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The interaction of factors in constructing English learning motivation of China's government-sponsored overseas academic visiting candidates on an official preparatory program

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Abstract

The present study investigates the English learning motivation of China's government-sponsored overseas academic visiting candidates on an official intensive English preparatory program. A structural equation model (SEM) analysis was conducted on the results of a 33-item questionnaire survey taken by 632 such candidates, most of whom were university academics. By establishing a SEM model for the general sample and four sub-models for its sub-samples, the study delineates the complex interaction of the components in shaping this population's English learning motivation against the backdrop of China's grand socio-educational ambition. It also reveals some nuanced differences in the path coefficients in this motivational complex within each of its two sub-sample sets: the candidates with humanities and social science backgrounds vs. those with science backgrounds and the candidates from an institution or program on China's Double First Class initiative vs. those not. These research findings may help a better understanding of the English learning ecology in today's China. Theoretically, this study reinforces the usefulness of the prevailing L2 Motivational Self System framework while at the same time accentuating its socio-contextual variance; it also illuminates the future direction pertaining to the application of the Complex Dynamic Systems theory.

I. RESEARCH BACKGROUND

Motivation has become one of the most extensively probed topics in L2 research. We see come into play varied theoretical paradigms, research methodologies, target languages and learners at different levels in different countries (see Boo, Dörnyei & Ryan, 2015). Given that China today owns the world's largest learners of English, it is not surprising that L2 motivation researchers have undertaken to mine from these richest single country-based data (e.g. Xu & Gao, 2014; You & Dörnyei, 2016; Liu & Thompson, 2018). In spite of this, one cohort of English learners in China has been overlooked — candidates applying for government-sponsored overseas academic visit schemes. Each year many Chinese academics are sent on a half-a-year to one-year-long overseas visit stint, mostly to Western countries, funded by China Scholarship Council (CSC). To meet one of the criteria for eligibility, candidates are required to demonstrate that they possess a certain foreign language proficiency (English predominantly, even for visit to some non-English speaking countries). While some candidates make it through a challenging national Public English Testing System -- Level 5 (PETS5), the lower-level majority choose to enroll in a four-month intensive English preparatory program at one of 11 university-affiliated Overseas Training Centers (OTCs) (some are called the Pre-departure Training Department) across the country under the joint supervision of China's Ministry of Education. They then must pass an end-of-program English proficiency test designed and administered by a joint teaching & advisory committee of OTCs. Take an OTC at a prestigious university in East China, for example. It alone saw a total of more than 10,000 candidates attending the program from 1995 to 2020 according to the unpublished annals of the university. In this sense, the picture of English learning motivation in China would not be complete if the parameters of this population went amiss.

This study focuses its lens on this unique batch of English language learners in China. It aims to, through a quantitative approach, shed light on their English learning motivation on OTCs' official preparatory program and, in particular, illuminate the interaction of a suite of components in constructing this motivational mosaic against the background of the nation's drive to promote its higher education to a world-leading standard. By so doing, we hope to highlight L2 learning motivation complex from a macro-level societal perspective, yet not losing sight of the micro-level individual cognition-affect, and contribute to a fuller understanding of the ecology of English learning in China today.

II. LITERATURE REVIEW

2.1 Theory: L2MSS and Complex Dynamic Systems

Research in L2 motivation saw a major paradigm shift in the first decade of this century. Against the rise of global English and an increasingly diversified learning context, Gardner's socio-educational model (Gardner & Lambert, 1972), which distinguishes an integrative element from an instrumental element, was losing influence to socio-dynamic models, typically the self and identity-informed L2 Motivation Self System (L2MSS) proposed by Dörnyei (2005, 2009a). Little is needed here to expound on L2MSS with Ideal L2 self, Ought-to L2 self, L2 learning experience as its components. The model can be found in the literature review of almost every research article on L2 motivation in recent years, which is also evidenced by Dörnyei newly becoming a highly cited author in applied linguistics (Lei & Liu, 2019). In line with L2MSS, even broader models have been proposed (Kormos et al., 2011) that integrate goals, attitudes, self-related beliefs (ideal L2 self and ought-to L2 self) and social contextual factors to account for the final outcome (effort and persistence) of the motivational processes, which can be seen as an extension of and a supplement to L2MSS. Subsequently, increasing amounts of research that adopt the L2MSS or

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related framework have attempted to show how different sub-constructs interact in a dynamic, non-linear, rather than an isolated and linear way, to produce the L2 motivation outcome, hence the emerging salience of the Complex Dynamic Systems (CDS) theory[1] in L2 motivation studies (see Dörnyei et al., 2015). Proponents of the CDS approaches believe that human behavior such as L2 motivation should be conceived as a complex activity system where an array of interrelated components co-constructed the whole system simultaneously. Also, as noted by Dörnyei & Ushioda (2011), "because of the multiple interactions of the system constituents - which also involve environmental factors -- the system is in constant flux, but the direction of the change cannot be ascribed to any single variable in isolation as it is the function of the overall state of the system" (p. 37). To put in a nutshell, L2 motivation research has come a long way since Gardner's time to the extent that the L2MSS and its extension CDS have become its main theoretical pillar.

2.2 Practice: L2 motivation research in the Chinese context

L2 motivation research in China, influenced by Gardner and Lambert's (1972) socio-educational approach, initiated in the 1980s. For an overview of empirical L2 motivation studies in China before the advent of the L2MSS paradigm, please see the literature review of You & Dörnyei (2016). After L2MSS was introduced to the academic circle in China, there has been a steady rise of L2MSS-based research articles published in various journals for foreign language studies across the country. Xu & Gao's (2014) work was probably the first study published in a mainstream English-language journal for applied linguistics that adopted L2MSS to investigate Chinese university students' English learning motivation. You & Dörnyei's (2016) and You et al. (2016)'s large-scale L2MSS-based stratified surveys provide substantial data regarding the motivational disposition of English language learners in secondary schools and universities in China. Liu & Thompson (2018), also using the framework of L2MSS, explores Chinese college students' motivational profiles with a particular emphasis on "anti-ought-to self", a construct based on psychological reactance. In line with the Complex Dynamic Systems theory, Yu et al. (2018) compares possible L2 self-identities of Chinese PhD students learning English in China and in English-speaking overseas contexts with a retrospective case study approach. As can be seen, however, most of the above studies focus on undergraduate and graduate students (occasionally secondary school students) in China with the territory unchartered for the country's vast population of mature students.

