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Extraordinary motivation or high sense of efficacy? The role of self-efficacy in the Directed Motivational Currents theory

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Summary

Introduction

Much investigative effort has been devoted in recent decades to the task of exploring what factors account for the success of a learner in a foreign language classroom. Amongst several dilemmas that have been troubling those concerned with second language instruction, one of the most notorious was the question of why certain individuals develop fluency in a foreign language in, what appears to be, almost an effortless manner, while other students struggle to exceed the boundaries of the beginner level. Stephen Krashen (1985), for instance, sought to explain the process of attaining satisfactory linguistic proficiency in terms of general mechanisms and the volume of input in a target language a person receives. It has not been until the early 1980s and the seminal work of Gardner (1982) until the researchers' attention was swayed towards the scope of influence of affective variables on the process in question. Since then, it has become a commonplace to consider that notions such as motivation or anxiety are indeed crucial in predicting a student's performance in a classroom, giving rise to a multitude of different motivational frameworks that were believed to contribute to leveraging the likelihood of attaining language proficiency. Although some theories have failed to withstand the evidence-based scrutiny, the novel conceptualisation of Directed Motivational Currents coined by Dörnyei and his colleagues, on top of broadening comprehension of the motivational processes, offers a robust practical structure which may inspire motivational momentum that would be far and beyond standard cases of motivated behaviour. Whereas motivation remains to be the most frequently researched affective variable in the L2 learning context, an array of more or less successful factors has been proposed over the last few decades. The concept of self-efficacy devised by Albert Bandura in the late 1960s has been originally suggested as a measure of predicting an individual's engagement in the domain of sport. However, as the extent to which personal agency is developed has been found applicable in virtually all spheres of human existence, the notion, as any other successful finding from the psychological inquiry, has been soon applied in the educational setting and is now understood to be one of the essential facilitators of developing mastery in a foreign language. Even though some efforts have been made to confirm the validity of Dörnyei's structure, the investigation into the potential of a DMC has been most typically focused on a retrospective exploration of motivational surges. Additionally, to the best of the author's knowledge, the framework has not been previously operationalised in combination with the concept of self-efficacy, and thus, the present research endeavour was initiated in the hope of ameliorating the identified gap of inquiry.

The dissertation takes the form of five chapters, with two of them being of theoretical nature. On top of elaborating on the Second Language Acquisition theory devised by Krashen, the first part aimed at providing a concise overview of the factors responsible for a learner's success while developing mastery in a foreign language, including self-efficacy, affective variables such as motivation and anxiety as well as learners' individual differences. The second chapter was focused on the analysis of Dörnyei's framework of Directed Motivational Currents; in addition to outlining the theoretical underpinnings behind the conceptualisation, Dörnyei's motivational structure was contrasted with a number of motivational theories in search of commonalities. As the framework in question pertains to highly unique periods of intense motivational involvement, this step was deemed essential to demonstrate a full understanding of its intricate nature. Moving on to a more analytical frame, mixed research methodology was applied in efforts to expand on the relationship between a high sense of efficacy and the occurrence of motivational surges of energy. The supplementary objective of the third chapter, in addition to generating confirmatory evidence for the existence of the aforementioned correlation, was to reveal the instances of the DMC phenomenon that would be further explored in the following sections of the thesis. In Chapter four, a qualitative methodology was applied; the DMC cases that emerged as a result of a quantitative investigation in the previous section were subjected to direct interviews designed by the author solely for the present investigation. The aims set out to the part in question were twofold; as the framework created by Dörnyei depicts a rather novel motivational phenomenon, the chapter was meant to contribute to the understanding of the processes involved in inspiring intense motivational gain and to elaborate on the role of agency beliefs for the process. Furthermore, the conclusions produced in due course were of tremendous importance for designing a language teaching curriculum in the hope of inspiring DMCs in a real classroom environment. Finally, Chapter five was dedicated to the application of the experimental structure that was explicitly honed to trigger the DMC phenomenon amongst students of English as a foreign language. On top of presenting the results, in each chapter, the outcomes of the study are discussed.

