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Dewaele, Jean-Marc and Yu, J. (2015) What lies bubbling beneath the surface? A longitudinal perspective on fluctuations of ideal and Ought-to L2 self among Chinese learners of English. *International Review of Applied Linguistics in Language Teaching (IRAL)* 53 (3), pp. 331-354. ISSN 0019-042X.

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What lies bubbling beneath the surface? A longitudinal perspective on fluctuations of *ideal* and *Ought-to L2 self* among learners of English in Chinese universities¹

YU JIANG* & JEAN-MARC DEWAELE**

* Capital Normal University, Beijing

**Birkbeck College, University of London

Abstract: The study explores variation in L2 motivation (*Ideal L2 self* and *Ought-to L2 self*) of 88 Chinese English university learners in China over a one-year period. It examines change in L2 motivation and the evolving relationship with other measures at three data collection points. No significant changes were found in *Ideal L2 self* values but *Ought-to L2 self* values increased significantly between Time 1, 2 and 3. Regression analyses suggest that the significant increase in values of *Ought-to L2 self* is affected by different motivational factors at various times. We claim that perceptions of the dynamic variation can be obscured in conventional statistical analyses because of the graphical representation of mean values of groups at different times. The use of bubble graphs representing number of participants whose values increase, decrease or remain stable between data collection points, shatters the false impression of stability.

1. Introduction

Dynamic system theory (DST) is increasingly seen as a useful model to describe and understand the occasionally random-looking patterns in second language acquisition (SLA) (Verspoor and Lowie 2013). Rather than considering SLA as a purely cognitive or a social process, proponents of DST present the emerging L2 as the complex and ever-changing result of an interactive process between individuals and their environment (Larsen-Freeman 1997). Larsen-Freeman and Cameron (2008a) have argued that viewing SLA through a chaos/complexity theory perspective makes perfect sense because a developing L2 is a complex, dynamic, emergent, open, self-organizing, and adaptive system. DST has also emerged in L2 motivational research with researchers focusing on the situated complexity of the L2 motivation process (Ushioda and Dörnyei 2012). The present study does **not** adopt a DST perspective, but looks at the development of *Ideal L2 self* and *Ought-to L2 self* among Chinese learners of English using a conventional mixed method approach (cf. Ushioda and Chen 2011). We used a longitudinal design, with data collection at the start, in the middle and at the end of the year. We argue that it is perfectly possible to look at a dynamic system without espousing a DST perspective, and that it is possible to show non-linear change using traditional statistical methods.

2. Literature review

DST has been taking the field of applied linguistics by storm (Dörnyei, MacIntyre and Henry 2014; Menezes de Oliveira e Paiva 2013). One could argue that the time was

¹ Pre-print version of the paper that appeared in 2015 in the *International Review of Applied Linguistics in Language Teaching* 53(3): 331–354. DOI 10.1515/iral-2015-0015

right for this new approach. SLA researchers had become increasingly aware that interlanguages did not develop in a linear way (cf. Dewaele 2002), and that learners' motivation, attitudes, anxiety, desire varied quite unpredictably across time and space. A model was therefore needed that could help capture the non-linear development of variables in complex interactions with a wide range of linguistic, situational, sociobiographical, cultural and psychological variables, and DST became the general representative term (Larsen-Freeman 2007). However, some SLA researchers have expressed their doubts about the DST approach, labeling Larsen-Freeman and Cameron (2008a) as "shallow draughts" (Gregg 2010: 549) and accusing DST researchers of a "failure to engage with the facts" (p. 557). Gregg points out that DST is a heavily mathematically based theory, which the applied linguists drop entirely from their presentation of the theory: "This may strike some as Hamlet without the prince" (p. 551). He also questions the wisdom of not "constraining or simplifying the model, and instead push(-ing) for as much detail as the researcher can dig up" (p. 551). We feel that it is crucial to have a healthy debate about approaches and methods in applied linguistics. While it is true that early work was more about the potential that DST held for applied linguistics (Herdina and Jessner 2002; Larsen-Freeman 1997) and was generally free of mathematics, more recent work includes a proper mathematical basis (Dörnyei, MacIntyre and Henry 2014; MacIntyre 2012).

A pioneering DST study in applied linguistics is Larsen-Freeman (2006) who investigated the L2 development of five Chinese L2 English immigrants in the US. Through writing tasks repeated four times over the course of six months, the participants were asked to write a story about their past and then do an oral task by retelling the story three days later. Based on the findings of the different aspects of language complexity, fluency and accuracy in each of the participant's L2 usage, Larsen-Freeman suggested that L2 acquisition is a system that adapts to changing contexts. Each aspect of language development is transformed or shaped through use in diverse contexts by each individual learner, and language development both within and outside the classroom or interaction differs in each social context (Dörnyei 2009b)

L2 motivation research evolved from a macro-social-psychological perspective to a more micro-level perspective of the L2 learning environment in the 1990s and it developed further, focusing on motivational changes within a dynamic system (Dörnyei 2009a; Ushioda and Dörnyei 2012; Dörnyei et al. 2014). L2 motivation researchers once considered "ebbs and flows" (Dörnyei 2000), and Dörnyei suggested that learners' motivation should be evaluated based on "their interaction with a specific environment, temporal factors or conditions (2009b: 232). Dörnyei and his colleagues gradually applied DST ideas in L2 motivational research in a task-based framework, such as Dörnyei and Kormos (2000), Dörnyei (2002), Kormos and Dörnyei (2004), and Dörnyei and Tseng (2009). The first three studies were based on the same large-scale British-Hungarian research project and the fourth study was a validating research in Asia.

3. The L2 Motivational Self System

The L2 Motivational Self System has become one of the dominant perspectives in SLA motivation research in recent years (Dörnyei and Ushioda 2011). It is characterized by a number of dynamic features. The origins of the L2 Motivational Self System are the possible selves studies of Markus and Nurius (1986) and the self-concept research by Higgins (1987). Dörnyei and Ushioda (2011: 97) describe

possible selves as “broad, overarching constellations that blend together motivational, cognitive and affective areas”. The review in this section will mainly focus on the dynamic features of self-concept and the relevant DST studies on the L2 Motivational Self System.

