# Chinese university faculty's motivation and language choice for scholarly publishing

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## Abstract

Research on scholarly publishing has focused predominantly on bi/multilingual researchers' experiences and practices of publishing in English with scant attention paid specifically to their motivation and language choice for bi/multilingual publishing. Drawing on data collected from 318 Chinese university faculty members, this study examines bilingual researchers' motivation (i.e., interest value, utility value, cost, and ability self-concept) and language choice (i.e., first language only, English only, or both English and first language) for publishing their research articles, and factors that may influence their motivation and language choice. Mixed-design ANOVAs revealed clear language-, discipline-, and overseas experience-based differences in their motivation, and complex interactions among language, discipline, and overseas experience. A multinomial logistic regression found significant effects of disciplinary background, overseas experience, and perceived ability to write English research articles on participants' choice of publishing in Chinese only or in both Chinese and English. These results provide some evidence against the seemingly unstoppable spread of English as the language of publication and the widely-held view of utility as the single most important driving force behind it, and point to a complex and multidimensional picture of Chinese researchers' motivation and language choice for scholarly publishing.

**Keywords:** expectancy-value theory, language choice for publication, motivation for bi/multilingual publishing, writing for publication.

## Resumen

*Motivación y elección de lengua para la publicación académica en las universidades chinas*

La investigación sobre la publicación académica se ha centrado principalmente en las experiencias y prácticas de investigadores bilingües y multilingües al publicar en inglés. Apenas se ha prestado atención específicamente a su motivación y su elección de lengua para la publicación bilingüe o multilingüe. Con base en los datos recopilados de 318 profesores de diferentes facultades chinas, en este trabajo se examina la motivación de investigadores bilingües (valor de interés, valor de utilidad, coste, autoconcepto de capacidad) y su elección de lengua (solo la primera lengua, solo inglés, ambas lenguas) a la hora de publicar artículos de investigación, así como los factores que pueden influir en ello. Por medio de anovas de diseño mixto se han detectado claras diferencias relacionadas con la lengua, la disciplina y la experiencia en el extranjero en lo que respecta a la motivación, y también se ha identificado una compleja interacción entre la lengua, la disciplina y la experiencia en el extranjero. A través de una regresión logística multinomial se han advertido que el bagaje de los participantes en sus disciplinas, su experiencia en el extranjero y su percepción sobre su propia capacidad de escribir artículos de investigación en inglés son variables que tienen efectos significativos en la decisión de publicar únicamente en chino o también en inglés. Estos resultados proporcionan argumentos en contra de la expansión aparentemente imparable del inglés como lengua de publicación y del punto de vista generalizado de que la utilidad es el único motivo subyacente, o, al menos, el más importante, y apuntan hacia un panorama complejo y multidimensional de la motivación y de la elección de lengua para las publicaciones académicas por parte de los investigadores chinos.

**Palabras clave:** teoría de expectativa-valor, elección de lengua para publicaciones académicas, motivación para la publicación bilingüe y multilingüe, escritura académica.

# 1. Introduction

The past few decades have witnessed the ever accelerating global dominance of English as a language of research communication (Ammon, 2001; Lillis and Curry, 2010). However, despite the seemingly unstoppable spread of English in scholarly publishing, researchers in English-as-an-additional-language (EAL) contexts may still need or want to publish in local or regional languages. There is some evidence that bi/multilingual scholarly publishing is still common in various EAL countries, such as China (Zheng & Gao, 2016), Japan (Casanave, 1998), Poland (Duszak & Lewkowicz, 2008), Romania (Muresan & Pérez-Llantada, 2014), and Spain, Slovakia, Hungary and Portugal (Lillis & Curry, 2010).

The bi/multilingual publishing reality notwithstanding, previous research has focused primarily on EAL researchers' English publishing practices with relatively little attention paid specifically to their motivation and language choice for bi/multilingual publishing (Duszak & Lewkowicz, 2008; Gnutzmann & Rabe, 2014; López-Navarro et al., 2015). This body of research has suggested that EAL researchers may be motivated to publish in English or their first language for various reasons, and that a series of "ecological variables", such as national, institutional, and disciplinary contexts, may influence their motivation and language choice (Baldauf, 2001; López-Navarro et al., 2015). However, most studies in this line of research are case studies or qualitative interview studies. Although they have greatly enhanced our understanding of EAL researchers' motivation and language choice for scholarly publishing, they are not well equipped to reveal broad patterns and show how potential influencing factors may impinge on them (Lin et al., 2014; López-Navarro et al., 2015). In response, this study builds on and extends the findings from these studies by employing quantitative methods to examine Chinese university faculty's motivation and language choice for publishing in English and Chinese, and factors that may influence them.

