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Validating the English Language Learner Motivation Scale (ELLMS): Pre-college to measure language learning motivational orientations among young ELLs

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ABSTRACT

This study modified and validated a measure of motivational orientations – grounded in self-determination theory and originally developed for postsecondary students – for use with younger (pre-college) English language learners (ELLs). Exploratory factor analysis results in Sample A ($n = 528$) indicated that the data were best explained by a three-factor solution (intrinsic motivation, introjected regulation, and external regulation) that explained 51.6% of the variance. These results were corroborated by a confirmatory factor analysis in an independent Sample B ($n = 529$; GFI = .97, CFI = .96, SRMR = .04, RMSEA = .05). The test for invariance across the two samples further supported the validity of the measure. The modified instrument, named *English Language Learner Motivation Scale (ELLMS): Pre-College*, showed strong psychometric characteristics for use with elementary (ages 9–11 years), middle (ages 12–14 years), and high school (ages 16–17) ELLs. Applications of the measure are discussed.

1. Introduction

Individual differences (IDs) have been defined as the "dimensions of enduring personal characteristics that are assumed to apply to anyone and on which people differ by degree" (Dörnyei, 2005, p. 4). Interest in studying IDs is driven by a trend characteristic of educational psychology in general and of second language acquisition (SLA) research in particular. In SLA, this trend reflects a shift in focus from studying *what* is learned when a new language is acquired (the product) to studying *how* a new language is learned (the process; Fromkin, Rodman, & Hyams, 2007). Dörnyei pointed out that much of variation in second language (L2) or foreign language (FL) attainment has been attributed to IDs and that "no other phenomena investigated within SLA have come even close to this level of impact" (p. 2). Consequently, "there is a considerable body of literature on such variables as language aptitude, motivation and learning styles" as well as their relations to other variables such as age, teaching methods, and learning contexts (Bown, 2007, p. 353).

Motivational orientations, the variable of interest to this study, have been defined as particular reasons for learning an additional language (Noels, Pelletier, Clément, & Vallerand, 2000). Motivational orientations have been linked – either directly or through the mediating effects of other ID variables – to L2 achievement (Ardasheva, 2011; Bernaus & Gardner, 2008; Ehrman & Oxford, 1995; Gardner, 2006; Masgoret & Gardner, 2003; Pae, 2008) as well as to a host of other ID and language learning behavior and attitude variables (Comanaru & Noels, 2009; Csiezér & Dörnyei, 2005; Oxford & Nyikos, 1989; Rubenfeld, Sinclair, & Clément, 2007; Schmidt & Watanabe, 2001; Vandergrift, 2005).

The instrument that has been particularly informative in guiding research and current understandings of motivational orientations and their relationships with other ID variables (e.g., Comanaru & Noels, 2009; Goldberg & Noels, 2006; Pae, 2008; Rubenfeld et al., 2007; Vandergrift, 2005; Wu, 2003) has been Noels et al.'s (2000) *Language Learning Orientations Scale–Intrinsic Motivation, Extrinsic Motivation, and Amotivation Subscales* (LLOS-IEA). This instrument is grounded in self-determination theory (Deci & Ryan, 1985; Deci, Vallerand, Pelletier, & Ryan, 1991). The theory defines motivation against the degree of self-determination and distinguishes between two key motivational subtypes—intrinsic and extrinsic motivations. The instrument has been validated in a sample of college-age Anglo-Canadian L2 learners using exploratory factor analysis techniques and showed good psychometric properties for use with this learner population.

The instrument, however, has been primarily used to study motivation among post-secondary second/foreign/heritage language learners. The validity of LLOS-IEA (Noels et al., 2000) for use with younger learners – particularly with pre-college English language learners (ELLs), a fast-growing school population in English-speaking countries (Goldenberg, 2008; Kaufman & Crandall, 2005) – has not been empirically tested. When LLOS-IEA has been used to conduct research with pre-college (elementary and high school) learners (Vandergrift, 2005; Wu, 2003), the authors modified the instrument to better fit their target

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groups and reported reliability coefficients but stopped short of conducting a thorough examination of the psychometric properties of the modified versions of the instrument. The primary purpose of this study was to modify and validate the LLOS-IEA for pre-college ELL students. Additionally, this study provided some preliminary investigation into the generalizability of SDT constructs to pre-college ELLs.

2. Study background

2.1. Theoretical framework

2.1.1. Motivation in SLA

Language learning motivation has been defined as the drive to learn a new language associated with effort, desire to learn, and positive attitudes toward the language studied (Gardner, 2006). Motivational orientations, in turn, have been defined as sets of reasons for learning an additional language (Noels et al., 2000). While motivational theories, in general, seek to explain why people do what they do, motivation for learning a new language, Dörnyei (1996) argued, represents "a unique situation even within motivational psychology" (p.72) given the unique *personal* and *social* role of language in human experience. On the one hand, Dörnyei argued, language is "an integral part of the individual's identity involved in almost all mental activities" (p. 72); on the other hand, language serves as an interpersonal communication system and as a tool for social organization. In second language contexts, language takes on an additional symbolic value of access to the social, cultural, and material resources (e.g., membership, education, employment) available to the native speakers of the language (Norton, 2006; see also Bourdieu, 1986).

