

Unpacking The Role of Ideal L2 Self and Growth Mindset in Explaining EFL Learners' DMCs

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Research Article

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Abstract

In the field of second language learning motivation, recent trends call for studies that scrutinize Directed Motivational Currents (DMCs). Yet, there remains a paucity of evidence on the individual difference variables that induce DMCs. In particular, research to date has not yet determined the role of ideal L2 self and mindset in explaining variations in the DMC disposition. This quantitative study aims to fill these gaps in the literature by exploring the role of ideal L2 self and growth mindset in explaining EFL Learners' DMCs. The current study was conducted with a total of 176 preparatory class students enrolled in the department of English Language and Literature or English Language Teaching at various state universities in Turkey. The data were gathered using a composite survey instrument that includes the DMC Disposition Scale, the Mindset Instrument, and the Ideal L2 Self Scale. The findings of the multiple linear regression analysis indicated that growth mindset explained 32% of the variance in EFL learners' DMCs whereas ideal L2 self-contributed to the prediction of DMCs, explaining 24% of the variance in participants' DMC disposition. The results offer new insights into how EFL teachers could exploit such intense motivational experiences to promote learning in L2 classroom contexts.

Keywords: Directed motivational currents, ideal L2 self, growth mindset, EFL learners

İngilizceyi Yabancı Dil Olarak Öğrenen Öğrencilerin Hedefli Motivasyonel Akımlarını Açıklamada İdeal Yabancı Dil Benliği ve Zihniyet Rolünü Ortaya Çıkarmak

Öz

İkinci dil öğrenme motivasyonu alanındaki son eğilimler, hedefli motivasyonel akımları inceleyen çalışmaların artmasına yol açmıştır. Ancak, hedefli motivasyon akımlarını etkileyen bireysel farklılık değişkenleri ile ilgili çalışmalar yetersiz kalmıştır. Özellikle de ideal yabancı dil benliği ve gelişen zihniyetin dil öğrenenlerin hedefli motivasyon akımlarını yordamadaki rolü henüz belirlenmemiştir. Bu nicel çalışma, İngilizceyi bir yabancı dil olarak öğrenenlerin hedefli motivasyon akımlarını açıklamada ikinci dil benliği ve gelişen zihniyetin rollerini inceleyerek literatürdeki bu boşluğu doldurmayı amaçlamaktadır. Bu çalışma, Türkiye'de çeşitli devlet üniversitelerinde İngiliz Dili ve Edebiyatı ya da İngilizce Öğretmenliği bölümlerine kayıtlı 176 hazırlık sınıfı öğrencisi ile yürütülmüştür. Veriler Hedefli Motivasyonel Akımlar Ölçeği, Zihniyet Ölçeği ve İdeal Yabancı Dil Benliği ölçeğinden oluşan karma bir anket aracılığı ile toplanmıştır. Çoklu doğrusal regresyon analizi sonuçları gelişen zihniyetin katılımcıların hedefli motivasyonel akımlarındaki değişimin %32'sini açıklar iken, ideal yabancı dil benliğinin ise bu varyansın %24'ünü yordadığını göstermiştir. Çalışma sonuçları, öğretmenlerin yabancı dil öğrenme ortamlarında öğrenmeyi teşvik etmek için bu motivasyon dalgalanmalarından nasıl yararlanabileceklerine dair yeni bilgiler sunmaktadır.

Anahtar Sözcükler: Hedefli motivasyonel akımlar, ideal yabancı dil benliği, gelişen zihniyet, yabancı dil olarak İngilizce öğrenenler

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INTRODUCTION

L2 motivation, a significant predictor of second/foreign language (L2) achievement according to Dörnyei (2006), stands out as one of the most extensively studied individual difference (ID) variables (Dörnyei, 2005; Ushioda, 2008). Since Gardner and Lambert's research in 1959, there has been considerable exploration into the role of motivation in L2 learning, with the past decade witnessing a growing interest in examining "the situated nature of L2 motivation" (Boo, Dörnyei, & Ryan, 2015). In line with this current emphasis, a fresh motivational concept known as "Directed Motivational Currents" (DMCs) has emerged in the field of L2 learning psychology. DMCs, characterized by their lasting nature and strength, refer to a sustained engagement in tasks that are primarily rewarding because they lead individuals toward a highly cherished objective (Dörnyei, MacIntyre, & Henry, 2015, p. 98). Put simply, DMCs represent a motivational experience where individuals are deeply involved in activities fueled by the pursuit of a personally significant and valuable goal, utilizing a clear and supportive pathway (Ibrahim, 2017, p. 25). A DMC differs from traditional motivation in that it possesses an inherent energizing capacity. Once a DMC is established, the initial motive itself becomes a part of the energy source, as emphasized by Dörnyei, Henry, and Muir (2016).

