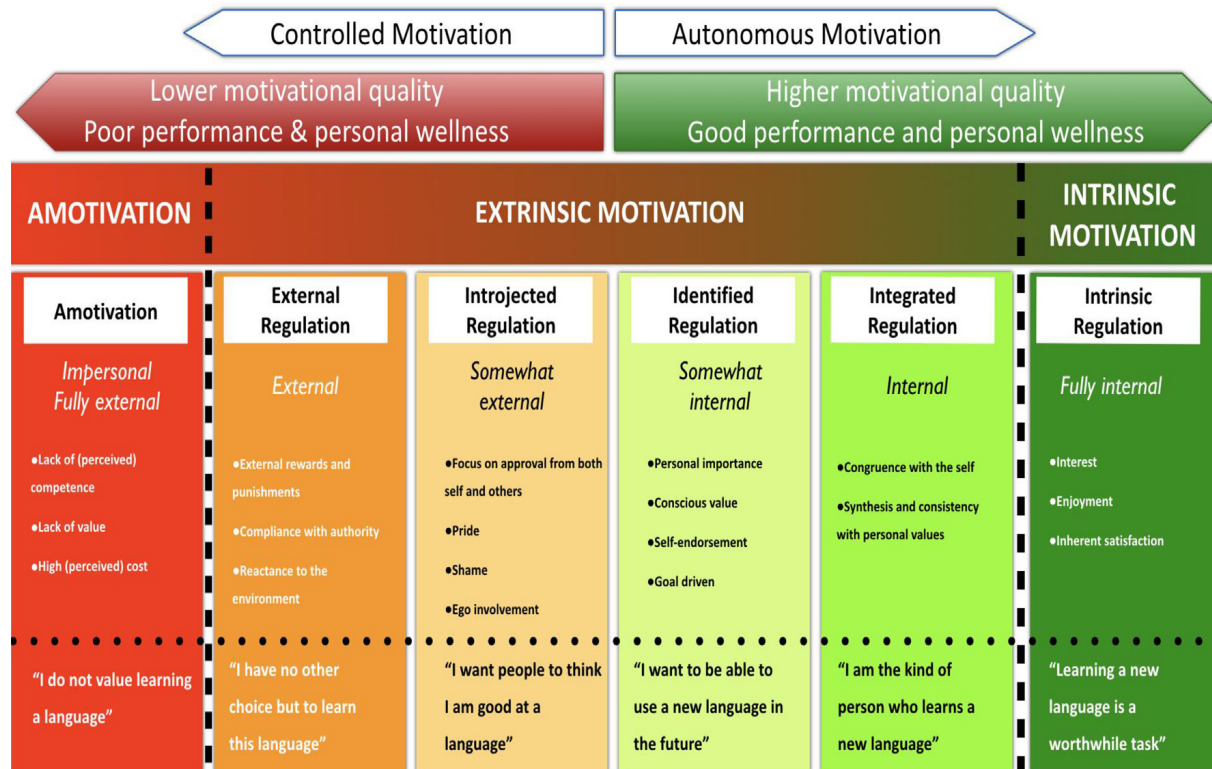| AMOTIVATION	EXTRINSIC MOTIVATION				INTRINSIC MOTIVATION
Amotivation	**External Regulation**	**Introjected Regulation**	**Identified Regulation**	**Integrated Regulation**	**Intrinsic Regulation**
Impersonal Fully external	*External*	*Somewhat external*	*Somewhat internal*	*Internal*	*Fully internal*
•Lack of (perceived) competence •Lack of value •High (perceived) cost	•External rewards and punishments •Compliance with authority •Reactance to the environment	•Focus on approval from both self and others •Pride •Shame •Ego involvement	•Personal importance •Conscious value •Self-endorsement •Goal driven	•Congruence with the self •Synthesis and consistency with personal values	•Interest •Enjoyment •Inherent satisfaction
"I do not value learning a language"	"I have no other choice but to learn this language"	"I want people to think I am good at a language"	"I want to be able to use a new language in the future"	"I am the kind of person who learns a new language"	"Learning a new language is a worthwhile task"

Fig. 1. The organismic integration continuum of motivation regulation.

motivation. Comparatively higher autonomous motivation is of higher quality, with concomitant better achievement and well-being. Comparatively higher controlled motivation is of lower quality, and accompanies lower achievement and well-being.