To fill the niche, Chen's study (2024), based on a survey of over 500 government-sponsored overseas academic visiting candidates then attending the preparatory program at an OTC, probes the facets of this group's English motivation as well as the interrelations of its facets. The first-order and second order confirmative factor analysis reveal that their promotion focus and imaginative ideal L2 self are of slightly higher importance in their motivation complex than their prevention focus and the ought-to L2 self (better combined and called survival L2 needs in this particular context) while these seemingly opposite ends are somewhat correlated; also, their family concern (mostly about their children's English study) and personal dispositions is an additional facet. Two things, however, remain to be done to reinforce and expand these research findings and make them more meaningful. First, an SEM path analysis could be carried out to illuminate a detailed mechanism whereby different components interact to contribute to this population's motivational outcome. Second, a broad social contextual variable needs to be added to the

[1] The Complex Dynamic Systems (CDS) theory, originally known as the complexity theory, was first developed by Diane Larson-Freeman (2002; Larsen-Freeman & Cameron, 2008) and applied to the general research field of second language acquisition. Dynamic system behavior such as an outcome of SLA is regarded as "involving the interlinked cooperation and interaction of a number of components, conditions and factors, which in turn results in outcomes that, in many cases, cannot be described using traditional individual differences paradigms" (Yashima & Arano, 2015 p. 288). It is not until Dörnyei's (2009b) adoption of this framework for his research that CDS began to be ever widely applied to the L2 motivation research.

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equilibrium to empirically gauge its impact rather than simply form a conjecture.

III. THE PRESENT STUDY: MODEL PROPOSAL AND RESEARCH QUESTIONS

The present study is a follow-up on Chen's research (2024) and it takes a structural equation modeling (SEM) approach with a particular emphasis on the element of path analysis. As Dörnyei & Ushioda (2011) put it, "System modelling is an important aspect of a complex dynamic systems approach because it considers, by definition, the coordinated operation of the whole system and allows for various cyclical processes, feedback loops and iterations" (p. 249).

To execute SEM, hypothetical models need to be proposed first. Based on L2MSS and Chen's earlier study (2024), we formulate our model assumption as presented in Figure 1. We assume that the promotion focus, the ideal L2 self, survival L2 needs, the current L2 learning experience and the family/personal orientation are all linked to the group's learning efforts and a broad social contextual dimension affects the motivation's all sub-constructs above mentioned as well as the overall motivational outcome. Also, we postulate that survival L2 needs will have an influence on the motivation's all other sub-constructs, the promote focus will affect all other sub-constructs except survival L2 needs and the ideal L2 will be linked to the learning experience as well as the family/personal orientations. It is to be noted that as we are not certain of the real distinction between the promotion focus and the ideal L2 self for our population[2], an alternative model (Figure 2) is also suggested where the promotion focus and the ideal L2 self are combined and it has a bearing on all other sub-constructs except survival L2 needs.

Here are the three research questions we set out to answer:

1. How reliable are Chen's (2024) initial research findings about the interrelationships of the different motivational sub-constructs and their contributions to the overall English learning motivation for China's government-sponsored overseas academic visiting candidates on the OTC preparatory program? To rephrase the question or, rather, to take a step forward, how in detail do the different sub-constructs interact with each other in producing their final learning effort?

2. What is the role of the prevailing socio-contextual condition and how does it fit in the whole equation?

3. How do we compare the internal structure of English learning motivation between its sub-samples, e.g., between the candidates with humanities and social science backgrounds and those with science and engineering backgrounds, and between the candidates who are from an institutions or program on the Chinese government's Double First Class initiative [3] (shortened as the DFC candidates hereafter) and those who are not (shortened as the non-DFC candidates hereafter)?

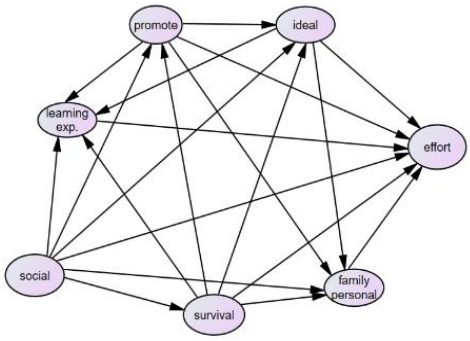

Fig. 1. Proposed model 1

[2] In Chen's (2024) previous study, an exploratory factor analysis (EFA) identified four factors of this group's English learning motivation with no distinction being made between their promotion focus and ideal L2 self. However, to better address the element of international posture contained within their ideal L2 self, the author split them up and proposed a four-factor model and a five-factor model respectively. Interestingly, when subjected to the first-order CFA, the five-factor model yielded slightly better goodness-of-fit indices than the four-factor model with the two factors highly correlated (r = 0.83).

[3] The Double First Class initiative is a Chinese government plan conceived in 2015 to comprehensively develop a group of elite Chinese universities and individual university programs into a world-class level by the end of 2050. It is more ambitious and heavier-funded than its predecessor – the "985" and "211" initiatives – launched to promote the competitiveness of China's flagship higher education institutions at the end of the last century.

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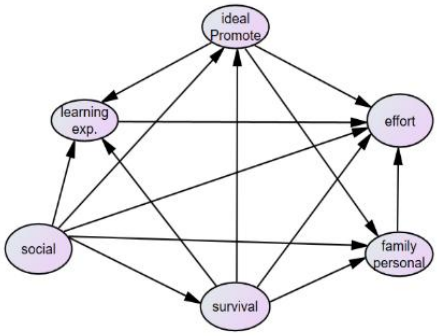

Fig. 2. Proposed model 2

IV. METHOD

4.1 Participants

A total of 632 government-sponsored overseas academic visiting candidates then studying at five of the OTCs across the nation, 312 males and 320 females, participated in the study. Table 1 & 2 present the detailed information of these participants related to our research questions. For more general information of these participants, please see Supplement I of this article.