According to Dörnyei and colleagues (2016), Directed Motivational Currents (DMCs) encompass three essential components, without which they cannot be considered true DMCs: goal-orientedness, a salient facilitative pathway, and positive emotional loading. The first component involves the learner personalizing a goal by imbuing it with their envisioned experience of achieving it (Dörnyei & Chan, 2013, p. 454). DMCs are inherently directional and aimed at a specific ultimate goal, such as becoming a proficient second language learner. A clearly defined objective guides behavior towards tasks that increase the likelihood of reaching the goal (Henry, Davydenko, & Dörnyei, 2015).

The second element of DMCs is a salient facilitative pathway, acting as a map that outlines the route towards achieving the ultimate goal. This pathway is accompanied by a series of subgoals that serve as progress checks, ensuring alignment with the learner's vision and providing opportunities for feedback.

The third crucial aspect of DMCs is positive emotionality, representing the sense of enjoyment experienced during task performance, which also brings the individual closer to their goal (Henry et al., 2015). According to Dörnyei and colleagues (2016), this positive emotional experience arises because individuals are actively engaged in actions that contribute to their ultimate goal.

Although Directed Motivational Currents (DMCs) hold significant promise as a research area for L2 (second/foreign language) researchers, our understanding of this unique motivational phenomenon is still in its early stages, leaving gaps to be addressed. Notably, little attention has been given to exploring individual difference variables that influence individual-level variations in DMCs. While some studies have explored the connection between DMCs and affective factors, such as personality traits, buoyancy, evaluation apprehension, personal best, self-confidence, autonomy, self-efficacy, self-concept, and willingness to communicate (e.g., Jahedizadeh et al., 2021; Pietluch, 2018, 2019; Sak, 2021; Zarrinabadi et al., 2019), no research has specifically examined the extent to which an EFL (English as a Foreign Language) learner's ideal L2 self and growth mindset can predict the variability in their DMCs.

The concept of ideal L2 self, a component of Dörnyei's (2005) L2 motivational self-system, represents an individual's L2-specific goals, hopes, and aspirations regarding their future use of the language. It has been identified as a crucial predictor of L2 motivation (Papi & Teimouri, 2012; Ryan & Dörnyei, 2013; Taguchi et al., 2009). Learners with a strong ideal L2 self attach personal significance to learning the language, leading them to internalize their motives for studying it. This construct is seen as a dynamic interplay between integrativeness and instrumentality, as suggested by Dörnyei (2009).

Mindsets, which are alternatively called lay/implicit theories, pertain to a person's personal convictions about the changeability (growth mindset) or unchangeability (fixed mindset) of their own traits (Lou & Noels, 2019). In relation to acquiring a new language, a growth mindset indicates the belief that language skills can be enhanced through diligence, whereas a fixed mindset suggests that language proficiency remains constant and cannot be altered (Dweck & Leggett, 1988). Language mindsets have been found to be strong predictors of L2 motivation (Lou & Noels, 2017; Waller & Papi, 2017), as they influence how L2 learners think, feel, and act during their learning journey. Research has consistently shown that learners with a growth mindset display higher motivation levels and are more willing to embrace challenges, whereas those with a fixed mindset tend to avoid challenging tasks and show lower motivation levels due to a belief that academic obstacles cannot be overcome (Dweck, 2006). Additionally, growth mindset overlaps with the construct of ideal L2 self (Lan et al., 2021).

The complex nature of DMCs necessitates an exploration of individual difference variables that may impact this construct. Investigating these learner variables can provide valuable insights into facilitating the pedagogical use of DMCs. Thus, the present study aims to contribute to this emerging field of research by examining the roles of ideal L2 self and growth mindset in explaining EFL learners' experiences with DMCs.