Self-concept has varied in degrees over changes in persons’ affections, cognition and behaviour, and can even change dramatically depending on the social situation. In the cognitive approach, “self-schemas are constructed creatively and selectively from an individual’s past experiences in a particular domain” (Markus and Nurius 1986: 955). In other words, past experiences reflected the individuals’ concerns and their efforts, which could have an influence on the formulation of a person’s potential self in the future. In addition, possible selves are responsive to changes in the environment and are sensitive to the emergence of new or inconsistent information about self. “The self negotiates between the social environment and an individual’s behaviour” (Hannover 2000: 178).

Self-concept, as a part of the public domain, could remain stable because of invariance in social feedback or an individual’s need to maintain a consistent manner. However, this is based on Higgins’ self-discrepancy theory, which suggested people are motivated to move their actual self as close as possible to the desired self and are also motivated to keep their actual self as far as possible to the undesired self. When applying self-relevant ideas to cognitive therapies, it was found that the self-concept could change within an hour according to the context (Markus and Nurius 1986).

The L2 Motivational Self System has three components:

Ideal L2 self: is the L2-specific facet of one’s ‘ideal self’: if the person we would like to become speaks an L2, the ‘*Ideal L2 self*’ is a powerful motivator to learn the L2 because of the desire to reduce the discrepancy between our actual and ideal selves.

Ought-to L2 self: concerns the attributes that one believes one ought to possess to meet expectations and to avoid possible negative outcomes.

Learning experience: concerns situated, ‘executive’ motives related to the immediate learning environment and experience (e.g. the impact of the teacher, the curriculum, the peer group, the experience of success). (Dörnyei 2009a: 217).

Within the DST paradigm, these three elements were described as three possible attractor basins and any one of the three attractor basins alone was believed to be strong enough to influence the learners’ behaviour when acquiring L2 knowledge (Dörnyei 2009a).

Lamb (2009) investigated two Indonesian junior high school pupils’ motivation to learn English as a foreign language over a two-year period. The study revealed two categories of reasons for the English learning of Dewi and Munandar: personal aspiration, such as computer games, and requirements. Referring to the L2 Motivational Self System, Dewi and Munandar could be regarded as representations of the learners’ *Ideal L2 self* and *Ought-to L2 self*. Both showed different patterns of learning behaviour in English classes and different learning activities outside of the classroom. In addition, both had different learning goals in their English learning and

different manners in their communication with the interviewer. As the two participants were from different families and had different ideas about their English, the study highlighted the effect of “social settings and situated activity of language learning” on shaping L2 selves (p. 245).

Taguchi, Magid and Papi (2009) collected data in three Asian countries (Japan, China and Iran) and explored the L2 self in an Asian context. The researchers wanted to determine the relationship between two key variables: *Integrativeness* and *Ideal L2 self*. They also wanted to examine the existence of *promotion/prevention instrumentality* and the link with *Ideal/Ought-to L2 selves*. Their final aim was to validate the three components of L2 self in an Asian context, determining the relationship between the attitudinal and motivational factors of the construct, particularly the relationship between *Ideal L2 self*, attitudes towards learning English and the criterion measures. Almost 5,000 participants from Japan, China and Iran took part in the research. Participants included middle school students, college students or working professionals. Three versions of the questionnaire were used in the three countries, separately, and the main components of the questionnaire (based on Dörnyei et al. 2006) included criterion measures, *Ideal L2 self*, *Ought-to L2 self*, *family influence*, *promotion/prevention instrumentality*, *attitudes towards learning English*, *cultural interests*, *attitudes towards the L2 community* and *integrativeness*. Integrativeness was found to be positively correlated with *Ideal L2 self* for all participants of the three countries and with *ideal/ought-to L2 selves* and *criterion measures*. The correlation values between *Ideal L2 self* and *criterion measures* were generally higher than the correlation values between *integrativeness* and *criterion measures*. The result also revealed that *Ideal L2 self* was positively correlated with both *promotion instrumentality* and *Ought-to L2 self* in the three countries, but only negatively correlated with *prevention instrumentality* in China. *Ought-to L2 self* was positively correlated with *promotion/prevention instrumentality* for all three countries and *promotion/prevention instrumentality* were also positively correlated with each other in the three countries. A Structure Equation Modelling analysis showed that all paths between the variables were significant, except for promotion/prevention instrumentality in the Iranian group, but that the strength of the relationship among the variables appeared inconsistent across the three cultures. The impact from *attitudes towards L2 culture/community* on *Ideal L2 self* was almost twice as large as from *promotion/prevention instrumentality* in Japan, whereas it was displayed as being roughly equal in China and Iran. Attitudes towards learning English were correlated to criterion measures in all three countries, but the link in China was much weaker than in Japan and Iran. The results suggested that Chinese students’ enjoyment of English and their classroom experience played a less important role in their overall motivation than for Japanese and Iranian students because Chinese students were able to control their negative attitudes in order to achieve the required English proficiency and pass the exams. Therefore, the study suggested the existence of cross-cultural differences in L2 selves and successfully validated the L2 Motivational Self System in Asian cultural contexts.

Pawlak (2012) investigated the fluctuations in motivation in an L2 English class with 28 Polish senior school students over a period of four weeks. He collected data through questionnaires, observations and interviews. The results showed little variation in students’ reasons for learning English, but he did find variation on a minute-to-minute basis during classes and also differences between classes.

Mercer (2011a, b) investigated L2 learners' dynamic self-beliefs through a single, three-year longitudinal case study using journals and in-depth interviews. The results showed that the learner's self-beliefs in foreign language learning were situational in nature and that a learner's self-beliefs can be dynamic (the fluctuation of their self-belief depends on their different English learning experiences in university) and were also relatively stable (consistent report of positive beliefs when faced with some learning difficulties in their Spanish learning). Mercer (2014) extended self-concept research to explore L2 selves with the DST paradigm. She examined the dynamism of different facets of the self of Austrian EFL university students across different timescales (seconds, minutes, weeks and months).

The DST approach can encourage researchers to develop new ways of conceptualising complex and nonlinear variation in SLA. We agree up to a point with Greg's comment about the danger of drowning in detail and not developing some kind of model – inevitably a simplification of a complex reality. John Schumann (2014), in his foreword to the Dörnyei et al. (2014) volume, offers a slightly biased view of research before the arrival of DST: “Typical scientific research isolates an independent variable and a dependent variable, and then looks at the singular influence of the former on the latter. DST challenges this approach to understanding complex phenomena” (p. xvi). We would argue that most SLA researchers have included a range of independent and dependent variables in their research designs, using regression analyses, cluster analysis, Structural Equation Modelling or multivariate statistics to measure the effects of multiple independent variables (Dewaele 2009). It is of course statistically impossible to include **all** potentially interesting independent variables, but researchers typically carry out preliminary analyses in order to pick the most promising independent variables, and look at possible interaction effects.