Table 1: Profile of the participants

Specialization	Sample size	Long-term overseas academic exp. a prerequisite for title promotion at home institution			
		Yes and affect me	Yes but not affect me	No	Don't know
Humanities & Social sciences	186 (29.4%)	101	21	52	12
Sciences & Engineering	446 (70.6%)	140	56	215	35
Total	632	241	77	267	47

Table 2: Profile of the participants (continued)

From a university or university program on the DFC initiative	Sample size	Long-term overseas academic exp. a prerequisite for title promotion at home institution			
		Yes and affect me	Yes but not affect me	No	Don't know
Yes	252 (39.9%)	112	16	96	28
No	304 (48.1%)	137	23	129	15
Do not know	76 (12.0%)	22	8	42	4
Total	632	271	47	267	47

4.2 Instruments

A 33-item questionnaire was designed and used for the current study (see Appendix). The first part consists of eight questions on the participants' background information. Both the second part and the third part adopt a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly

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agree). The second part contains 18 questions on five dimensions of the participants' motivation to learn English during the preparatory program: ideal L2 self, promotion focus, survival L2 needs, current L2 learning experience and family/personal orientations. Informed by Taguchi et al. (2009), the validity and usefulness of these thoroughly redeveloped 18 items in categorically contributing to the construct of English learning motivation for the population under study has been established in Chen's earlier study (2024). The remaining seven items constitute the third part with four of them representing the participants' motivated learning effort (criterion measures) and three their perception of the prevailing atmosphere toward internationalization at their home institutions (that is, the social context). These items were the result of the interviews with eight candidates studying at the OTC and pilot tested with 16 others (these 24 candidates were not included in the official survey). Based on the candidates' feedback, some items were removed and some were rephrased. For instance, an item borrowed from Taguchi et al. (2009) - "Compared to my classmates, I study English relatively hard" - was removed as they were adult part-time students and they had no knowledge of how hard their classmates were working after class. Another item – "I am working hard at learning English" – was reworded to "I am making my greatest effort to learn English under the circumstances I can control" given their part-time status and usually busy engagements. Table 3 lists the Cronbach Alpha internal consistency reliability coefficient for each category of the items.

Table 3: Internal consistency reliability for each category of the items

Category	Item No.	Cronbach Alpha	
Promotion focus	9,10,17, 25	.874	.920
Ideal L2 self	14,15,16,19	.844	
Survival L2 needs	11,18,22,24	.728	
Current L2 learning exp.	21,23,26	.871	
Family/personal orientation	12,13,20	.786	
Criterion measures (efforts)	27,28,29,30	.817	
Social context	31,32,33	.840	

4.3 Procedure and data analysis

The data was collected through a popular online survey platform in China, *Wenjuanxing*, in June 2021, about two weeks before the end-of-program English proficiency test. After the collected data was transformed into a datasheet in SPSS 23.0, the proposed overall models were submitted to evaluation using maximum likelihood estimation in AMOS 21.0. Next, four sub-datasets were created: (a) the candidates with humanities and social science backgrounds; (b) the candidates with science backgrounds; (c) the DFC candidates; (d) the non-DFC candidates. The parameter estimation was then conducted for each sub-model and standardized path coefficients were compared between Sub-model (a) and (b) and between Sub-model (c) and (d).

It is important to note here that two concerns have been addressed when employing an SEM technique. First, SEM is often used assuming that data are from an underlying multivariate normal distribution, particularly for maximum likelihood estimation, so researchers should indicate that the skewness and kurtosis values of their data are all within the guideline before embarking upon any SEM exercise (Okey & Choi, 2015). The descriptive statistics for the questionnaire survey in this study

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(see Supplement II) show that no skewness values and kurtosis values exceed the absolute values set by Kline (2011) for our datasets. Second, sample size is also an important factor that determines the quality of an SEM study and a common recommendation is to have at least 10 samples per estimated model parameter (Ockey & Choi, 2015). In our study we have 25 parameters and, according to the suggestion, Sub-models (b), (c) and (d) meet the requirement of the minimum sample size of 250 but Sub-model (a) does not (see Table 2). However, Ockey & Choi (2015, p. 310) also points out that a more defensible option to justify one's sample size is to conduct a power analysis following the procedures proposed by Maccallum et al. (1996). We referred to the paper by Maccallum et al. and found the table for the minimum sample size to achieve power of 0.80 for selected levels of degrees of freedom (df). According to the table (p.144), a minimum sample of 178 would be adequate to achieve a power of 0.80 for test of non-close fit with the degrees of freedom of 100, and the higher degrees of freedom the lower the minimum sample size would be required. As the degrees of freedom in our models are all greater than 200 (see Table 4) and a non-close fit technique is employed, there should be no problem with the sample size for Sub-model (a).

V. RESULTS

AMOS failed to generate any estimates for the first proposed model (figure1), which means for the sample under our study their promotion focus and the ideal L2 self are probably too similar to be considered distinct. This is not very surprising as the aspects of their ideal L2 self are all oriented towards their career development (see Appendix) and it is echoed by what Dörnyei & Ushioda (2011) observe—when our idealized image is associated with being professionally successful, 'instrumental' motives with a promotion focus are related to the ideal L2 self (p. 87). Parameter estimation was then attempted on the alternative model proposed (Figure 2) and Figure 3 shows the model with standardized path coefficients. Compared with Figure 2, three proposed paths (the promotion & ideal L2 self the family/personal orientation, Social context the family & personal orientation, social context criterion measures) were removed as their regression weights turned out to be insignificant at .05 level. Please refer to Table 4 for the goodness-of-fit indices for this general model. Even though the chi-square / df ratio is above the usually recommended value of 2, the RMR value is below .08, the RMSEA is below .06 with 90%, and both the confidence interval and the CFI are very close to .95, which, together with a few other indices, indicate that the model fits the dataset quite well (Ockey & Choi, 2015).