Research Questions

The following research question was addressed based on the aim of the current study:

1. To what extent can EFL learners' ideal L2 self and growth mindsets explain the variability in their DMC dispositions?

METHOD

Research Design

In this quantitative study, the adopted research design was a cross-sectional survey-design in which a representative sample of participants was included. A quantitative approach was employed intentionally as it is well-equipped to contact a large number of participants at a time and then generalize the results to the whole population (Creswell, 2005). The present study is descriptive in its nature as the aim of this study is to describe the role of the ideal L2 self and mindset in explaining EFL learners' DMCs in explaining EFL learners' DMC dispositions via some surveys. In order to capture their role a survey-design was thus deemed appropriate.

Setting and participants

The study was conducted at various state universities in Turkey. The research respondents were a total of 176 preparatory class students studying in the department of English Language and Literature or English Language Teaching and receiving compulsory English preparatory class education.

Table 1. Demographic Information about the Participants

		F	%
Gender	Female	135	76.71
	Male	41	23.29
Department	English Language Teaching	53	30.11
	English Language and Literature	123	69.89
L2 Proficiency Level	Pre-Intermediate	127	72.15
	Intermediate	41	23.29
	Upper-Intermediate	8	4.54

Research respondents, ranging in age from 19-23 ($M=20.1$), were chosen via non-random convenience sampling method (Female: 135, 76.71%; male: 41, 23.29%). The survey sample size was considered appropriate, considering the number of independent variables examined in the current study ($n=2$) (Tabachnick & Fidell, 2013). Table 1 provides demographic information about the participants.

The selection of the true-DMC cases (namely the participants of the present study) was performed in two steps. First, a brief description of DMCs and core features of DMCs through two archetypical examples were given to 876 respondents who were asked to fill in the composite-survey. In the initial stage, individuals who self-reported having undergone (or currently undergoing) a DMC with a comparable level of intensity in their history of L2 learning were chosen as DMC cases for this study. Subsequently, individuals who reported not having experienced a DMC to a similar degree of intensity were excluded from further analysis. In the second step, the analytical procedures were carried out based on the data collected from those respondents who self-reported having experienced this type of intense motivation ($n=176$). Muir in her 2016 PhD Dissertation guided such a stepwise approach to isolate the true-DMC cases. She (2016) noted that:

The step of isolating participants who had experienced this type of motivation to a similar level of intensity was a key to distilling true DMC experiences, and participants who self-selected as to a similar level of intensity were earmarked for inclusion in the DMC group (p. 137).

In the present study, this reasoning was also followed. Initially, the potential DMC group was identified and then the data came from this group of participants.

Instruments

In line with the aims of the current study, an online composite survey consisting of the DMC Disposition Questionnaire, the Mindset Instrument, and the Ideal L2 Self Scale was used. In the first part of the composite-survey, the respondents were asked to provide information on their gender and age, then this part also included a brief description of DMC and core features of DMCs through two archetypical examples provided to the respondents to report whether they have experienced a DMC to a similar level intensity or not. Those respondents who self-reported having experienced a DMC to a similar level intensity in their L2 learning history were asked to provide information on these three instruments. The second part of the survey was made up of Muir (2016)'s DMC Disposition Scale which includes 12 items based on a 5-point Likert type response format. The internal consistency of Muir (2016)'s scale was high ($\alpha=.84$). The third part of the online survey included the ideal L2 self-subscale adapted from Taguchi, Magid, and Papi's (2009) questionnaire. Dörnyei and Chan (2013) has also adopted the scale and they reported high internal consistency ($\alpha=.78$). In the last part of the online survey, the respondents were asked to fill in the subscale of Dweck's Mindset Instrument (2000) consisting of sixteen items focusing on their views of their own intelligence and success. Mindset is defined by (Dweck, 1995, p. 269) as a construct with a simple unitary theme. Also, he has further stated that in order to form shorter versions of the scale, their items can be utilized alone (Dweck, 2000). In this study, the growth mindsets statements (i.e. 3, 5, 7, 8, 11, 13, 15, and 16) were provided to the respondents to reflect their beliefs and core assumptions about their success and intelligence. The internal consistency of the instrument was found to be quite high ($\alpha= 0.94$ to 0.98) (Dweck, 1999).