The danger for DST research, in our opinion, is that by wanting to look at everything it might end up catching nothing. We argue that it is useful to identify patterns of variation linked to certain independent variables: these patterns may be abstractions, but they are extremely useful. Of course, they need to be complemented with more detailed information from individuals in order to gain some understanding of the possible reasons underlying individual variation patterns. Metaphorically, we defend the view that both the forest and the trees need to be taken into account. An aerial view could reveal that trees near the river are taller than those further away and that trees at higher altitude are shorter than those at lower altitude: these observations are only possible if a sufficient number of trees can be compared in various locations. The study of individual trees could then reveal that some specimens grow taller, that some are smaller for various reasons. In other words, we can make generalizations by looking at the forest, and we can make insightful local observations by studying individual trees.

4 Rationale of the current study

In his chapter entitled ‘The dynamics of possible selves’, Henry (2014) argues that: “research in both mainstream psychology and in our own field has tended to ‘freeze’ current and ideal selves, presenting them as photographic stills rather than moving pictures”. The current study shows that a non-DST approach can consider dynamic features in L2 motivation (as did Dörnyei's early work on ebbs and flows), presenting changes to the L2 learners' selves, taking into account the situational complexity of

the L2 learning process, learners' learning goals and learning behaviour within L2 macro social contexts. The study will explore some of the interrelated mechanisms of L2 selves and their interaction with other motivational factors in a Chinese university context.

5 Methodology

The current study, which forms a part of the PhD project of the first author, was designed as a longitudinal research and follows the guidelines of the mixed methods suggested in Dörnyei (2007) and Dörnyei and Ushioda (2011). It combines quantitative data from questionnaires and qualitative data from interviews. A longitudinal perspective was adopted in order to examine the changes and patterns of participants' development over a certain period of time, which is the default approach to examine the changes in dynamic processes and to reflect on the connections across levels at certain times (Dörnyei 2009b; Larsen-Freeman and Cameron 2008b). Dörnyei (2009b) suggested that a mixed methods could suit the multilevel analysis of complex and dynamic issues.

6 Instruments

The main components of the questionnaire were based on Taguchi et al. (2009) and Magid (2011). Fifty-eight items were measured with six-point Likert scales. In total, 12 motivational factors were included and the Cronbach Alpha values varied between .60 and .87.

1. *Effort intention in L2 learning* (6 items): to examine the learners' intended efforts toward English learning. For example, I think that I am doing my best to learn English.
2. *Ideal L2 self* (5 items): for example, I imagine myself as someone who is able to speak English.
3. *Ought-to L2 self* (7 items): for example, I study English because close friends of mine think it is important.
4. *Family Influence* (5 items): to measure parental roles in the learners' English learning. For example, My family put a lot of pressure on me to study English.
5. *Instrumentality personal* (8 items): to measure the learners' personal English learning purposes. For example, Studying English is important to me in order to attain a higher social respect.
6. *Instrumentality obligation* (5 items): to measure the learners' obligations or responsibility for their English learning. For example, I have to study English because I don't want to get bad marks in it.
7. *Travel Orientation* (3 items): to measure whether the learners' intentions to travel affected their English learning. For example, I study English because with English I can enjoy travelling abroad.
8. *Fear of Assimilation* (5 items): to measure how much the learners were afraid of being assimilated with English values. For example, I think the cultural and artistic values of English are going at the expense of Chinese values.
9. *Attitude to Learning English* (4 items): to investigate the learners' evaluation of their current L2 learning environment and learning experiences. For example, Do you really enjoy learning English?
10. *Integrativeness* (3 items): to examine the learners' attitudes toward English, English culture and English native speakers. For example, How much do you like English?

11. *Cultural Interest* (3 items): to examine whether the learners like English music, movies, and TV programs. For example, Do you like English films?
12. *Attitudes to L2 Community* (4 items): to investigate the learners' attitudes towards the English community. For example, Do you like meeting people from English-speaking countries?

The qualitative data provided subsidiary and supportive data to the quantitative data. The interviews happened only once, one month after the annual TEM exams¹ and were semi-structured. They were conducted separately after the participants had finished the questionnaire. Most questions related to motivational factors, e.g. *Do you speak English outside the classroom?* (to explore the participants' learning efforts outside of the classroom), and *Why did you choose an English major?* (to explore the participants' learning orientation for English learning). All the interviewees answered six to eight questions, talking between 10 to 15 minutes. Most of the interviews were conducted in English, some in Chinese, and they were recorded with a Sony digital recorder.

7 Participants

Eighty-eight female university students from Beijing, China, participated in this one-year long study. They were all English major students, ranging from Years 1 to 3 (Year 1 = 47; Year 2 = 12; Year 3 = 29), and from cities or towns throughout China. A pilot study preceded the major survey. The students were given 25 minutes to fill out the questionnaire and were invited to attend a follow-up interview. The period for the data collection was carried out between October 2010 and November 2011 and the questionnaires were administered three times; in October/November 2010, May/June 2011 and October/November 2011.

In the present study we will focus on the changes of two dependent variables: *Ideal L2 self* and *Ought-to L2 self*. The other measures will be cast in a supporting role only, in other words, to examine their evolving relationship with *Ideal L2 self* and *Ought-to L2 self*.

8 Results

A repeated measure ANOVA was performed with period as the within-subject factor (Time 1 vs. Time 2 vs. Time 3) so as to examine the changes of *ideal/ought-to L2 selves* over the 12 months. Participants' *Ought-to L2 self* increased significantly during the 12 months' learning ($F_{2, 174} = 7.05, p < .001, \eta^2 = .075$). Pairwise comparisons revealed that values for *Ought-to L2 self* at Time 2 and Time 3 were significantly higher than at Time 1. However, participants' *Ideal L2 self* remained stable during the year (see Figure 1).