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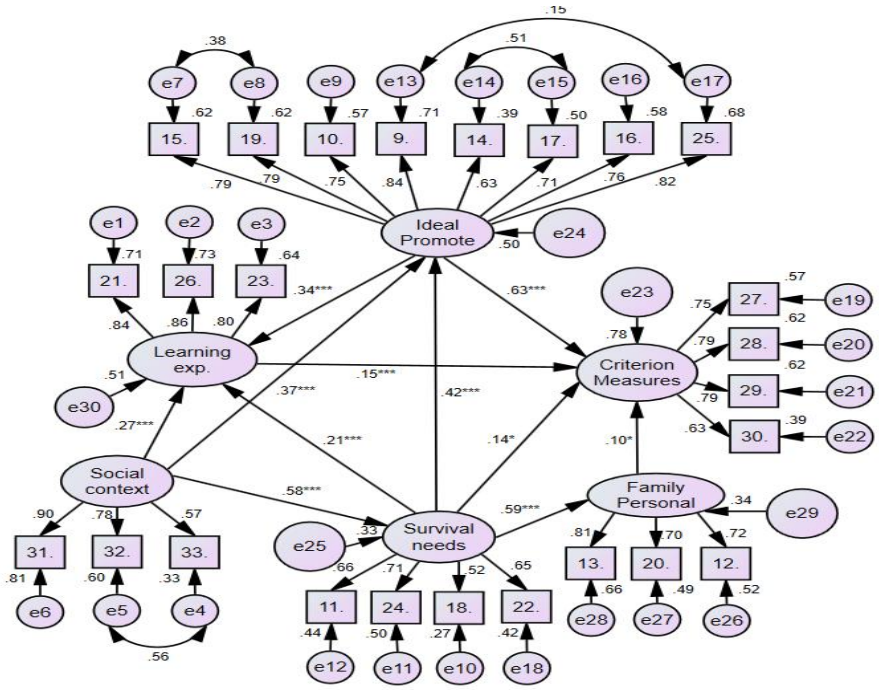

*Fig. 3. Full structural model for the whole sample (flagged path coefficients are significant at *p<.05, **p<.01, ***p<.001)*

Figure 4 presents the path coefficient comparisons between the sub-models for the candidates with humanities and social science backgrounds (a) and for those with science and engineering backgrounds (b) while the comparisons between the sub-models for the DFC candidates (c) and for the non-DFC candidates (d) can be seen in Figure 5 (Please go to Supplement III of the online version of this article to view all four full structural sub-models). The goodness-of-fit measures for these four sub-models are also listed in Table 4 and they indicate that each of these four sub-models reasonably fits its corresponding sub-sample (Kline 2011).

VI. DISCUSSION

6.1 Some features of the general model

Table 4: Goodness-of-fit indices for the general model and four sub-models

Model	CMIN / DF (p = .000 < .001)	RMR	GFI	NFI	CFI	PCFI	RMSEA (90% confidence interval)
General model	2.928 (df=260)	0.039	0.908	0.919	0.945	0.819	0.055 (0.051-0.060)
Sub-model (a)	1.909 (df=263)	0.052	0.831	0.841	0.916	0.803	0.070 (0.061-0.079)
Sub-model (b)	2.667 (df=262)	0.047	0.886	0.892	0.929	0.812	0.061 (0.056-0.067)
Sub-model (c)	2.226 (df=262)	0.050	0.842	0.868	0.922	0.805	0.070 (0.062-0.077)
Sub-model (d)	1.830 (df=261)	0.041	0.883	0.893	0.948	0.825	0.052 (0.045-0.060)

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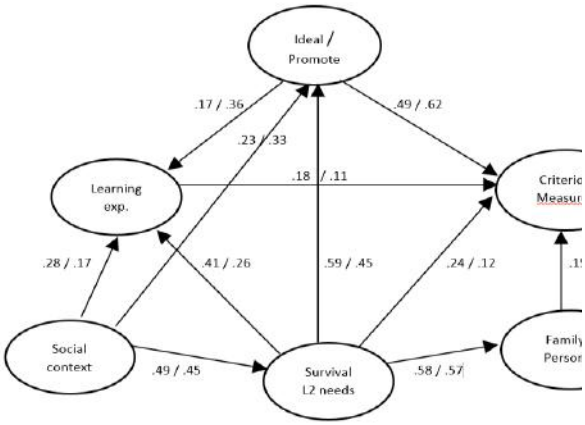

Fig. 4. Comparison of Sub-model (a) with its coefficients on the left and Sub-model (b) with its coefficients on the right

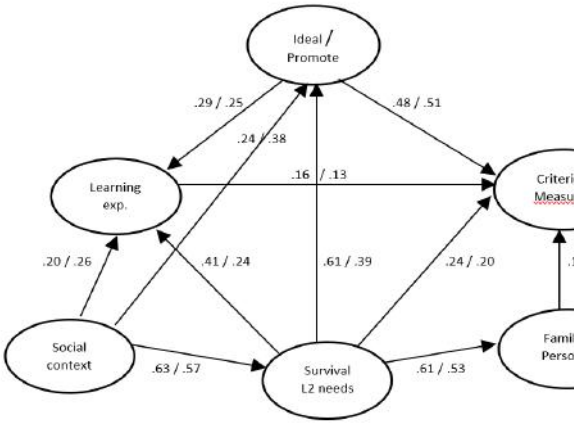

Fig. 5. Comparison of Sub-model (c) with its coefficients on the left and Sub-model (d) with its coefficients on the right

According to Figure 3, the factor of survival L2 needs seem to have a far smaller effect (γ =.14) on our whole sample's English learning efforts than their promotion & ideal L2 self (γ =.63), which is somewhat implausible given a general exam-orientation nature of OTCs' intensive English preparatory program. A further calculation of these two factors' cumulative effect on the sample's learning effort, however, reveals that their influences are much closer in the whole equilibrium: .68 from the promotion & ideal L2 self to the learning effort (0.63 +0.34∗0.15) and .45 from survival L2 needs to the learning effort (0.14+0.59∗0.10+0.31∗0.63+0.36∗0.15). Taking into account the path coefficients from the learning experience to the learning effort (γ =.15) and from the family/personal orientations to the learning effort (γ =.10) , the contribution weight of their promotion & ideal L2 self and survival L2 needs to the final motivational outcome in the current study is quite in line with Chen's (2024) earlier findings using a second-order CFA technique on a similar cohort; that is, for the population under our study, their promotion & ideal L2 self and their survival L2 needs are the two most significant components in their L2 motivation complex with the former figuring slightly larger than the latter.