The reliability coefficient for all the scales of the present study was analyzed with Cronbach's alpha. $\alpha= 0.89$ for the DMC Disposition scale, $\alpha= 0.90$ for growth mindset subscale of the Dweck mindset instrument, and $\alpha= 0.902$ for the ideal L2 self subscale. The reliability coefficients of the DMC Disposition scale, growth mindset subscale of the Dweck mindset instrument, and ideal L2 self subscale were found to be quite high.

Data Collection and Analysis

Using a convenience sampling method, the data collection was performed during the fall term of 2018-2019 academic year with a composite survey in the Google Forms format. The completion of the composite survey lasted up to about 15 minutes. IBM SPSS 24 software was utilized to analyze the collected data descriptively. The descriptive statistics of the scale scores were obtained, and to assess the assumptions of linearity, normality, and absence of outliers, the skewness and kurtosis values were examined. Subsequently, a multiple linear regression analysis was performed, and the assumptions of linearity, normality, independence, and homoscedasticity of residuals were tested to understand if EFL learners' growth mindset and ideal L2 self scores could predict their DMCs. Besides, in the data, no multicollinearity and multivariate outlier biasing the model were identified. Comparisons were made at the $p<.05$ significant level for statistical analysis.

FINDINGS

The multiple linear regression analysis was conducted to find out whether growth mindset and ideal L2 self scores could predict variability in the participants' DMC disposition. There are assumptions for this multivariate statistical method, which is parametric. For multiple linear regression analysis, the predicted (dependent) variable should be normally distributed and continuous, while continuous predictive (independent) variables should also be normally distributed. The skewness and kurtosis values were examined for the normality of the scores, and if these values are between ± 2 , the score distribution is normal. See Table 2 for the normality scores.

Table 2. Descriptive Statistics

Scales	Skewness	Kurtosis
DMC	0,391	-0,964
GM	-0,175	-1,049
IL2S	-1,31	1,807

As seen in Table 2, accordingly, the distribution of the three scale scores was found to be normal.

In addition, there should not be a multicollinearity problem between the independent variables in the model (Pallant, 2007). Tolerance and VIF values are examined in multi-connection problem. In the absence of multicollinearity, VIF values below 10 and tolerance values above 0.10 indicate that there is no significant issue (Tabachnick & Fidell, 2013). There is no multicollinearity according to the tolerance value and the VIF value. In other words, there is no significant ($r>0.90$) relationship between the independent variables (See Table 3).

Table 3. Multicollinearity Problem Table

	Tolerance	VIF
GM	0,855	1,17
IL2S	0,855	1,17

Since the independent variables are the same for all models, the multicollinearity problem is provided for all models. An important assumption in regression analysis is whether there is autocorrelation between residuals and it is expected to be between 1.5 and 2.5 when examined with the Durbin Watson coefficient (Tabachnick & Fidell, 2013). The Durbin Watson value was obtained as 2.106. Thus, the assumption was held true for the regression model.

Table 4. Multiple Linear Regression Analysis and Coefficients

Independent Variables	B	Standard Error	β	t	p
Fixed	2,539	0,255		9,975	,000
GM	0,02	0,005	0,32	4,41	0
IL2S	0,195	0,059	0,242	3,331	0,001

F(2,173)=12.948; p<0,001
R=0,469; R²=0,22

As seen in Table 4, the multiple linear regression model, which was established to test if growth mindset and ideal L2 self could predict variability in explaining EFL learners' DMC dispositions, is statistically significant (F(2,173)=2.539, p<.01). The R square value indicates to what extent the variance (variability) in the predicted variable is explained by the independent variables (Pallant, 2007). 22% of the variance in the DMC scores is explained by the variables included in the regression model. Growth mindset scores ($\beta=0.32$, $t=4.41$, $p<.05$) and ideal L2 self ($\beta=0.242$, $t=3.331$, $p<.05$) statistically positively and significantly predict EFL learners' DMC disposition scores. When there is a 1-unit increase in each of the growth mindset and ideal L2 self-scores, there is an increase of 0.320 and 0.242 units in the DMC disposition scores, respectively, and growth mindset was found to be stronger predictor of DMCs than their ideal L2 self.