Crucially, SDT does not claim that extrinsic (controlled) motives, such as rewards, punishment, contingencies, shame, and guilt, are not motivating. If extrinsic motives were immediately ineffective, no one would use them. Extrinsic motives and orientations can provide short term motivation, but this motivation is likely to disappear quickly, promote negative attitudes, and lead to less long-term well-being and achievement. Through the integration process described in CET, learners develop stronger autonomous or controlled motives based on environmental influences.

Consistently, recent language education research has verified the effects of stronger autonomous motives on learning and instruction across multiple language educational contexts. Canadian learners enrolled in university Japanese language classes were more likely to want to continue learning when they espoused autonomous reasons for the studying (McEown, Noels, & Saumure, 2014). Other Canadian undergraduates showed a greater sense of primary control and positive reappraisal of their language study aspirations when more autonomously motivated (Chaffee, Noels, & McEown, 2015). Among Chinese elementary and secondary school students, autonomous motives correlated with language achievement, but the strength of this relationship differed across grade level and socio-economic status, increasing as students grew older (Butler, 2014). For Japanese high school learners in a largely negative peer environment in Japan, autonomous motives still had a moderate predictive relationship with vocabulary learning (Tanaka, 2017a, 2017b, pp. 130–138). Other work showed how autonomously motivated elementary students engaged and achieved more in their language classes (Oga-Baldwin et al., 2017).

3.1. Applications for language education research

While considerable work has been done regarding the organismic integration continuum (Noels et al., 2000, etc.), there are two major areas of exploration that may allow for greater ecological and developmental understanding of the theory: person-centered analyses and longitudinal analyses. We highlight these methodological and analytic possibilities primarily to indicate the potential for new directions that even the most established aspects of this theory can provide for language education research.

Person-centered examinations. While previous studies have used variable-centered perspectives, using motivation to predict outcomes (Noels, Clément, & Pelletier, 2001; Noels et al., 2000; Oga-Baldwin et al., 2017), person-centered analytic methods may offer new opportunities for exploration. Where variable-centered analyses isolate the predictive effect of each motivational regulation and control for shared variance, person-centered analyses allow us to see how individuals'

simultaneous autonomous and controlled motives influence learning. Both cluster analyses and latent profile analyses may indicate individual students' similarity to other individuals (Vansteenkiste, Sierens, Soenens, Luyckx, K., & Lens, 2009; Gillet, Morin, & Reeve, 2017), and how these profile groupings relate to the learning environment (see CET above) and other constructs such as mindsets (Lou & Noels, 2019), goals (M. Lee & Bong, 2019), learning approaches (Parkinson & Dinsmore, 2019), and in class engagement (Oga-Baldwin, 2019). The insights from these methods can help indicate the influence of the environment not only on motivation, but the complex ways it affects individuals as a whole.

Longitudinal analyses. Following with the "dynamic turn" in L2 motivation (Dörnyei, MacIntyre, & Henry, 2015), research is needed to investigate the dynamic nature of students' motivation over time. Longitudinal variable-centered analyses such as cross-lagged and auto-lagged structural equation modeling or time-series analyses can offer a dynamic view of how students' motivation itself changes over the course of a week, a month, a semester, or a full school year. Likewise, person-centered analyses can demonstrate how individual students' motivation may change to place them in different groups at different times. Some work has made use of these methods in Japanese school settings (Oga-Baldwin et al., 2017; Oga-Baldwin & Fryer, 2018; Fryer & Oga-Baldwin, 2019), but more studies demonstrating the dynamic, longitudinal, and interconnected nature of students' motivational regulation is necessary.