## 2. Literature review

### 2.1. Motivations for bi/multilingual publishing

EAL researchers' motivations to publish in English or their first language have been shown to centre on perceived utility, intrinsic value, ability self-concept, cost of publishing in that language, among others (Lin et al., 2014; López-Navarro et al., 2015). To begin, their motivations to publish in English appear to revolve around the perceived utility of English scholarly publishing. In particular, publishing in English is often associated with such utilitarian goals as getting promotion and tenure (Duszak & Lewkowicz, 2008; Martín et al., 2014), establishing international recognition and reputation (Burgess et al., 2014; Muresan & Pérez-Llantada, 2014), and obtaining monetary rewards (Hanauer & Englander 2011; Lillis & Curry, 2010). Given the primacy of English and Western-based index metrics like SCI, SSCI, or A&HCI in research assessment, international English publication is often more valorised than publication in local languages (Ferguson et al., 2011; Huang, 2011; Salager-Meyer, 2014). In addition to utilitarian goals, EAL

researchers may also publish in English to, among others, obtain wider readership and greater impact (Huang, 2011; López-Navarro et al., 2015) and establish and maintain international networks (Curry & Lillis, 2010; Duszak & Lewkowicz, 2008).

However, EAL researchers' ability self-concept and perceived cost of English scholarly publishing may demotivate them to publish in English despite high utility associated with it (Lillis & Curry, 2010; Uzuner, 2008). A large body of literature has explored linguistic disadvantages perceived by EAL researchers relative to native-English-speaking researchers (Burgess et al., 2014; Hanauer & Englander, 2011; López-Navarro et al., 2015). For instance, 80 % of the Chinese mainland doctoral students in Li's (2002) study and 68% of the 585 Hong Kong researchers in Flowerdew's (1999) research reported feeling disadvantaged in English scholarly publishing compared with native-English-speaking researchers. Additionally, research has shown that publishing in English may place additional burdens on EAL researchers, because not only does writing a research article in English tend to take them more time and effort (Shin et al., 2014; Tardy, 2004), but acquiring the skills needed to publish in English also requires them to invest extra time and effort (Ammon, 2001; Burgess et al., 2014; Salager-Meyer, 2008). The Mexican scientists in Hanauer and Englander's (2011) study, for example, perceived writing a research article in English to be 24% more difficult and to generate 11% more dissatisfaction and 21% more anxiety than writing a research article in Spanish. Nevertheless, some researchers have argued that EAL researchers may not necessarily feel such a sense of disadvantage (Ferguson et al., 2011; Hyland, 2016) and that native-English-speaking researchers tend to face similar challenges because scholarly publishing has more to do with expertise and practice than with language competence (Hyland, 2016; Swales, 2004).

In contrast to the principally utilitarian motivations for publishing in English, EAL researchers' motivations to publish in their first language seem to be more related to intrinsic satisfaction emanating from the published work itself (Hanauer & Englander, 2011), the solving of the 'puzzle' (Lam, 2011, cited in López-Navarro et al., 2015), or the like. For example, while viewing publishing in English as being extrinsically motivated for its "greater symbolic capital in terms of recognition", Gentil and Séror (2014: 23) characterised "the pleasure of 'wordsmithing' in French" and "the intellectual satisfaction of developing deeper insights through bilingual work" as intrinsic motivation for scholarly publishing. Relatedly, EAL

researchers may also be motivated to publish in their first language because of their emotional or ideological attachments to their first language or home academic community, such as to protect local languages and journals (Duszak & Lewkowicz, 2008; McGrath, 2014), promote research of local concern (Muresan & Pérez-Llantada, 2014; Petersen & Shaw, 2002), communicate research to the local community (Kuteeva & Mauranen, 2014; Salager-Meyer, 2014), and respond to invitations for contribution from local colleagues or publishers (Burgess et al., 2014; Martín et al., 2014). These motivations aside, EAL researchers are also likely to publish in their first language for other motives, such as to obtain national recognition (Duszak & Lewkowicz, 2008; Martín et al., 2014), establish and maintain the local network (Casanave, 1998; Huang, 2011), and meet institutional requirements for promotion (Burgess et al., 2014; Salager-Meyer, 2008).