DISCUSSION AND CONCLUSION

The aim of the present study was to understand whether EFL learners' growth mindset and ideal L2 self scores could predict their DMC dispositions. The following paragraphs will discuss the findings with regard to our current knowledge base on L2 motivation research, mindset, and ideal L2 self. This is of high importance as thus far the relation between DMC experience and the aforementioned ID factors were not investigated. For this reason, considering the strong relationship between L2 motivation and DMCs, the discussion will have to be grounded on the L2 motivation literature. In this study, this is not expected to cause deficiency.

As regards the research question, the regression model with all predictors, established to test if growth mindset and ideal L2 self could predict variability in explaining EFL learners' DMC dispositions, accounted for a significant proportion of the variance in EFL learners' propensity to experience DMCs (22%). In light of the past literature on the relation of these predictors (growth mindset and ideal L2 self) with L2 motivation, this finding was expected. It was not thus surprising to obtain growth mindset and ideal L2 self-scores statistically positively and significantly predict EFL learners' DMC disposition scores. By receiving the greatest weight in the model, growth mindset was identified as the most potent predictor of EFL learners' DMC dispositions. These findings therefore provide some of the initial insights into an ID variable that explains such variability in EFL learners' L2 DMC dispositions, which corroborated the arguments of the DMC researchers who have proposed that certain ID variables may explain the variance in L2 learners' propensity to experience DMCs (e.g., Peng & Phakiti, 2020; Selçuk & Erten, 2017; Muir & Gümüş, 2020; and Dörnyei et al., 2016). The possible reason for this predictor may rest on the common view that people with growth mindset are more persistent in their mastery goals and adaptation of effort attribution which in turn leads them to achieve better academic results (Dweck, 2006). The strong link might also be ascribed to the fact that people holding a growth mindset acknowledge that challenges should be embraced as an opportunity like steppingstones for the learning process and effort is essential and regarded as a path to mastery, leading them to extend exerting effort until the final achievement (Dweck, 2006). As DMCs represent goal-driven motivational orientations which doubtless bring about EFL learners toward being achievement-oriented, this result is conceivable. Thus, striving persistently in a disciplined way with an

achievement-oriented mindset implies the goal-directed nature of DMCs. What this tells us is that people with fixed mindset may suffer from a lack of motivational investment and behavioural inhibition, thus most probably leading them not to be caught up in DMCs.

The regression analysis also found ideal L2 self as a significant predictor for EFL learners' DMC dispositions, corroborating the findings of a large number of previous research (Murray, 2013; Kormos & Csizer, 2014; Dörnyei & Kubanyiova, 2014; Dörnyei & Chan, 2013). The mental imagery capacity was found to be a precursor for generating clear visions of desired future selves, or in other terms ideal L2 self (e.g., Kim & Kim, 2011, 2014; Dörnyei & Chan, 2013; Yang & Kim, 2011). Thus, EFL learners who have strong imagery capacity might be able to generate more vivid visions of their ideal L2 selves. Dörnyei and his colleagues (2013, 2014) have also supported the significant role of imagination capacity (or vision) in instigating learners' efforts. Besides, learners with strong images of their desired future selves would be more prone to exert greater amount of effort into their L2 learning process to accomplish them in their actual lives with positive emotions (Kormos & Csizer, 2014; Muir & Dörnyei, 2013), finally leading to stronger motivation. The relation of the ideal L2 self might also be attributed to the fact that a clear goal or vision is a primary cornerstone of all DMCs which align diverse tasks that learners must undertake en route in their L2 learning process until the achievement of the final goal (Dörnyei et al., 2016). Thus, it was revealed that learners with a high level of ideal L2 self may have a dispositional advantage to be caught up in DMC experiences in an EFL context. This finding also documented evidence for the significant role of the ideal L2 self in explaining the individual probability of engaging in DMC practices. This finding corroborates the ideas of Dörnyei and associates (2015), who suggested that engaging in some self-in-future imaginations can trigger and propel DMCs. This may further imply that the learners who visualize their ideal future situations (namely, they have accomplished their end-states) are more likely to excel in the DMC practices. Moreover, the deprivation of a well-developed ideal L2 self, as Dörnyei (2014) emphasizes, may give cause for amotivation. It can therefore be assumed that learners with low levels of ideal L2 self may suffer from the deficiency of motivational energy needed to engage in DMC practices.