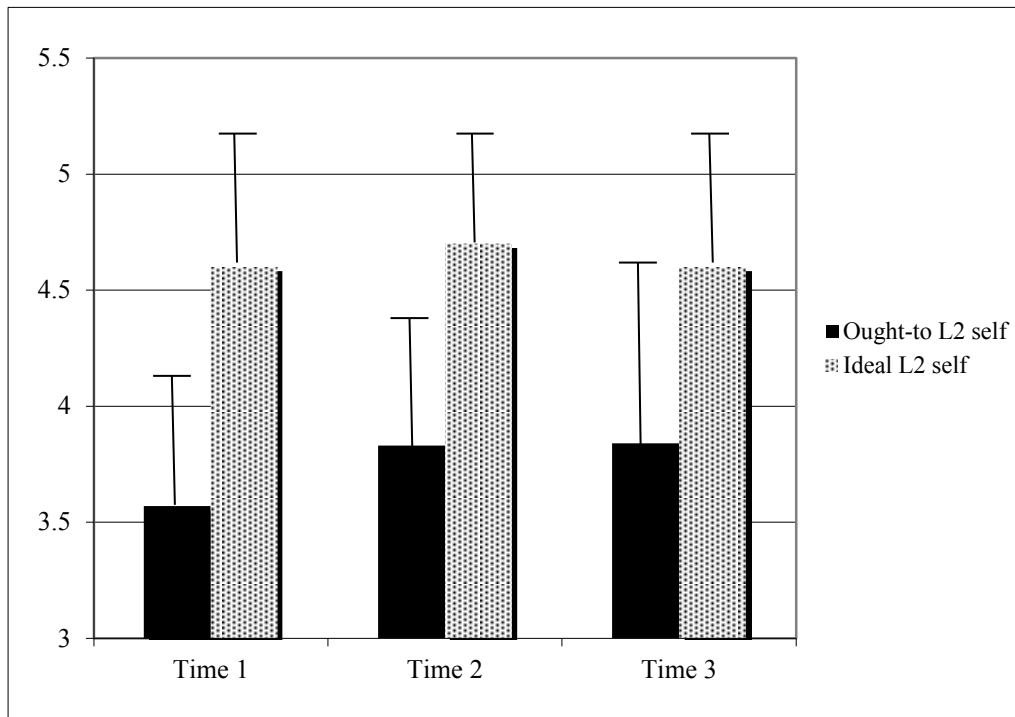


Figure 1: Changes in learners' *Ideal + Ought-to L2 self*

From looking at Figure 1, one might be forgiven thinking that not very much seems to have happened over the year. Means and standard deviations remain stable for *Ideal L2 self*, with only a modest increase for *Ought-to L2 self* by Time 2 and similar values by Time 3. We argue that the impression of relative stability is strongly influenced by the conventional use of bar charts with means and standard deviations. A different type of figure might give the reader a better impression of the amount of turbulence in the data. Bubble graphs, for example, allow us to show a graphical representation of the number of participants whose scores changed between two points in time. Figures 2 and 4 show the number of participants whose scores for *Ideal/Ought-to L2 self* changed – or did not change - between Time 1 and Time 2 and between Time 2 and Time 3. The numeric values inside the bubbles represent the number of participants and the position on the x-axis reflects the amount of change.

8.1 *Ideal L2 self*

An analysis of the raw difference values showed that close to half of the 88 participants reported higher levels of *Ideal L2 self* at Time 2, with 7% reporting no change and close to half of the participants reporting lower levels. The pattern shifts between Time 2 and Time 3 with over a third of participants reporting higher levels of *Ideal L2 self*, 16% reporting no change and close to half of participants reporting lower levels. The arrow lines (in Figure 2) are the individual learners with the biggest change in their *Ideal L2 self* between T1/T2 and T2/T3. Figure 3 shows the detailed data of these learners whose *Ideal L2 self* scores differ by more than 2.6 between collection times over the 12 months. We will present some feedback from these students later.

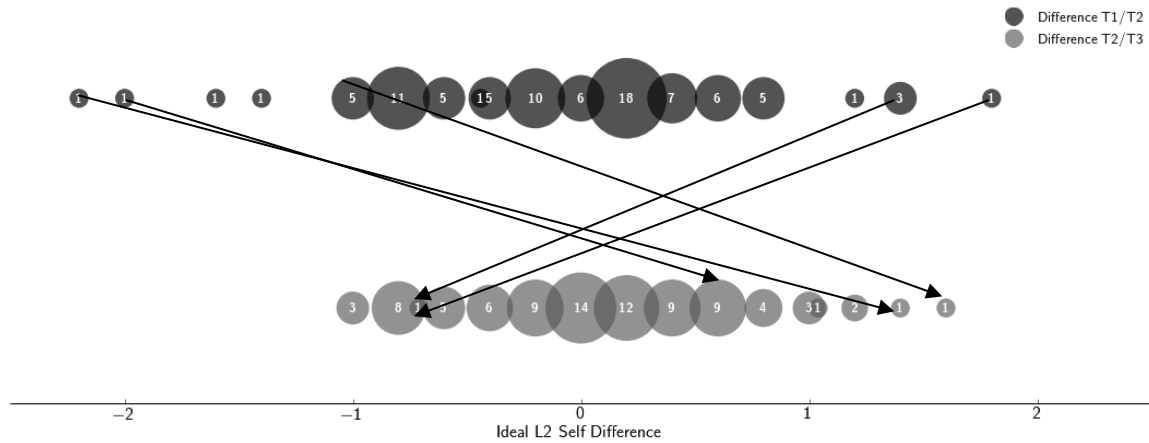


Figure 2: Differences in *Ideal L2 self* between Time 1, Time 2 and Time 3

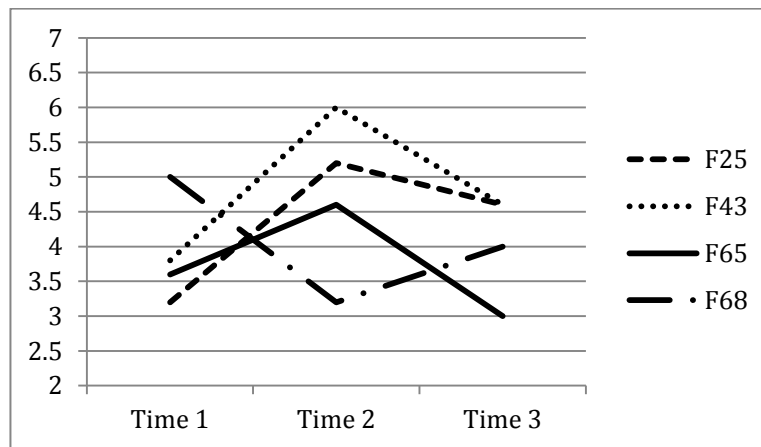


Figure 3: The scores of four participants' *Ideal L2 self* over the 12 months

Pearson correlation tests were conducted to identify the motivational variables that correlated significantly with *ideal/ought-to L2 selves*. These motivational variables were then entered in multiple regressions in order to establish the amount of variance explained by the predictor variables. The analyses were repeated for Time 1, Time 2 and Time 3, allowing us to uncover the dynamic changes in the relationship between *ideal/ought-to L2 selves* and motivation factorsⁱⁱ.