4. Basic psychological needs theory

A major contribution of Self-Determination theory is that it highlights the importance of three basic psychological needs: The theory emphasizes autonomy, competence and relatedness as essential needs for internalizing motivation. Autonomy refers to the need for learners to feel their actions are their own, with a sense of personal endorsement (Ryan & Deci, 2017). Autonomy may also relate to the idea of personal investment (see King, Yeung, & Cai, 2019). Competence refers to the need for learners to feel that their actions lead to desired outcomes, and that they feel effective in what they do (Deci & Ryan, 2002; Harter, 1982; White, 1959; Ryan & Deci, 2017). Relatedness refers learners' need to feel a sense of belongingness and connection with teachers and classmates, provided by warmth and reciprocal support (Furrer & Skinner, 2003).

The more school conditions support these three basic needs, the more likely that learners will feel a sense of well-being (Reeve & Assor, 2012; Ryan & Niemiec, 2009). According to this mini-theory, if teachers, peers, parents, and other educational facilitators satisfy learners' needs, then learners will more effectively and proactively participate in academic activities and engage more in learning (Ryan & Deci, 2017). In contrast, thwarting these basic psychological needs undermines learning and adaptive functioning in schools (Ryan & Deci, 2017). When learners experience need satisfaction in schools, they show higher engagement and achievement over time (Jang, Kim, & Reeve, 2012). Likewise, need thwarting in educational settings shows the opposite effect (Jang, Kim, & Reeve, 2016a), where learners show higher disengagement with the learning process.

4.1. Applications for language education research

Autonomy, competence, and relatedness needs have been quite well-established in the realm of language learning (Agawa & Takeuchi, 2016; Hiromori, 2003; Maekawa & Yashima, 2012; Otoshi, J., & Heffernan, N., 2011, Tanaka, 2017a, 2017b, pp. 130−138) since Noels' initial application of this theory to applied linguistics (Noels et al., 1999). Much subsequent attention has been given to need satisfaction (e.g., Tanaka & Hiromori, 2007). However, as of yet few studies have focused on the study of thwarting behavior. In some settings, the primary reasons for learners experiencing disengagement, negative emotions, and other maladaptive outcomes was not because students did not perceive that these three basic psychological needs were not well supported but that their needs were strongly frustrated or thwarted by contextual facilitators (Jang et al., 2016a, b).

Some research has demonstrated the differential functioning of these needs. Joe, Hiver, and Al-Hoorie (2016) illustrated that only competence need satisfaction had an effect on ultimate language achievement among a sample of Korean secondary school students. Tanaka (2017a, 2017b) showed that autonomy correlated with intrinsic motivation for extensive reading, relatedness with peers correlated with introjection, and competence was most strongly associated with extrinsic regulation for extensive reading in English. Other studies have shown similar differences in correlation between the three basic needs and motivational regulation, with several showing the strongest and most consistent correlations between competence satisfaction and language motivation regulation (Hiromori, 2003; Agawa & Takeuchi, 2016). Looking at the predictive value for a supportive environment on the different needs, Oga-Baldwin and Nakata (2015) showed how a combination of autonomy support and structure supported need satisfaction for Japanese elementary school students, with the strongest predictive value found for autonomy. These studies, primarily in East Asian Confucian heritage cultures, indicate how this mini-theory may function universally, but not uniformly.

Every culture may have its own emic or internally recognizable way of expressing different needs (King & McInerney, 2014). Each culture may have its' own way of expressing relatedness, competence, and (the most controversial) autonomy (Chirkov, Ryan, Kim, & Kaplan, 2003; Roth, Assor, Kanat-Maymon, & Kaplan, 2006). While some researchers (e.g., Miller, 1999; Oishi, 2000) have argued that autonomy may be a sociological construct (see Noels, Chaffee, Michalyk, and McEown (2014) for a more recent and detailed discussion addressing culture and autonomy in language learning), originating from a Western perspective, robust cross-cultural research has shown that autonomy need satisfaction is a clear predictor of intrinsic motivation, well-being, and achievement (Chirkov et al., 2003; Jang et al., 2009; Chen et al., 2015; etc.).