Thus, research on language learning motivation has been influenced by both *social* and *cognitive* theories. In differentiating between these two perspectives, Dörnyei (2003) argued that whereas social theories consider both individuals' ethnolinguistic attitudes (e.g., attitudes toward the L2 and its speakers) and societal variables (e.g., power relationships, language status, language contact), cognitive theories primarily consider an individual learner's characteristics (e.g., perceived locus of causality, perceptions of success, goals) as essential elements underlying motivational dispositions. Two theories – socio-educational model (Gardner, 2006) and self-determination theory (Deci & Ryan, 1985; Deci et al., 1991), representing the social and cognitive perspectives, respectively – have been particularly influential in guiding SLA research. Because the instrument examined in this study was grounded in the self-determination theory, in the following section we examine some of the key premises and criticisms associated with the latter theoretical perspective.[1]

2.1.2. Self-determination theory: premises and criticisms

Deci and Ryan's (1985) self-determination theory (SDT) holds that the individual's "capacity to choose and to have those choices" (p. 38) determines the individual's actions. Thus, SDT developers distinguished between two types of motivation, namely, *intrinsic* and *extrinsic* motivations, whose subtypes are thought to represent points on a continuum from less to more self-determined behaviors. Whereas the sources of self-determined behaviors are believed to lie within personal choice and task relevance, compliance and task irrelevance are believed to be the main regulatory processes underlying controlled behaviors. The authors elaborated:

> Intrinsically motivated behavior has an internal perceived locus of causality: the person does it for internal rewards such as interest or mastery; extrinsically motivated behavior has an external perceived locus of causality: the person does it to get an extrinsic reward or to comply with an external constraint. (p. 49)

In other words, within the SDT framework, personal choice and relevance are thought to give rise to intrinsic motivation and more self-determined behaviors; compliance and lack of personal relevance are associated with extrinsic motivation and controlled behaviors.

The theory offers several advantages to the field of SLA in terms of predicting student successes or failures in acquiring a new language. First, within the SDT framework, more self-determined motivations are thought to be conducive to more optimal learning including increased problem solving flexibility, more efficient knowledge development, an increased sense of self-worth (Deci et al., 1991), and sustained effort (Noels, Clément, & Pelletier, 2001). Second, instructional environments that satisfy inherent human needs for *competence* (the know-how regarding attaining varied external and internal outcomes), *autonomy* (self-initiation and regulation of one's actions), and *relatedness* ("secure and satisfying relationships with others") are thought to maximize more self-determined types of motivation (Deci et al., 1991, p. 327). Relatedly, as expressed within an SDT-subtheory framework termed *cognitive evaluation theory* (CET; Deci, Koestner, & Ryan, 1999), intrinsic motivation – the most self-determined motivational type – is believed to be diminished by tangible rewards such as money or college credit. According to Deci et al. (1999), tangible rewards – when perceived as controllers of behavior – are likely to "thwart satisfaction of the need for autonomy, lead to a more external perceived locus of causality […], and undermine intrinsic motivation" (p. 628).[2] In other words, despite the "innate propensity" of humans to engage in interesting tasks (Deci & Ryan, 1985, p. 38), within CET framework, motivation to engage with even interesting tasks is believed to be diminished by rewards.

The CET premises, however, have met some criticism in the literature (Eisenberger, Pierce, & Cameron, 1999), on the grounds that this framework (a) did not adequately explain the differential effects of rewards reported in the literature and (b) did not consider motivation to engage in low-interest tasks. In offering an alternative theoretical perspective – termed *general interest theory* (GIT) – Eisenberger et al. argued that "intrinsic motives are more diverse than solely competence and self-determination" (p. 678). The authors argued:

> The content of tasks and the context in which they are presented, including reward, increase intrinsic motivation when they convey that task performance helps satisfy needs, wants, or desires. Conversely, task content and context, including reward, reduce intrinsic motivation when they communicate that the task is irrelevant or antithetical to needs, wants, or desires. (p. 678)

Notably, in their meta-analytic re-analysis – including a reward re-categorization schema as well as some additional research – of reward studies synthesized in Deci et al. (1999), Eisenberger et al. (1999) found that rewards, in general, had a positive effect on self-perceived autonomy and intrinsic motivation as measured by engagement in free-choice behaviors and self-reported interest. Rewards contingent on more restrictive performance standards – mastery or normative criteria versus vaguely defined criteria such as 'doing well' – were associated with greater positive outcomes. The authors attributed these results to the *symbolic value of the reward* (i.e., conveying either task triviality or task importance and thus decreasing or increasing self-determination, respectively). Eisenberger et al. further argued that the concept of the symbolic value of the reward – when perceived as being associated with personal (needs, wants, desires, skill development) and social ("identification with the task

[1] Readers interested in learning more about the socio-educational model, are referred to Gardner's work, in particular to Masgoret and Gardner's (2003) meta-analysis of studies grounded in this framework.

[2] On the other hand, when perceived as affirming competence (i.e., informational rewards such as positive feedback), rewards are believed to enhance intrinsic motivation (Deci et al., 1999).