A total of 8 independent variables that correlated significantly with *L2 Ideal Self* values at Time 1 were entered into stepwise regression analyses. Three predictors accounted for a combined 52% of variance: *instrumentality personal* (40%), *integrativeness* (9%) and *instrumentality obligation* (3%).

The same 8 independent variables correlated significantly with *L2 Ideal Self* values at Time 2 and were entered into the multiple linear regression analysis. A slightly different set of predictor variables emerged, accounting for 34% of variance: *instrumentality personal* (24%), *attitude to learn English* (9%) and *cultural interest* (3%).

A total of 7 independent variables correlated significantly with *L2 Ideal Self* values at Time 3 and were included in the multiple linear regression. The picture changed again

with three predictors accounting for 53% of the variance: *integrativeness* (35%), *instrumentality personal* (16%) and *cultural interest* (3%).

The results thus suggest that the lack of significant changes between Time 1, 2 and 3 in *L2 Ideal Self* values masks the turbulence in the predictor variables and the amount of variance they explain. The only independent variable to account for variance at the different times is *instrumentality personal*. *Cultural interest* appears twice as a predictor variable while *instrumentality obligation*, *attitude to learn English* and *integrativeness* appear only once as predictor variables. Another interesting observation is that the motivational variables account for only a third of the variance at Time 2 while accounting for over half the variance at Time 1 and Time 3. One could thus wonder whether any other independent variable might have interfered at Time 2.

Table 1. Results of multiple linear stepwise regression with *L2 Ideal Self* as dependent variable

Predictors	Times	Adjusted R ²	F	p
Instrumentality personal, Integrativeness, Instrumentality obligation	1	.523	30.7	0.001
Instrumentality personal, Attitude to learn English, Cultural Interest	2	.341	16.0	0.001
Integrativeness, Instrumentality personal, Cultural Interest	3	.533	34.1	0.001

Focusing on the four students who displayed most variation, it turns out that three of them were from the Year 1 group. The qualitative data showed that students in Year 1 had more fluid future *Ideal L2 self* and *Ought-to L2 self* than other year groups. The information from a language tutor and some interviewees in Year 1 group provided possible explanations. Because of the limitations of institutional management, not all the students can register for their preferred course on entering the college. This means that not all students were equally eager to take the course. Students may therefore have very different views of their *Ideal L2 self* at the beginning of the year.

F65's *Ideal L2 self* values showed an inverted U-shaped pattern. From a low value at the start of the year it reached a high point at Time 2 before dropping again at Time 3 to below the original value. F65 explained that her future self image was more related to telecommunication rather than English at the start of her studies. But her attitudes towards the English programme improved and she seems to have started to integrate her English into her future self-images. However, by Time 3 her enthusiasm had cooled and her career choice – and the role of English in her life – was still vague:

F65: I was allocated to the English major by the school. I wanted to study telecommunication. But I like to learn English too. It is very useful. I don't know a lot of foreign people. I want to know more and make friends. I am not sure what I will do in the future. It should be relevant to English. I don't know.

This means that F65's *Ideal L2 self* shifted, reflecting changing personal preferences, career options and attitudes towards English culture during the year. This is consistent with the close link between *Ideal L2 self* and *integrativeness* at a later stage.

Continuous contact with English learning positioned the learners to develop their L2 selves in the relevant cultural context.

In contrast, the *Ideal L2 self* values of F68 showed a U-shaped pattern. She explained that she had a strong personal interest in English at the start of the year and a clear idea about her future career. However, by Time 2 she got disappointed in her English classes and engaged gradually in more English activities outside the classroom.

F68: I am interested in English and I like to know more about English culture. I don't like all the subjects. Some are very boring. We just began to organize story-telling activities by ourselves. I want to be an interpreter/translator.

The vagueness of F65' career and F68's future self-image as interpreter/translator could fluctuate during the academic year reflecting changes in career orientations. Additionally, the comments made by F65 and F68 suggests that for some students, their *Ideal L2 self* was strongly influenced by their immediate learning experience. Because of a different starting point, the students' *Ideal L2 self* were shaped differently and fluctuated at different stages.

Figure 3 also indicated that F43, another Year 1 participant, showed a strong increase in her *Ideal L2 self* between Time 1 and Time 2 with a strong drop at Time 3. Her feedback indicated that some students in Year 1 felt excited about the English-related activities on campus (the so-called "English Corner"), which did not exist in high school. By Time 2, F43 imagined herself as a good English speaker and showed a determination to increase her knowledge. However, at Time 3 she admitted not attending the English Corner as actively as before because she did not like it anymore. Her self-image as a good English speaker had been shaken by negative experiences in the English Corner, but she still spent time on English reading and writing. This could explain the decrease of *Ideal L2 self* between Time 2 and Time 3.

A closer look by the researcher at the English Corner revealed that most of the participants were from Year 1 or Year 2. Students found it difficult to find a partner with a similar level of L2 English proficiency in order to have proper practice. Although there was an English tutor managing the activities sometimes, some students felt bored by the routine activities and were reluctant to participate in discussions on cliché topics. Although the aim of the English Corner was for students to build up an English-speaking social network outside the classroom, the activities were not deemed interesting enough by F43, who stayed away as a result:

F43: I like to study English. I learned more knowledge about English in college than in high school. I want to speak English well. We seldom speak English after class. We went to English Corner every week before, but we only go there when we feel nothing to do right now. We mostly read or watch something by ourselves at the dormitory.

It seems thus that the inverted U-shaped pattern of F43's *Ideal L2 self* values was linked to her perception of her knowledge of English, the enthusiastic start of a new social activity, the disappointment when the novelty wore off and its replacement by more solitary activities in English. In general, the dynamics in Year 1 group's L2 ideal self could link to Busse and Walter (2013), who found that the first year university students' L2 motivation in their modern foreign language decreased

because of limited L2 contact, declining engagement of learning activities, universities' insufficient responses to the learners' wish for L2 learning, the lack of L2 learning progress, etc.