While empirical work has indeed provided questions regarding the effectiveness of choice as a form of autonomy need satisfaction (Agawa & Takeuchi, 2016; Iyengar & Lepper, 1999; Miller, 1999; Otoshi & Heffernan, 2011), theoretical discussions

have addressed these issues, indicating that the need for autonomy is more than a need for choice (Katz & Assor, 2006). Likewise, attempts to explicate the differences between the construct of autonomy as presented in language learning and SDT (M.-K. Lee, 2016) have ultimately muddied the water more than they provided clarity (Lou, Chaffee, Vargas Lascano, Dincer, & Noels, 2017). In short, when adapting the basic needs constructs of autonomy, relatedness, and competence in new cultural settings, there is a clear need to take into account the localized (emic) indicators, wordings, and conceptual understandings of the target culture.

Though the basic needs, especially autonomy, will continue to be a source of controversy, the empirical literature supporting them remains strong (Ryan & Deci, 2017). On a more intuitive, pedagogical level, successful teachers make students feel welcome and part of the language learning classroom community (relatedness), capable of successfully using the new language (competence), and that engaging with the language aligns with students' sense of self (autonomy). Whether students are learning the new language in a country where the target language is spoken or as part of a foreign language program, teachers can support motivation and well-being by paying attention to these three needs.

5. Goal contents theory

Goal contents theory describes what students hope to achieve, and the reasons behind those future goals. As discussed in other articles (M. Lee & Bong, 2019), goals have an important value on learning. SDT's goal contents mini-theory employs the same autonomous-controlled dialectic framework for understanding how learners set and define their goals. Just as with organismic integration theory, the reasons why students may be motivated differ in quality, the directions that they choose to go are also ruled by the quality of the goals they choose to follow. In short, the contents of language learners' goals matters, and not all goals that learners express will be of equal value in drawing students toward the intended outcome.

Intrinsic goals and extrinsic goals. Similar to organismic integration theory, intrinsic goals originate from within the individual (Ryan & Deci, 2017). These are goals which help to satisfy basic needs, move the student towards well-being and personal growth, build strong interpersonal relationships, and allow for freedom and self-expression. In language learning, these goals might be attuned toward making friends across cultures, opening up possibilities for travel, understanding interesting new media, and achieving personally valuable goals.

Extrinsic goals are those which move individuals toward more short term rewards. Learners may seek to make shallow friendships, make money or achieve recognition or praise, and may handicap their ability to express themselves in the long term. Extrinsic goals for school-based language learning might include the desire to pass high-stakes examinations, to win recognition with teachers and peers, or outperform classmates in comparative rankings. These goals are conceptualized as dispositional; learners will tend to make and hold goals in line with their different individual tendencies (see also the discussion of causality orientations theory below).

Research has demonstrated how intrinsic goals, which originate from within the person, may have more powerful outcomes than those which come from outside (Vansteenkiste, Lens, & Deci, 2006). More than this, more goals do not always improve the quality of outcomes, especially when these goals are ruled by external circumstances (Vansteenkiste et al., 2004). Combining goals for intrinsic reasons and extrinsic reasons does not improve the power of the goals, but rather the more tangible and enticing extrinsic goal may distract learners from the long-term rewards of the intrinsic goal. Models and instruments established in psychology (Vansteenkiste et al., 2004; Vansteenkiste, Timmermans, Lens, Soenens, & Van den Broeck, 2008) have been tested in language education as well, verifying the internal-external goal framing as valid and useful for explaining the instrumental reasons students choose to engage in compulsory language learning (Fryer, Ozono, Carter, Nakao, & Anderson, 2013; Fryer, van den Broeck, Ginns, & Nakao, 2016).