It is fairly noticeable in Figure 3 that both their promotion & ideal L2 self and their survival L2 needs also work through the current L2 learning experience on the learning effort apart from exerting a direct influence on it; this again confirms the importance of including L2 learners' emotional states in the L2 Motivational Self System. The effect of the promotion & ideal L2 self on the learning experience in the current study is expected, which is consistent with Teimouri's (2016) findings that L2 learners with a more promotional focus tend to express more positive emotions toward their own learning experience, peers, and teachers. While some research has established that prevention-focused L2 learners may feel anxious when they perceive difficulty in achieving their obligations regarding their foreign language learning thus bringing about a negative attitude (Papi & Teimouri, 2014), the current study saw quite a positive effect of the

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prevention focus on the learners' experience (γ =.36). This may be accounted for by the fact that the L2 learners in our study are all mature, self-regulated university academics who find a real survival need to improve their English level and hence put in great effort; when they receive high-quality English training that they have never received before, their survival needs are greatly satisfied and hence, a positive relationship established. We have to point out here, though, that the path coefficient from the current learning experience to the learning effort is relatively low (γ =.15). This is what we had not expected although the order of its weight in the contribution to the overall motivation is consistent with Chen's (2024) earlier findings. It may also have to do with the unique characteristics of our sample, who, unlike younger secondary or university students, are better at self-regulation and are fully aware of the instrumental value of English competence; independent of the current learning experience and enjoyment derived to some extent, they tend to maintain a stable level of learning input.

Let's zoom out our lens to the broad social context for now. The three items falling under this category in our questionnaire partially capture the Chinese government's ambitious bid to internationalize its higher education and promote it to a world-class standard, with the DFC initiative representing the latest step of this endeavor. Against the accelerating rate of globalization and dramatic growth of China's economic power, Chinese universities have witnessed a quick rise in their competitiveness by receiving increasing government funds and focusing on a broad array of engagements with the outside world especially Western societies (Neubauer & Zhang, 2015). From the light of academics, this internationalization drive mostly entails the urge for them to publish more papers in high quality international academic journals, to have a sizable length of experience working or studying overseas, and to seek or carry out more joint research with their counterparts at Western universities, all of which presuppose a relatively high English proficiency. Consequences do follow for the staff who fail to meet the requirements for internationalization. In quite a few universities, for instance, one will not be eligible to be promoted to a higher academic status without having a one-year experience with a high-level overseas university and in some elite Chinese universities, young teaching or research staff will not be able to secure a contract renewal without successfully getting promoted within a certain number of years or failing to publish the targeted number of SCI/SSCI-indexed papers in international journals. All this exert a huge amount of pressure on the academic staff of Chinese universities today. With this macro-environment in mind, it should come as no surprise in our general model that the path coefficient from social context to survival L2 needs (γ =.58) is higher than that from social context to the promotion & ideal L2 self (γ = 0.25+0.58∗0.31= .43); for our sample, survival always has the paramount importance although the social influence on their ideal L2 self is also quite substantial.

Given the higher influence of social context on our sample's survival L2 needs than on their promotion & ideal L2 self, it is interesting to note that the latter should predict more of their learning efforts than the former as mentioned earlier. This seemingly asymmetrical pattern in the model (with the path from survival L2 needs to the promotion & ideal L2 self as its axis, see Figure 3) may well be explained by the very path at the center itself, that is, quite a portion of their promotion & ideal L2 self emanates from their survival L2 needs (γ = .31). As a matter of fact, considerable correlations between the promotional aspect of instrumentality with the ought-to L2 self has been found particularly in the Chinese context (Taguchi et al., 2009). Kormos et al. (2011) also observes that the internalization of the values of the milieu into the learners' self-concept seems to related to maturation: whereas for secondary school students the ought-to L2 self and ideal L2 self are unrelated constructs, for students past puberty and particularly for adult language learners, their milieu plays a role in shaping their internalized self-concept indirectly with the mediation of the ought-to L2 self

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(p.509). So back to our sample - mature, ambitious, highly educated university teachers and researchers, it is not inconceivable that they have highly internalized the value of their government's bid for higher education and hence the demands imposed upon them - to become a successful scholar of internationalization - despite still being very aware of their survival challenges. It is this asymmetry between social input (more on the survival side) and personal output (more from the ideal self side) that again demonstrates that unless students internalize the goals of their social environment, external regulation plays a very limited role in enhancing motivated behavior (Deci et al., 1991).

Here is another interesting observation from our general model. Through their survival L2 needs, the prevailing social condition has quite an effect, though indirectly, on our sample's family concerns ($\gamma = 0.58*0.59 = .34$). We surmise that it is probably through coping with the huge pressure of internalization in an increasingly globalized society that our sample, 76% of whom have at least a child to look after or need to help with his / her school (based on the result of Item 7 in the questionnaire, see Appendix), find it imperative to give their children a head start especially in terms of their English competence, so that they would be in a much better position to survive even more intense competition in the next-generation job market.