F25, a Year 3 participant, also displayed an inverted U-shaped pattern of *Ideal L2 self* values. Ideally we would have had to consider the variation of F25's *Ideal L2 self* values over the full three-year period. She mentioned having been forced into the programme, but then starting to enjoy it and having recently obtained a job where her language skills are crucial:

F25: I was allocated to this major by the school. With learning, I began to like my major. I have more opportunities to watch English movies and make foreign friends than the students in other majors. I became a qualified guide in a tourist company since this summer. After graduation, I will probably continue the postgraduate study or find a job.

F25 probably did not have clear *Ideal L2 self* when she started her English major two years earlier. However, she developed an *Ideal L2 self* as she progressed in her studies, and she mentions two non-classroom motivators: positive attitudes towards English movies and linking up with non-Chinese people. Her success in becoming a qualified guide must have further boosted her *Ideal L2 self*, yet none of the feedback explains the inverted U-shaped pattern of *Ideal L2 self* values during the academic year.

To sum up, the four students with the strongest variation in *Ideal L2 self* presented a range of possible explanations. Initial reluctance to engage with their English studies and developing an *Ideal L2 self* was replaced by anticipation and temporary enthusiasm. However, disappointment with teaching practices and English interactions with peers led to more solitary English activities. Other factors intervened, such as career choices, and the sociocultural implications of knowing English. The feedback confirmed that factors which could be grouped as *instrumentality personal*, *integrativeness*, *cultural interests* determine the development of L2 self images.

8.2 Ought-to L2 self

The analysis of the raw difference values showed that close to two thirds of the participants reported higher level of *Ought-to L2 self* between Time 1 and Time 2, with 5% reporting no change and a third reporting lower levels at Time 2. A different pattern of change emerges between Time 2 and Time 3, with close to half of the participants reporting higher levels of *Ought-to L2 self* at Time 3, with 7% reporting no change and almost half of participants reporting lower levels at Time 3.

The arrow lines (in Figure 4) are the five individual learners with the biggest change in their *Ought-to L2 self* between T1/T2 and T2/T3. Figure 5 presents the different patterns of the top five students' *Ought-to L2 self* over the 12 months, whose *Ought-to L2 self* scores differs by more than 2.40.

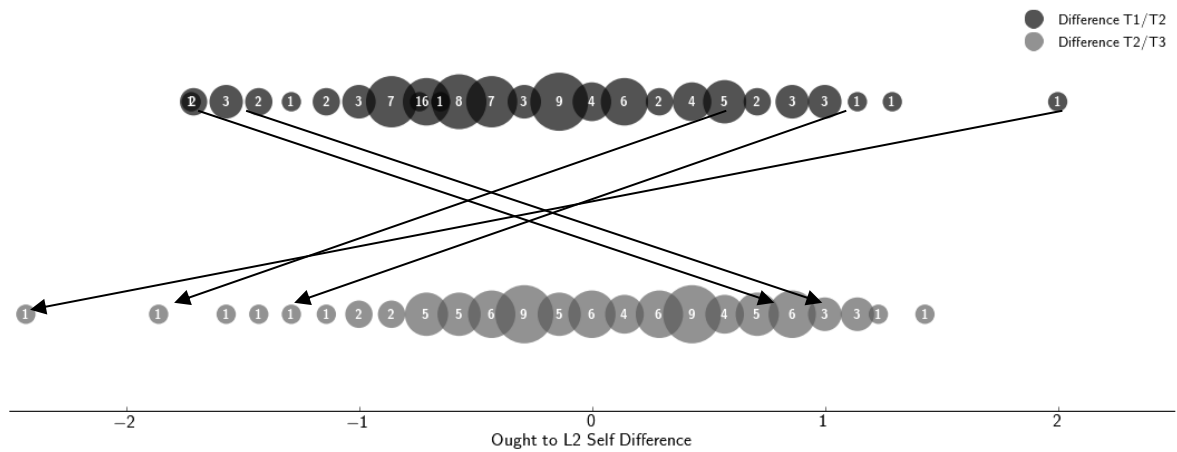


Figure 4: Differences in *Ought-to L2 self* between Time 1, Time 2 and Time 3

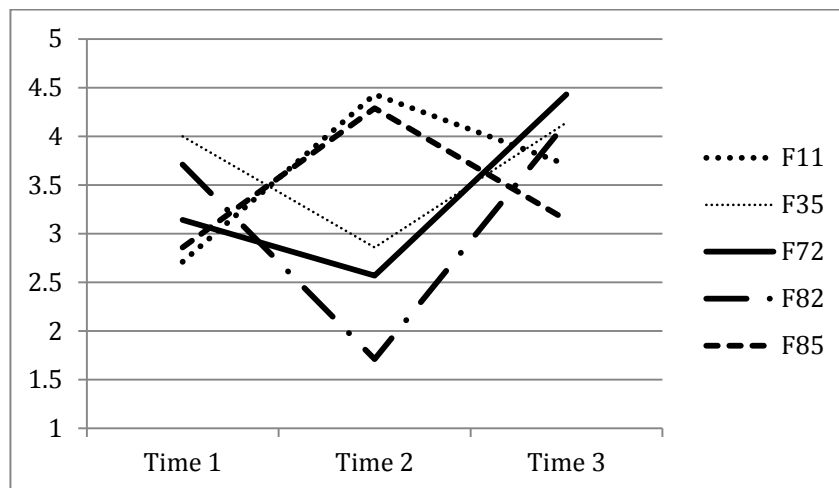


Figure 5: The scores of the five individual participants' *Ought-to L2 self* over the 12 months

A total of 7 independent variables that correlated significantly with *Ought-to L2 self* at Time 1 were entered into a stepwise regression analysis. Three predictors of *Ought-to L2 self* accounted for 64% of variance in *Ought-to L2 self*: *family influence* (46%), *instrumentality personal* (11%), and *instrumentality obligation* (6%).

A total of 8 independent variables were entered into the regression analysis at Time 2. The order and composition of the list of predictor variables changed, and the global amount of variance accounted for dropped to 55%: *instrumentality personal* (41%), *family influence* (13%), and *integrativeness* (2%).