Overall, the results implying the supremacy of EFL learners' ideal L2 selves and growth mindsets to generate a more conducive environment for their dispositions to experience DMCs in the L2 learning process, suggest that ID factors or psychological variables might contribute to the efficacy of DMC experiences. By extensions, if EFL learners are guided to engage in practices reflecting their growth mindsets and ideal L2 selves, it might be the case that all EFL learners may be able to be more highly disposed to experience DMCs than others and obtain more motivational gains when they are caught up in DMCs. Although the findings of the present study have documented evidence for the dispositional advantage of a subset of people who have a high level of ideal L2 self and growth mindset, any learners may be able to experience DMCs irrespective of their ID factors if suitable environment and opportunity are provided (Dörnyei et al., 2016).

Implications for the individual-level DMCs

In the present study, the insights offered by the above discussion may provide some pedagogical implications to enhance EFL learners' L2 motivational dispositions. First and foremost, the results seem to suggest that deliberate ideal L2 self and growth mindset-informed pedagogical decisions may serve a useful purpose in maximizing EFL learners' motivational dispositions which might in turn enable them to be caught up in DMCs. Thus, it is of great importance for teachers to understand that having higher levels of ideal L2 self and growth mindset have an impact on EFL learners' tendency to experience intense motivational surges. L2 teachers should adopt strategies that enable their EFL learners to enhance and strengthen their L2 self-imagery and growth mindset which will, in turn, enhance their propensity to experience DMCs. Then, by enabling EFL learners to imagine the future situation in which they use the L2 and visualize themselves as L2 speakers in the future, this set of strategies thus may promote their DMCs. Creating learning environments which will engage learners' L2 self-imagery will also help them to build up and retain such visions. The importance of such visions in DMCs lies in their key role to generate substantial motivational energy and maintain it during the whole experience. Also, to develop and strengthen their growth mindsets, mindsets interventions implementing growth mindset practices into L2 classroom settings and curriculum could prove useful in stimulating EFL learners' DMCs.

Last but not least, it is also essential to consider the wider potential implications for assessment, instruction, and curriculum design in L2 learning settings. If sustained professional development sessions regarding L2 self-imagery and growth mindsets are intentionally incorporated into teacher training, it may result in stimulating L2 learners' intensive and long-term learning motivation. Moreover, from a motivational perspective, it could prove to be useful to employ testing and assessment methods that navigate ideal L2 self and growth mindsets for fulfilling the needs of intense motivational commitment.

Limitations and Future Directions

The present study was conducted with tertiary level EFL learners in a Turkish context. Therefore, it is advisable to exercise caution when extending the findings of this study, as the data was obtained through non-random means. The scope of the present study was confined to analyzing the quantitative data collected using a composite survey instrument. Documenting qualitative evidence could provide more useful insight into the links between EFL learners' DMC experiences and ID variables. It would be promising for future studies to investigate how other individual difference (ID) variables on EFL learners' propensity to experience DMCs. Another fruitful area of future research could be to document any possible long-term effects of ID factors on EFL learners' individual and/or group DMC experiences. A further fruitful future avenue will be to carry on the exploration of the longitudinal stability of ID variables (self-efficacy, self-regulation, growth mindset, ideal L2 selves, and WTCs) in those learners who have been caught up in DMCs. Issues of interest might also include the extent to which ID variables might explain the variation in individual and group DMC experiences. The importance of exploring such questions lies in the potential to provide a more effective toolkit that might help practitioners to purposefully facilitate their EFL learners' individual or group DMCs in L2 classroom settings.

Statements of Publication Ethics

As the authors of this research, we affirm that there were no ethical issues in the study. We strictly adhered to research and publication ethics, as well as ethical principles and regulations, throughout the entire research process, including planning, data collection, analysis, and reporting. Participants who willingly participated in the study were requested to provide their consent by signing a consent form. Confidentiality and anonymity were meticulously maintained during data analysis and reporting to safeguard the participants' privacy.

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