5.1. Applications for language education research

Goal quality for language learning. Researchers interested in translating, localizing, or otherwise replicating the work done on goals have an open, but theoretically and empirically grounded, field for exploration. Preliminary work has validated the constructs of internal and external goal framing (Fryer et al., 2013), but further work is necessary to test the theoretical, cross-cultural, and pedagogical implications of this minitheory. The results may offer important new understanding of how language learners set goals for themselves or are controlled towards specific learning outcomes. Though these goals may have theoretical overlap with the integrative vs. Instrumental framework pioneered by Gardner (Masgoret & Gardner, 2003), new instruments and updates using SDT may offer greater explanatory power of proximal, distal, instrumental, and social orientations (Fryer et al., 2013).

One avenue for cross-theoretical comparison might be the explanatory power of intrinsic/extrinsic goal orientations and ideal/ought-to L2 selves. Though the self discrepancies may be considered primarily external in their framing, the comparison between how goals differ for language specific reasons offers room for interchange between these fields. The ideal L2 self as conceptualized by Dörnyei (Dörnyei & Ryan, 2015) has many elements of a personally relevant goal, often involving imagery and visions of personal growth and development, while the ought-to L2 self is recognizable as a sense of internal and external social pressure toward a goal. With a better understanding of how vision (Dörnyei & Chan, 2013) relates to self-determined goal setting, this new direction in language education research could positively feed back into general psychological and educational research.

6. Causality orientations theory

Causality orientations theory (Deci & Ryan, 1985) offers a personality approach to motivation (McAdams & Pals, 2006), again emphasizing more dispositional trait features than state factors. This theory seeks to address the question of who students believe is in control of their motivation, and who they prefer to be in charge, and distinguishes motivationally relevant psychological processes into three different levels: autonomous, controlled, and impersonal causality orientations — i.e., understanding the basis of a person's behavior (Deci, 1980; Kwan, Hooper, Magnan, & Bryan, 2011). When individuals are autonomously oriented, they tend to be more self-determined, intrinsically motivated and less controlled by external pressure or extrinsic rewards (Deci & Ryan, 1985; Hagger & Chatzisarantis, 2011). In contrast, controlled orientation involves individuals' behavior controlled by either in the environment or from internal pressure (Deci & Ryan, 1985). People with a controlled orientation tend to be ego-orientated or are motivated because of social pressure or extrinsic rewards. Impersonal orientation entails behavior that an individual believes is outside of their intentional control, that is, they lack choice (Deci & Ryan, 1985). Those orientations may result in their perceived likelihood of failure, incompetence (Kwan et al., 2011), or inability to master a situation (Deci & Ryan, 1985).

With respect to L2 learning, the first two types of causal orientations (autonomous and controlled orientations) have been well researched and many results have indicated that people who endorsed an autonomous orientation tend to be more self-determined in language learning processes, have a stronger interest in learning the language, have a stronger intention to continue to learn the language, have a more positive attitude toward the language and toward learning the language, and have better self-regulatory learning processes (e.g., Sugita-McEown, Noels, & Saumure, 2014). On the other hand, people who endorsed a controlled orientation may have the opposite circumstances, such as lower their interest, negative attitude, and disengagement.

Although impersonal orientation is a relatively new concept in language learning, L2 researchers have focused on similar dimensions without employing this SDT framework, that is demotivation or remotivation (e.g., Kikuchi & Sakai, 2009; Sakai & Kikuchi, 2009). These studies are not a theoretical basis but take a more practical approach. Moreover, demotivation is viewed in a more categorical manner and L2 researchers' strong focus on demotivation focuses on what are demotivating factors among language learners rather than what will happen after endorsing these demotivational factors. By considering SDT impersonal orientation, we might be able to add different perspectives to L2 demotivation research. For example, Ryan and Deci (2000) note that individuals with this type of orientation are imbued with a strong belief that they are not capable of producing an organized environment conducive for adaptive learning processes. Therefore, in academic contexts, impersonal orientations tend to predict helpless feelings, depressive thoughts, and amotivated behaviors toward learning and learning situation. Impersonals have an external locus of causality (Deci & Ryan, 1985, p113), tend to attribute their successes to external factors, and frequently experience feelings of boredom (Deci & Ryan, 1985; Koestner & Zuckerman, 1994).