Theoretical foundations

Much has been written on the role of agency beliefs in developing proficiency in a second language and, nowadays, self-efficacy is viewed as a catalyst of successful performance in the domain under scrutiny (Pajares 2005; Meral et al. 2012; Raoofi 2012; Pietluch 2018). At the opposite end of the spectrum, although it is possible to observe some investigative effort which rendered positive coefficients between Dörnyei's conceptual framework and learners' success

in terms of developing satisfactory degree of language fluency, much more research work remains to be done to confirm the practical potential of the structure (Henry et al. 2015; Watkins 2016; Ghanizadeh and Jahedizadeh 2017). As both concepts, in their essence, seek to explain the motives behind a person's longitudinal investment in a task, the assumption that the notions may be interrelated is not deprived of reason. More specifically, beliefs of efficacy are generally considered to leverage such features of an individual's performance as resilience in the case of hardships and the effort expenditure tendencies which are, beyond any doubt, crucial from the perspective of challenging endeavours such as learning a foreign language. Similarly, the intricate structure created by Dörnyei pertains to longitudinal engagement in the pursuit of highly demanding goals. One may assume therefore that by mitigating the daily ebb and flow of human motivation, self-efficacy may serve as a crucial facilitator of the DMC occurrence. As it has been indicated earlier, large scale, longitudinal investigations concerning the correlation between a high sense of efficacy and the DMC phenomenon are virtually non-existent, with an exception to a small-scale analysis conducted by the author of the thesis (Pietluch 2018). Henceforth, the present research endeavour was initiated in the hope of addressing the identified gap in the empirical investigation regarding both self-efficacy and the theory of Directed Motivational Currents.

Methodology

A mixed methodology was applied in the empirical chapters of the thesis and, except for the final part of the present work, which was launched to validate the experimental framework designed for the purpose of the study, several hypotheses were put forward as a result of the prior theoretical discussion. For the sake of brevity, the research questions will be presented separately.

The primary rationale of the third chapter was to scrutinise the exact nature of the hypothesised congruence between self-efficacy beliefs and the likelihood of triggering motivational surges of energy in the pursuit of a personally relevant goal. With this in mind, it was assumed that not only does self-efficacy contribute to the emergence of the DMC phenomenon but, also, operating within the DMC zone significantly enhances a person's self-perception of efficacy. To this end, the following research hypotheses were formulated:

1. There exists a direct correlation between a high sense of self-efficacy and the occurrence of the DMC phenomenon.
2. Well-anchored beliefs of efficacy may be viewed as a facilitative factor encouraging an individual to actualise self-potential within the DMC framework.

In addition, the project was intended to address the following supplementary research questions:

1. Is there any relationship between gender and high beliefs of efficacy?
2. Is there any relationship between gender and the occurrence of the DMC phenomenon?
3. Is there any relationship between age and well-anchored beliefs of agency?
4. Is there any relationship between age and the occurrence of the DMC phenomenon?

In Chapter four, the DMC cases identified in the course of previous quantitative analysis were further explored through the application of direct interview protocol designed by the author. On top of broadening the comprehension of the interrelatedness between concepts essential for the study, the chapter was set out to address the following research hypotheses:

1. Well-developed agency beliefs may encourage an individual to adopt a distal goal, such as the one in a DMC framework.
2. Attaining mastery en route to accomplishing an end-goal within a DMC structure fosters an agent's positive self-perceptions of efficacy.
3. Agency beliefs follow a natural evolutionary growth trajectory throughout a DMC experience, as an agent in such a motivational framework is constantly provided with feedback upon the quality of his or her proceedings.
4. Efficacy beliefs leverage a person's dedication to a cause by contributing to the emergence of positive emotionality which, in turn, aids a person in sustaining the motivational impetus.

In the initial stages of the quantitative investigation, 420 adult users of English as a foreign language from different backgrounds were targeted. Whereas respondents' sense of efficacy was measured through a standardised version of General Self-Efficacy Scale created by Schwarzer and Jerusalem (1995), the possibility of experiencing the DMC phenomenon was scrutinised by the application of DMC Disposition Questionnaire devised by Muir (2016). The adoption of the instruments was dictated by the fact that both tools possess significant result corpus and the majority of data are collected along a Likert-type response format. Considering that the motivational phenomenon described by Dörnyei pertains to a rather unique periods of intense motivational involvement, the author did not want to narrow down the pool of potential DMC cases to a single context only. The sample was, however, homogenous in terms of the participants' level of language fluency. Of the total population, only 78 participants reported experiencing involvement in a task akin to the motivational surge as outlined by Dörnyei, which would lend support to the assumption that such dedication to one's pursuits is indeed a rare occurrence. At the same time, the group in question was also characterised by well-anchored

beliefs as to their capacity to manage troublesome circumstances, reflected in the overall GSES score. Bearing in mind that one of the pivotal aims of the study was to explore the potential of the DMC phenomenon in a foreign language classroom, following the quantitative part of the project, the DMC group was narrowed down to 27 respondents who signalled experiencing a state of heightened motivation with reference to developing linguistic proficiency. The participants were interviewed in person over the course of three months, ensuring the confidentiality of the respondents' data, and the insights supplied by the application of direct interview protocol were then utilised in the creation of an experimental framework. The last chapter of the thesis was devoted to the description and discussion of the outturns stemming from the experiment in the setting of a foreign language classroom. Two separate groups consisting of 8 individuals were targeted at that stage; whereas one group was subjected to a curriculum imbued with elements of efficacy building and the instruction was honed to inspire motivational gain similar to the DMC phenomenon, the other group followed a language development programme typical for the school. The adoption of both quantitative and qualitative modes of inquiry not only allowed the researcher to develop a broader comprehension of the quantitative data but also, yielded additional explanations as to the phenomenon under scrutiny (Creswell 2014).