Only 4 independent variables correlated significantly with *Ought-to L2 self* at Time 3. These were entered in the regression analysis. The picture reverts to what was observed at Time 1, with three predictor variables accounting for 72% of the variance: *family influence* (55%), *instrumentality personal* (14%), and *instrumentality obligation* (3%).

The results of the regression analyses suggest that the significant increase in values of *Ought-to L2 self* between Time 1, 2 and 3 is affected by different motivational factors at various times. *Family influence* appears as the central predictor, though its effect

drops at Time 2, but comes back as the dominant variable at Time 3. *Instrumentality personal* and *instrumentality obligation* appear twice as predictor variables while *integrativeness* appears only once as a predictor variable. The motivational variables account for slightly less variance at Time 2, mirroring the pattern observed for *Ideal L2 self* while accounting for around two thirds of the variance at Time 1 and Time 3.

Table 2. Results of linear stepwise regression with *L2 Ought-to Self* as dependent variable

Predictors	Times	Adjusted R ²	F	p
Family Influence Instrumentality personal Instrumentality obligation	1	.630	50.3	0.001
Instrumentality personal Family Influence Integrativeness	2	.551	8.6	0.001
Family Influence Instrumentality personal Instrumentality obligation	3	.717	74.5	0.001

The qualitative data suggested that the students' *Ought-to L2 self* values were closely related to their learning situation, especially the ever-looming exams. They wanted to avoid failure or unsatisfactory marks in their exams at all cost. The feedback from the five students with the strongest variation highlighted the role of external pressure. F11, F35 and F72 (figure 5) had comparable "change scores" but going in different directions. F72's values dropped slightly from Time 1 to Time 2 before picking up again at Time 3, possibly because of the reminder of parental expectations before the exams at the end of the year. Her responses suggested strong parental interference in her college study. However, she did not seem to disapprove it. To some extent, her choice to do an English major partially met her parents' expectations. When she expressed uncertainty about her future, she still came up with two options, probably suggested by her parents. It thus seems that F72' *Ought-to L2 self* at the different times of the year partially reflected her parents' expectations and their plans for her future.

F72 (year 1): My academic scores in the national college entrance exams are not bad. My mother chose the English major and my father wanted me to study publication. But this university is better, so I came here. I don't know what I will do in the future, maybe continue to postgraduate study, maybe go abroad.

F82 and F11 both reached the end of the year with higher *Ought-to L2 self values* than at the start, but while F82 had a dip at Time 2 and recovered by Time 3, F11 reached a peak at Time 2 and declined by Time 3 (figure 5), both emphasized their concerns about exams. F82 had neutral attitudes towards the university subjects. She indicated that she probably did not work hard enough and would have to make a stronger effort to prepare for the English exams. Her reply suggested that her *Ought-to L2 self* was closely linked to her preparation for the exam. She wanted to avoid negative outcomes in her exam by studying hard:

F82 (year 2): The school subjects are all similar. We are going to take TEM 4 in a few months. I need to study hard again.

F82's comments show the overlap of *instrumentality personal* and her *Ought-to L2 self* in her studying behaviour, echoing the regression results on the close link between both variables.

F11's reply focused on the responsibilities of taking exams. She complained about the work overload and the overwhelming focus on exams:

F11 (year 3): We have a lot of classes this year. I even don't have enough time to review what we learn. I am worrying whether I can pass all of them. I feel that all of our learning is for the exams.

F11's observation illustrates the close relationship between her *Ought-to L2 self* and *instrumentality obligation* and the power of the links could vary depending on the load of the school subjects in each term and how well she expected to do in the exams.

The timing of the interview at Time 2 affected the students' comments. They were temporarily released from the pressure of passing TEM exams, except the students in the Year 1 group. Although the overall level of the students' *Ought-to L2 self* went up through the year, their mood varied before and after the exams. Students at Time 2 were less obsessed by the exams and their studies, but they set up new learning aims for the coming exams by Time 3. This could also explain the smaller amount of variance explained by motivational variables for *Ideal/Ought-to L2 self* at Time 2.

The effect of parental expectations and exhortation was probably strongest at Time 1 and Time 3 when students had been reminded by their parents to keep studying hard and perform well. This might explain the similarity in patterns of predictors at Time 1 and Time 3 for the learners' *Ought-to L2 self*.

The overlap of the learners' intentions to meet their parents' expectations and their obligation in their studies determined the strongest predictors for their *Ought-to L2 self*: *family influence* and *instrumentality personal/obligation*.

9 L2 self-shifting depending on the position of L2 learner or L2 user

Students commonly expressed the hope to learn English well and have more opportunities to practice their newly acquired English. Imbedding this into their learning contexts, the students' expectations for learning English well could have many reasons, such as maintaining good academic records, fulfilling their learning responsibilities as a student, meeting their parents' expectations, realizing their personal preferences to English learning or putting what they learned into practice. The positive feedback by foreign teachers on students' oral English performance and the positive memories of successful English use in volunteer/part-time jobs in secondary school, foreign/joint-venture companies and international events encouraged some students to see themselves as legitimate L2 users (Cook 2002), rather than just good L2 learners. However, with the focus on exams in their environment, most students limited their ambition to excel as L2 learners.

The stories from F6 indicated that she was reflecting on the change from a L2 English learner to a L2 English user. Her work experiences had enhanced her confidence in English and triggered an image of herself as a fluent L2 user in the future, while temporarily reverting to being a learner again after finishing the internship and coming back to school. Therefore, temporary role changes from a L2 learner to a L2

user, or vice versa, could create instabilities in the L2 selves because of the different immediate L2 experience and L2 learning purposes.

F6: I worked in PanAmerican Seed for three weeks. It gave me a lot confidence in speaking English. I hope to have more such chances in the future. I learned many names of the flowers easily and I even did not recite them on purpose. I am preparing TEM 8 exam. It takes me hours and hours to recite these words and I keep forgetting most of them. But we have to do this.