6.1. Applications for language education research

According to Boo, Dörnyei, and Ryan (2015), and Ushioda and Dörnyei and Malderez (1997) the strong majority (>70%) of L2 motivation research in recent years was conducted in English learning contexts or in contexts where English was the target language. In much of this research English was a compulsory subject, with much of the curriculum designed by governments; in other words, individual learners had almost no choices regarding their learning goals and processes. In these situations, learners might experience an absence of self-determination and self-confidence, which in turn may lead to a higher possibility of endorsing impersonal orientations. Comparing orientations within these contexts might provide additional understanding of individuals learning a compulsory subject, and inform perspectives on L2 demotivation.

7. Conclusion

Self-determination theory offers a deep well to plumb for researchers looking for research topics. As of yet, the theory has only been applied in a limited number of ways, though the applications offered by the theory have had long-lasting effects. Each of the parts of the theory works in consistent and synchronous fashion, with clear mechanisms for understanding how self-determined motivation develops in both foreign and second language learning contexts. By integrating new methodologies as well as new microtheoretical avenues, researchers can help to expand understanding of the motivation to learn a language based on these theoretical precepts. Beyond this, the universal nature of self-determination theory offers opportunities for interaction between the world of language education and into the more generalized discussion of human motivation.

Researchers should consider the complex contextual issues in which the language learning occurs, which could be divided into two contexts: 1) formal classroom settings where, in most of the cases, learners follow a formal plan of instruction from teachers, or 2) outside classrooms, which often integrate into language learners' real life experiences. Language learning sometimes occurs in multiple contexts throughout a persons' life (e.g., through formal instruction in the classroom and/or in casual contexts such as a café) and the learning occurs with either with a strong intention to learn the language or without a strong intention to learn the language. In many cases they go across cultures to learn a language and things become even more complex. These complex contexts that language learners have are dynamic and make it difficult to provide a clear distinction among the dimensions introduced in SDT mini-theories or to provide a continuum of these dimensions. As mentioned,

language learners can hold simultaneous autonomous and controlled motives (Nishida & Yashima, 2017). The crucial element is thus the complex interactions of these motives on learners' behavior and their surroundings.

Considering these complex contextual issues, in some instances language learners perceive more other environmental supports as more salient to their autonomous motivation (e.g., relatedness satisfaction as more connected than autonomy; Otoshi & Heffernan, 2011). Diverse cultural backgrounds and learning situations may include casual settings where learners practice a new language with their friends in that language community. As described earlier, the focus of the current article is SDT in formal classroom settings. We present the mini-theories here in a way that L2 researchers and teachers can use to explain and explore learners' motivation in the L2 classroom. However, care must be taken in the implementation and interpretation of this research. By considering the type of learning situations involved in target samples (students learning a new language only in the classroom vs. those learning as an immigrant or heritage language learner vs. those learning while living abroad, etc.), researchers may choose the most appropriate theoretical mechanisms. As noted, SDT is universal in its scope, but not uniform in its application.

Given the strong interpersonal and interactional nature of language learning, the SDT minitheories suggest ways for teachers to improve student motivation and well-being. In promoting classroom learning, teachers can help to nurture inner psychological resources by using autonomy support, structure, and interpersonal involvement with their students. These practices help to support students' needs for autonomy, competence, and relatedness, which in turn feed autonomous motivation, more internal causality orientations, and more intrinsic goals. Even in formal, compulsory language learning situations, teachers employing the principles and practices of self-determination theory can have more positive effects on motivation, well-being, and language achievement. Nurturing environments matter in learning a language, and self-determination theory can improve teachers' instruction, peers' support, and individuals' well-being when engaged in language education.

Acknowledgement

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.system.2019.102124.

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