Results

At the early stages of the inquiry, the dataset was subjected to Kolmogorov-Smirnov and Shapiro-Wilk normality tests to verify the distribution of the sample (Table 1 and 2). In the case of the GSES instrument, the aforementioned tests indicated that the results under scrutiny were more dispersed than in the case of a normally distributed population. In turns, in the DMC sample, the normality score was more typical for a standard group of individuals.

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistics	Df	Relevance	Statistics	Df	Relevance
GSEs score (10-40)	0,126	78	0,004	0,948	78	0,003

Table 1. GSES normality

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistics	Df	Relevance	Statistics	Df	Relevance
DMC score (0-80)	0,088	78	0,200	0,981	78	0,306

Table 2. Normality tests of the DMC sample

Moving on to even more analytical frame, an essential objective of Chapter three was to corroborate the existence of the assumed relationship between a high sense of efficacy and the rate at which motivational drives occur. With the criterion of normality in mind, it was decided that the correlation in question should be measured through two separate tests, namely Spearman's and Pearson's rank correlation coefficients (Table 3).

		GSES (10-40)
DMC (0-80)	Spearman's correlation	0.864
	Coefficient	0.001
	N	78
	Pearson's correlation	0.892
	Coefficient	0.020
	N	78

Table 3. Spearman's and Pearson's coefficients

The outturns of the correlational measures employed provided confirmatory evidence for the existence of a strong relationship between well-developed efficacy beliefs and the occurrence of motivational surges of high intensity, known as the DMC phenomenon. Even more importantly, the results were found to be important from the statistical point of view ($p < 0.01$), substantiating the bi-directional nature of the relationship in question. Whereas it is possible to draw an irrefutable conclusion that astute beliefs of efficacy encourage an individual to embrace a challenging goal and, consequently, contribute to the inauguration of a motivational drive, a person's efficacy beliefs are further augmented while operating in the DMC zone.

To address the supplementary research questions formulated prior to the project, the data supplied by the instruments applied in the quantitative part of the research endeavour were analysed from the perspective of incidental variables, namely age and gender (Table 4 and 5).

			Gender		Total
			Female	Male	
Group (0-control, 1-research)	0	Population	153	189	342
		Gender %	79,7%	82,9%	81,4%
	1	Population	39	39	78
		Gender %	20,3%	17,1%	18,6%
Total		Population	192	228	420
		Gender %	100,0%	100,0%	100,0%
Phi	-0,041	0,709	1	0,400	0,450
Correlation	Value	Chi-squared	df	Relevance	Exact relevance

Table 4. Pearson's chi-squared test – gender

			Age					Total
			1	2	3	4	5	
Group (0-control, 1-research)	0	Population	127	96	56	36	27	342
		Age %	80,9%	87,3%	83,6%	80,0%	65,9%	81,4%
	1	Population	30	14	11	9	14	78
		Age %	19,1%	12,7%	16,4%	20,0%	34,1%	18,6%
Total		Population	157	110	67	45	41	420
		Age %	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
Kramer's rank	0,149	9,357	4	0,053	0,052			
Correlation	Value	Chi-squared	df	Relevance	Exact relevance			

Table 5. Pearson's chi-squared test – age

Overall, the most important conclusion yielded by the application of Pearson's chi-squared test is that, in the sample under scrutiny, neither age nor gender may be viewed as an effective predictor of initiating the DMC phenomenon in individuals with well-anchored agency beliefs.