10 Discussion

The analyses revealed a complex picture of *Ideal/Ought-to L2 self*, which changed over time and were affected by various motivational variables. Significant changes occurred in *Ideal/Ought-to L2 self* and their relationship with other motivational factors over the year. The nonlinear changes in *Ideal/Ought-to L2 self* was consistent with the basic dynamic features of self-concept: 1) The learners' self images and responsibilities in L2 learning are linked to changes of personal learning orientations, changes in immediate learning contexts and the interference of other external factors at different times, such as parental influence; 2) The intention to meet their parents' expectations and to avoid negative consequences in the learning overlapped with their *instrumentality personal/obligation*, which coincided with the self-discrepancy paradigm (Higgins 1987). This meant keeping their actual L2 self away from the undesired L2 self, such as failure in their exams. Besides, as Dörnyei and his colleagues (Dörnyei and Kormos 2000; Dörnyei 2002; Kormos and Dörnyei 2004) found, L2 selves and motivations developed as learners adjusted to changing learning contexts. These included school subjects, English teachers, learning purposes, and the different interplay among the motivation factors produced the multiple-levels of L2 selves at different points.

Talking about the three attractor basins of the L2 Motivational Self System, Dörnyei (2009a) suggested that "the stability of the system will be dependent not only on the power of the attractors but also on the number of existing attractor basins in the person's life space" (p. 211). In other words, adopting DST terminology, we could say that changes to our participants' existing attractor basins influenced the stability of the system. When they chose an English major based on their personal preferences and expectations, the *Ideal/Ought-to L2 self* which they developed at that point was their best projection for the future. However, with the accumulation of learning experiences and changes in the learning purposes, their *Ideal/Ought-to L2 self* was re-adjusted. The changes to each attractor basin caused the adjustment of two other attractor basins and a new temporary balance of the system. The differences in the links between *Ideal/Ought-to L2 self* and other motivational factors at the three data collection points suggest an on-going re-adjustment of the relationship between motivational factors, external pressure and the development of the learners' L2 selves. These changes and the interplay between *Ideal L2 self*, *Ought-to L2 self* and L2 learning experiences confirmed the dynamic and complex features of L2 selves within the L2 Motivational System.

Additionally, the current study confirmed two findings of Taguchi et al. (2009): firstly, the relationship between *Ideal L2 self* and *instrumentality personal, attitudes towards learning English* and *integrativeness*; secondly, the relationship between *Ought-to L2 self* and *instrumentality personal/obligation*. The current study confirmed these links and also highlighted the dynamic nature of these links during one year. The changes

reflected the complex and nonlinear dynamic development of the learners' L2 selves, which interacted differently with motivational factors at different levels and at different points.

A striking pattern emerging from the qualitative data was the interviewees' use of the collective pronoun 'we' when they were asked to express their own opinions or explain their own situation. Markus and Kitayama (1991) suggested that in the Asian context the self is viewed as interdependent, i.e. closely connected with social context as individuals see themselves as part of an encompassing social relationship, as a participant in a large social unit, and "are motivated to find a way to fit it with relevant others, to fulfil and create obligation, and in general to become part of various interpersonal relationships" (p. 227). This was illustrated by learners' focus on connections with others and building interdependent relationships with them. At the same time, they also developed an interdependent view of their self-images such as the intention to be (or remain) a loyal son or daughter.

In addition, Taguchi et al. (2009) also observed that Chinese students are always supported in their education by their parents. Therefore, in such circumstances, parental advice could become a powerful factor in the students' L2 learning. Taking advice from their parents and following their parents' arrangements for their future is consistent with the development of the self-concept paradigm within the unique social perspective in China.

Another factor to emerge from the interviews was the learners' concern about their academic performance. The exams are not only a record of the learners' performance in school but also a social measure of language competence and therefore crucial for future opportunities to start postgraduate study. Li and Li (2010: 213) observed that children in China are facing tremendous academic pressure from the desire for success because they are regarded as "the spiritual sustenance and the only hope of many families". Good scores and excellent academic performances are the proof of success as well as a kind of reward to the parents' expectations and economic investment. It is thus not surprising that *family influence* accounted for a large proportion of variance in the learners' *Ought-to L2 self*, combined with *instrumentality personal/obligations*.

One cautionary note: the feedback from the students with the strongest variation in *Ideal/Ought-to L2 self* over the year provided at best glimpses of possible reasons for the changes. This is partly inherent to the study design: one single interview rather than interviews at the different points of data collection. Also, the identification of the students with the most dynamic *Ideal/Ought-to L2 self* could only happen after completion of the data collection by which time it was too late to get back to them with more probing questions on the reasons for the changes they displayed. These could have been significant events shaping their learning experiences and their outlook which they may not have wanted to share with the researcher (such as falling in -or out of- love), which could have led to new priorities, or laziness, or bad performances in the English class or English Corner, which could have led to shame and could have affected their current and future views of themselves. In other words, design limitations and absence of complete information from individuals on the precise causes of variation means that some mist lingers over the general picture.

11 Conclusion

Recent research in the DST perspective emphasises the fact that growth is non-linear and that there is much more variation than SLA researchers using different paradigms ever acknowledged previously. We argue that DST researchers probably exaggerate their claim to be the first to highlight the dynamic nature of L2 development, as longitudinal studies have a long tradition in SLA. In the present study, based on conventional statistical analyses, we have shown that perceptions of variation can be affected by the graphical representation of the variation. Graphs showing group means and standard deviation tend to create a false impression of stability. We have shown through bubble graphs that this impression of stability is shattered when looking at number of participants whose values on *Ideal/Ought-to L2 self* dimensions increase, decrease or remain stable between data collection points. Statistical analyses also revealed dynamic relationships between independent variables and *Ideal/Ought-to L2 self* dimensions. The lack of change in values of *L2 Ideal Self* between Times 1, 2 and 3 did not mean that the system was stable: different motivational variables accounted for different amounts of variance at each data collection point. This complex, dynamic picture of *Ideal/Ought-to L2 self* offered a holistic view on L2 selves and L2 motivation from a macro-social perspective. We lifted the study of L2 motivation from a purely classroom-based context into a larger sociocultural L2 environment. Additionally, the qualitative data provided some information from individuals to complement the findings on patterns of variation in quantitative data. Further research is needed to explore patterns of variation and the complex nature of L2 selves in different cultural contexts (cf. Henry 2014; Mercer 2014). It is crucial to keep looking at what lies bubbling beneath the surface.

Acknowledgment

We would like to thank the reviewers for their excellent comments and feedback, and the participants for putting up with the multiple data collection and interviews.

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ⁱ TEM: refers to Test for English Major (two levels: Band 4 and Band 8). It is a dedicated national exam to measure the English proficiency of English major students and a compulsory exam.

ⁱⁱ Because of space limitations, the information resulting from the regression analyses in table 2 has been condensed.