6.2 Comparison of two sets of sub-samples

Figure 4 shows that the survival L2 needs have a much stronger direct impact on the learning effort in the group of humanities and social sciences than that of sciences and engineering (.24 vs. .12); conversely, the direct effect of the promotion & ideal L2 self on the learning effort is somewhat lower in the former group than the latter (.49 vs. .62). Also, the candidates with humanities and social science backgrounds see a higher proportion of their promotion & ideal L2 self derive from their survival L2 needs than those with science and engineering backgrounds (.59 vs. .45). We may have a better understanding of these comparisons if we put them in perspective with some additional information. From Table 1 we see 101/186 (54.3%) of the candidates with humanities and social science backgrounds said a long-term overseas academic visiting experience was an actual prerequisite for their promotion whereas only 140 / 446 (31.4%) of the candidates with science and engineering backgrounds said so. Also, based on the answers to Question 8 in the questionnaire (see Appendix), 48.4% of the scientists and engineers said their primary goal of overseas academic visit was for an existing joint research program or to seek such a program, compared with only 21.7% of the humanities scholars and social scientists who said so. It may reasonably follow that the Chinese scientists and engineers today have better opportunities to carry out international cooperation and conduct dialogues with the Western world on an equal footing than their humanities and social science counterparts, which is reinforced by the evidence that the growth of academic publishing especially internationally peer-reviewed papers in hard sciences has been extraordinary while this is far less prominent in social sciences and humanities (Neubauer & Zhang, 2015). Given a greater linguistic barrier and more ideological restraints in international publishing and academic exchanges, the English learning motivation of Chinese humanities scholars and social scientists on this preparatory program tends to be tilled slightly toward a survival basis (the cumulative effect of survival L2 needs on the learning effort $\gamma = .69$ through calculation; the cumulative effect of the promotion & ideal L2 self on the learning effort $\gamma = .52$ through calculation), with more immediate concern for their promotion whereas the English learning motivation for the Chinese scientists and engineers on this program are somewhat more associated with an idealistic, world-embracing mind (.66 vs. .51 through calculation in the latter as opposed to .52 vs. .69 in the former case), despite an ultimately instrumental regard for their career advancement as well.

As can be seen in Figure 5, the most notable model difference between the sub-samples of the DFC candidates and non-DFC candidates lies in the path coefficient from survival L2 needs to the promotion & ideal L2 self (.61 vs. .39). Both the direct (.48 vs. .51) and the cumulative effects (.53 vs. .54 through calculation) of the promotion & ideal

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L2 self on the learning effort are similar between the two groups. As for the effect of survival L2 needs on the learning effort in the two groups, the direct effects are fairly close (.24 vs. .20) while the cumulative effect in the DFC group is much higher than that in the non-DFC group (.67 vs. .47 through calculation). Considering more or less the same proportion of the candidates for whose promotion a long-term overseas academic visit is a real prerequisite in the two groups (112/252 or 44.4% for the DFC group, 137/304 or 45.1% for the non DFC group according to Table 2), we can reasonably infer that compared with the non-DFC candidates on the program, the DFC candidates have more proportion of their survival L2 needs coming from the aspects other than direct, tangible promotion requirements and they are more liable to convert the survival L2 challenges they are faced with to the promotion & ideal L2 self. This is probably a reflection of a subtly greater institutional pressure, peer pressure and self-imposed ought-to pressure on the DFC candidates than non-DFC candidates as well as a more idealistic ego possessed by them. As the DFC universities and programs (following their "985" or "211" predecessors) constitute the cream of China's institutions of higher learning, they not only enjoy extraordinary prestige across the nation but also receive substantial funding from the government; meanwhile, they bear the brunt of the burden to raise the nation's higher education competitiveness to a world-class level. The academics of these universities and programs, therefore, find their status a source of both pride and stress as they are at the forefront of this national drive. For most of them, thriving by academically outperforming their colleagues and peers is the only way of survival in the competition and to thrive means devoting 100% of their commitment to pursue a professionally ideal self. The nuanced differences in the complex of English learning motivation between the DFC and non-DFC groups, in this sense, are nothing but a reference to a broad social context at a particular time.

VII. CONCLUSION

This study addresses a research niche in English learning motivation in China by turning its attention to an important cohort of English learners largely neglected before, i.e., the candidates on an official intensive L2 preparatory program who are ready for a long-term overseas academic visit sponsored by the government. Employing an SEM approach, it delineates the complex internal structure of English learning motivation for this population against the backdrop of the nation's grand socio-educational ambition and reveals some subtle differences in this motivational complex between its sub-groups.

Specifically, for the first research question, the present study largely confirms Chen's (2024) earlier findings that the promotion focus & ideal L2 self, survival L2 needs, the current learning experience and the family/personal orientations, in this descending order of importance, contribute to this cohort's English learning effort, with their promotion & ideal self and survival L2 needs representing the two most significant components. It takes a step further and details the interrelationships of these components in shaping the L2 motivation together: both the promotion & ideal L2 self and survival L2 needs also have an indirect effect on the learning effort mediated by the current L2 learning experience; survival L2 needs account for quite a portion towards the promotion & ideal L2 self; and survival L2 needs, rather than the ideal L2 self, play a notable role in shaping their family concern. Regarding the second research question, the study finds that the prevailing social context constitutes a critical parameter in the equation: it exerts a considerable influence, direct or indirect, on all the mediating sub-constructs towards the criterion measures; it has a higher cumulative effect on our sample's survival L2 needs than on their promotion & ideal L2 self. By comparing each of the two sets of sub-models, we now can tentatively answer the third research question. As opposed to the scientists and engineers on this program, the humanities scholars and social scientists tend to be slightly less idealistic and have a little higher weight of survival

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L2 needs in their motivation, with more emphasis laid on their prospective promotion in the near future; the DFC candidates on the program see a somewhat higher impact and wider source of survival L2 needs than the non-DFC candidates and their promotion & ideal L2 self derives more from the survival L2 challenges they encounter.