Turning now to the qualitative analysis, the reason behind the application of direct interview protocol was bipartite; whereas the most pivotal objective was to develop the understanding of the DMC phenomenon, following the outcomes supplied by the correlational

tests, the desire of the author was to explore the exact role of self-efficacy in forging motivational drives. Although individual DMC experiences may vary as to the circumstances surrounding their emergence and a person's motivational impetus may be triggered as a result of emergent opportunity or negative emotional stimulation stemming from the inability to demonstrate one's full potential, the phenomenon described by Dörnyei does not simply drift into being on its own. Instead, such an immense launch of motivational energy may only emerge with the proper combination of personal, contextual, and emotional factors. Human beings are highly unique entities who differ as to their desires and the factors which they find motivating. Nevertheless, in the sample analysed, it was possible to observe that well-anchored agency may indeed be viewed as a component encouraging individuals to embrace highly demanding endeavours and, consequently, triggering their DMC experiences. A closer analysis of individual accounts revealed a rather intriguing observation; whereas some respondents possessed well-developed beliefs of efficacy prior to their motivational experience, other participants reported lacking the trust in their coping competence before the launch of their motivational impetus. In the case of the former group, one may put forward a conclusion that the confidence those individuals hold towards their own agency serves as a stimulus to internalise a goal regardless of task difficulty and being an agent within the DMC structure further augmented participants' judgements of efficacy. Turning now to the individuals lacking self-efficacy prior to entering the DMC zone, it would appear that even though taxing circumstances may temporarily cloud one's judgement of efficacy, the uniqueness of Dörnyei's framework lies in its ability to activate dormant agency beliefs. Furthermore, instead of devoting conscious effort to structuring a pathway for their DMC experiences, the respondents remained focused on the end-goals of their pursuits and, most typically, applied the structures available in their immediate surroundings. On this basis, the conclusion was formulated that in order to harness the potential of the DMC phenomenon, a motivational scaffolding must be personally and goal appropriate, suiting the purposes of an individual learner. Another crucial aspect of each DMC experience was the participants' readiness to replace their daily routines with the activities conducive to the goal attainment; through gradual adjustment of their proceedings, the participants were in full control of their experiences and shaped their motivational scaffoldings. This, in turn, provided the respondents with a sense of actualising one's potential and positive emotionality, rendering the framework entirely self-propelling and excluding the need for volitional control.

Lastly, the final part of the thesis was devoted to the creation of a framework that could be further utilised to inspire motivational gain in the context of an L2 classroom. The structure was meticulously planned for the present research endeavour based on the insights produced by the previous qualitative and quantitative analyses. Although it was not possible to clearly state that all of the participants included in the study experienced a fully-fledged motivational drive, as not all aspects of the DMC phenomenon are within an instructor's control range, the incorporation of the salient features of the DMC structure as well as the elements of efficacy building in the effort to develop a curriculum for language teaching purposes may contribute to leveraging the likelihood of emergence of a motivational impetus. From educational perspective, an important observation to be put forward here would be that coexisting with DMC agents and operating within the framework may encourage higher effort expenditure and overrule the influence of individual learners' differences which often constitute an obstacle in maximising the benefits of language instruction in a classroom also in the case of individuals who have failed to enter the DMC state. Shared positive emotionality was easily observable amongst the study participants; as a result of the desire to contribute to the accomplishment of the group, individual members of the classroom were capable of going beyond their personal aspirations and developed a feeling of accountability for each other's success. Importantly, the transition from self-centred pursuits to a mutually shared end-goal had no detrimental impact on the motivational qualities of the DMC phenomenon. Based on this, it was possible to formulate the conclusion that evoking a sense of collective responsibility may support individual students in maintaining their dedication to a cause and contribute to eradicating the impact of frequent demotivators such as stress or anxiety. Participants' engagement was further fuelled by the application of agency building techniques, as the observation of successful peer models allowed less-efficacious entities to prevent their motivation from fluctuating. Additionally, the experiment supplied compelling evidence to account for the existence of a bi-directional relationship between one's beliefs of efficacy and the likelihood of a DMC occurrence. People caught up in the flow of motivational energy ongoingly experienced mastery within the domain specific to their pursuits and, consequently, were provided with an ample volume of opportunities to actualise their beliefs of efficacy. Conversely, as a result of the conducted analysis, well-anchored efficacy was found to be one of the factors encouraging an individual to internalise a desired vision of future self.

Although the present project was successful in terms of inducing short-term, heightened motivation within the L2 setting, the most important conclusion to be made here is that,

depending on the expected outcomes of an L2 learning experience, a language instructor has to adjust his or her efforts to make the process of developing L2 proficiency more meaningful to all learners. Bearing in mind that foreign language classrooms are most typically heterogeneous in their nature, such attempts should take students' personal aspirations and abilities into considerations. Overall, the self-propelling properties of a DMC render the structure a great tool in accounting for the astounding complexity and the dynamical evolution of human motivation. When employed on the group level, the scaffolding holds the potential of encouraging students to actualise their linguistic proficiency and may diminish the influence of negative rumination and other factors typically reducing the quality of a student's performance in the L2 context.

Keywords: longitudinal motivation, individual variables, DMC, self-efficacy, second language acquisition, qualitative analysis, quantitative analysis

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