With regard to the theoretical relevance, this study reinforces the usefulness of the L2 Motivational Self System while accentuating its socio-contextual variance, echoing a view that the diversity of reasons for learning should be considered in analyzing L2 motivation (Duff, 2017). It also partially follows the line of the Complex Dynamic Systems theory inasmuch as it demonstrates how interrelated learner-internal cognitive and affective attributes simultaneously co-constructed a complex L2 motivation system. What needs to be pointed out, however, is that in this study the context is still more or less conceptualized as an isolated background variable in the whole system. This is probably due to the study's adoption of a broad sociocultural perspective and treatment of the sample and its sub-samples as a collective of the same nature. Future investigations could be conducted with a close-up lens on individual candidates on such a program and thus draw our attention to the interaction of the social context and individual agency in negotiating L2 motivational outcomes possibly including motivational fluctuations.

Appendix. Questionnaire (the English translation)

Part A Background information

1. Your gender is A. male B. female
2. Your age is A. 30 and below B. 31-45 C. above 45
3. Your academic title is (or equivalent to) A. professor B. associate professor C. lecturer D. assistant lecture or I am still doing Ph.D.
4. You specialize in A. humanities or social sciences B. sciences or engineering
5. You are A. from a university or a university program on the Double First Class initiative B. not from a university or a university program on the Double First Class initiative C. I don't know
6. Is overseas academic visiting a prerequisite for title promotion at your home institution? A. Yes and it affects me B. Yes but it does not affect me C. No D. I don't know
7. You A. have at least a child to look after or you need to help him or her with school B. don't have any child to look after or do not need to help him or her with school
8. Your primary goal for an overseas academic visit is A. to meet the requirement for promotion B. for an existing or potential joint research program or to seek such a program C. to broaden my vision and enrich my experience D. out of concern for my family

Part B Choice questions with the Likert scale (I.)

9. Improving my English is important to me as it will help distinguish myself from my colleagues and peers.
10. Improving my English is important as it will help bring me more opportunities of international cooperation or joint research.
11. My promotion or other aspects of career growth will be greatly affected without a certain English proficiency or an experience of overseas academic visit.
12. I want to improve my English and secure an overseas academic visit so that my children will be able to go with me and have a L2 immersion experience; or improving my English and securing an overseas academic visit will be beneficial to my children (in the future).
13. Working hard on my English and winning an opportunity to visit overseas sets a good example for my family.
14. I can imagine myself teaching a course of my subject in fluent English.
15. In general, successful scholars in China today have a relatively high English proficiency and I hope to be one of them.

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16. I can imagine myself chatting fluently with foreign colleagues in English on occasions such as reception, tea break at a conference, etc.
17. Improving my English is important as I need to publish papers in quality English-language academic journals.
18. It'll be face losing If I fail to pass the OTC end-of-program exam and lose the opportunity to visit overseas on government sponsorship.
19. I can imagine myself successfully presenting my research findings in English at an international conference.
20. I work on English in order to make up for what I missed before and perfect myself, not necessarily out of concern for my career development.
21. The OTC instructors' English competence and teaching skills raised my learning interest.
22. I feel somewhat worried whenever my low English competence come to my mind.
23. Improvement in my English skill on this program boosted my confidence and raised my learning interest.
24. Leadership of my college / department or research team expects me of having a high English proficiency, which exert some pressure on me.
25. Improving my English is important as it help me win more respect from my colleagues and peers.
26. The curriculum, teaching materials, course arrangement and general atmosphere here meet my needs and raised my learning interest.

Part C Choice questions with the Likert scale (II.)

27. I am making my greatest effort to learn English under the circumstances I can control.
28. I prioritize my language learning here, ranking its importance only after the commitments I was obliged to do or matters significant to my career development.
29. I almost complete all the assignments given by the instructors on the preparatory program.
30. I search for additional learning materials and engage in some self-guide learning after class.
31. My department now attaches a great importance to international cooperation, exchanges and joint research projects.
32. My department now attaches a great importance to its academics' publishing in high-quality international academic journals.
33. My department now stresses the importance of its academics having an international vision or is eager to recruit staff from overseas.

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Supplement I. More general Profile of participants

Gender		Age			Academic Title (or equivalent to)			
Male	Female	Below 30	31-45	Above 45	Assis. instructor / still doing PhD	Lecturer	Associate professor	Professor
312 (49.4%)	320 (50.6%)	34 (5.4%)	566 (89.6%)	32 (5.0%)	13 (2.1%)	231 (36.6%)	330 (52.2%)	58 (9.1%)

Supplement II. The descriptive statistics for the result of the questionnaire survey

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
9.	632	1	5	4.29	.846	-1.534	.097	2.868	.194
10.	632	1	5	4.19	.848	-1.179	.097	1.654	.194
11.	632	1	5	4.09	.961	-1.037	.097	.670	.194
12.	632	1	5	4.02	1.039	-.938	.097	.224	.194
13.	632	1	5	4.14	.953	-1.083	.097	.695	.194
14.	632	1	5	4.17	.872	-1.233	.097	1.891	.194
15.	632	1	5	4.33	.840	-1.662	.097	3.345	.194
16.	632	1	5	4.30	.833	-1.409	.097	2.294	.194
17.	632	1	5	4.18	.874	-1.205	.097	1.642	.194
18.	632	1	5	4.01	1.051	-.985	.097	.353	.194
19.	632	1	5	4.41	.765	-1.708	.097	3.992	.194
20.	632	1	5	4.23	1.028	-1.272	.097	.780	.194
21.	632	1	5	4.38	.863	-1.683	.097	3.231	.194
22.	632	1	5	4.04	.975	-1.029	.097	.678	.194
23.	632	1	5	4.20	.895	-1.124	.097	1.112	.194
24.	632	1	5	3.97	1.036	-.848	.097	-.011	.194
25.	632	1	5	4.20	.830	-1.135	.097	1.588	.194
26.	632	1	5	4.35	.831	-1.307	.097	1.550	.194
27.	632	1	5	4.46	.813	-1.798	.097	3.604	.194
28.	632	1	5	4.48	.837	-1.938	.097	3.860	.194
29.	632	1	5	4.40	.797	-1.453	.097	2.168	.194
30.	632	1	5	3.90	1.021	-.720	.097	-.138	.194
31.	632	1	5	4.14	.863	-.972	.097	.890	.194
32.	632	1	5	4.02	.863	-.645	.097	.094	.194
33.	632	1	5	4.12	.953	-.983	.097	.403	.194
Valid N (listwise)	632								

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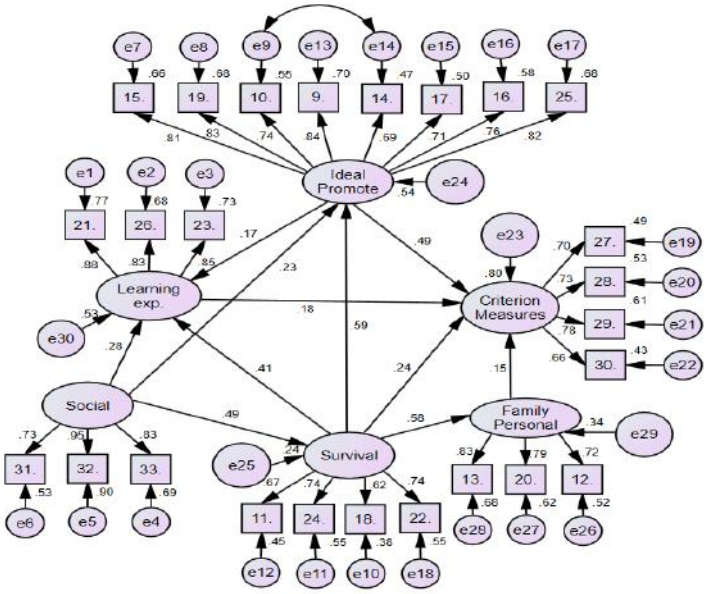
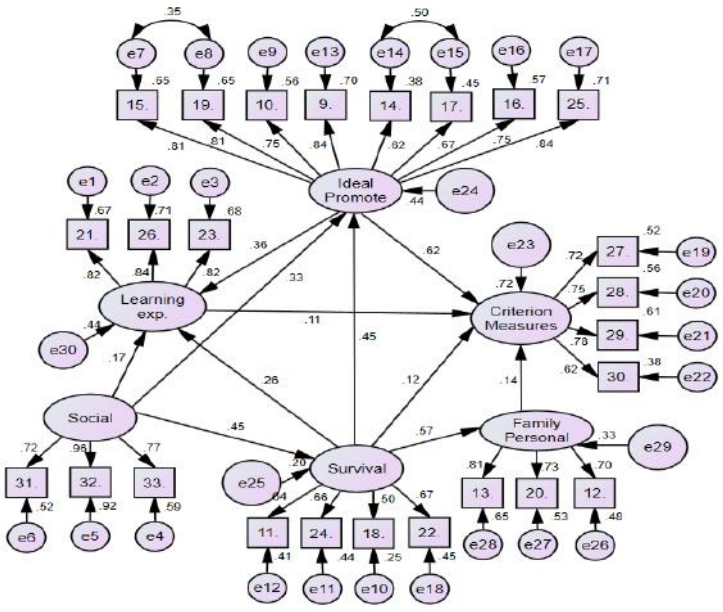
Supplement III. Four full structural sub-models



Sub-model (a)



Sub-model (b)

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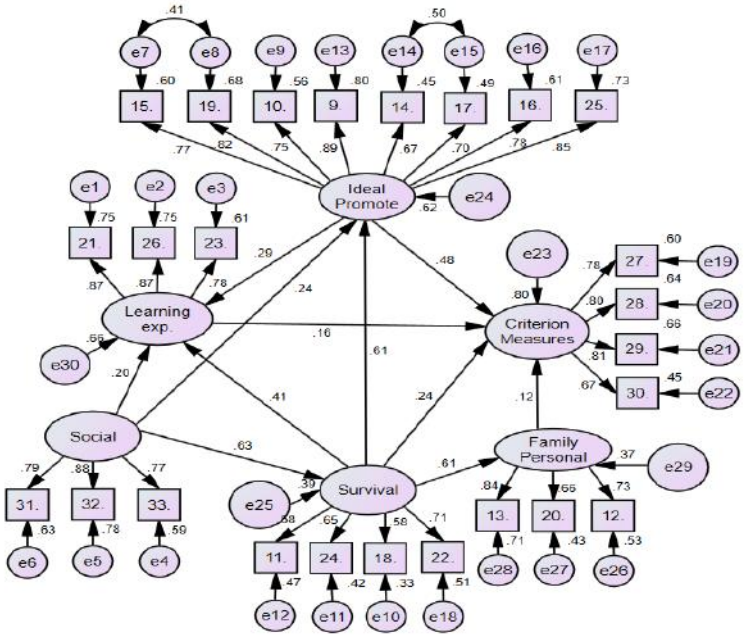
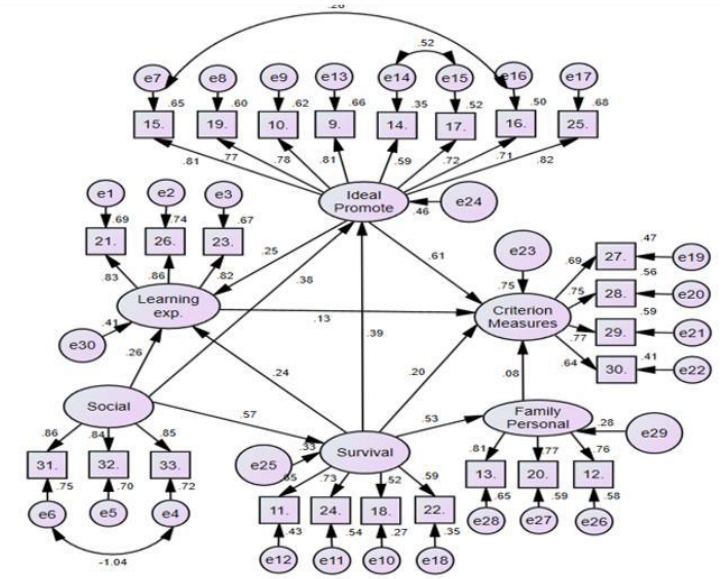


Sub-model (c)



Sub-model (d)

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