## 2.2. Influences of disciplinary background and overseas study experience

EAL researchers' divergent motivations to publish in English and their first language seem to hinge on a series of ecological variables at the macrolinguistic, microlinguistic, and individual levels (Baldauf, 2001; López-Navarro et al., 2015). One factor that stands out concerns disciplinary knowledge-making and -disseminating practices. Different disciplines have different cultures, conventions, and practices, which tend to lead to differing motivations for publishing and varying publishing practices (Gnutzmann & Rabe, 2014; López-Navarro et al., 2015). It has been shown that English tends to be more prevalent as a language for publication in hard disciplines than in soft disciplines (Ferguson, 2007; Martín et al., 2014). As Ammon (2007:124) observed, "[t]he preference for English is much stronger in the pure or theoretical sciences than in the applied sciences and especially the humanities". This disciplinary discrepancy may have to do with differing degrees of internationalisation of different disciplines with hard disciplines being generally more internationally-oriented and soft disciplines more locally-oriented (Kuteeva & Mauranen, 2014; Petersen & Shaw, 2002). López-Navarro et al. (2015: 945), for example, pointed out that "research on basic aspects of nature is viewed as being most likely to be of interest to an international readership, whereas research conducted in Social Sciences and Humanities is generally more locally oriented".

Another factor that may bear on EAL researchers' motivation and language choice for bi/multilingual scholarly publishing is their overseas experience or

lack thereof (Casanave, 1998; Li & Hu, 2017; Shin et al., 2014). Studies (Casanave, 1998; Shin et al., 2014) have found that overseas-trained EAL researchers tend to feel more competent and comfortable publishing in English than in their first language because of their overseas training. Shin et al. (2014: 470), for example, revealed that "[r]esearch performance is improved by integration into transnational professional networks, professional linkages with colleagues and supervisors in the overseas country where the doctorate was earned". Moreover, Salager-Meyer (2008: 125) observed that there may be differences in both perceived difficulty and cost in writing an English research article between overseas- and home-trained EAL researchers with the former likely to find it "less difficult and less time-consuming" than the latter. However, several studies (Shi, 2002; Tardy, 2004) have shown that returnee EAL researchers may find themselves isolated and faced with an array of difficulties in continuing to publish in English. Specifically, returnee EAL researchers may have to juggle different research cultures, conventions, and practices and "manage the competing and sometimes conflicting demands of writing in two languages" (Casanave, 1998: 196; see also Shin et al., 2014).

The preceding review raises several concerns over EAL researchers' motivation and language choice for scholarly publishing. To begin, although research has shown that EAL researchers may be motivated to publish in a language for various reasons and that publishing in different languages is associated with varying utility and intrinsic interest values, it is not clear exactly how their motivations for publishing in English versus local languages differ or overlap, and how they choose the languages for publication. For instance, there is still no consensus on whether and to what extent EAL researchers are linguistically disadvantaged compared with their native-English-speaking counterparts (Ferguson et al., 2011; Hyland, 2016), particularly regarding their abilities to publish in English versus their first language and the cost involved in this (Hanauer & Englander, 2011; Huang, 2011). Moreover, there is a paucity of systematic investigations into the factors influencing EAL researchers' motivation and language choice for bi/multilingual publishing. In view of these and other concerns, several researchers (Duszak & Lewkowicz, 2008; Gnutzmann & Rabe, 2014; Huang, 2011; López-Navarro et al., 2015) have called for more research on EAL researchers' motivation and language choice for bi/multilingual publishing, and factors that may impinge on their motivation and language choice. In response to this call, this study set out to address the following research questions:

RQ1. What are Chinese university faculty's motivations (i.e., interest value, utility value, cost, and ability self-concept) for writing research articles?

RQ2. What are their actual language choices for publication?

RQ3. Do their motivations for research article writing differ as a function of language, disciplinary background, and overseas experience?

RQ4. How are their disciplinary background, overseas experience, and motivations for research article writing associated with their language choices?

# 3. Method

## 3.1. Participants

A total of 318 faculty members from various higher educational institutions across mainland China participated in this study. At the time of data collection, they were attending a six-month English language training programme preparing them for overseas academic exchanges. There were 230 (72%) participants from the disciplines of science, technology, and medical sciences (STM) and 82 (26%) from the humanities and social sciences (HSS). Six (2%) participants did not report their disciplines. Eighty-five percent of the participants ($n = 269$) had no prior overseas study experience, whereas 14 % of them ($n = 46$) reported having had an average of 18.35 ($SD = 26.91$) months of overseas study experience. Three participants (1%) did not report their overseas study experience. Of the participants ($n = 304$) who reported their academic ranks, there were 33 (10%) professors, 170 (54%) associate professors, 98 (31%) lecturers, and 3 (1%) instructors. Seventy percent of the participants aged between 31 and 40, with another 10%, 18%, and 2% aged between 21 and 30, 41 and 50, and 51 and 60, respectively. There were 147 (46%) female and 171 (54%) male participants.

## 3.2. Instrument

A survey instrument was used to collect the data. The instrument comprised a demographic section, the English Research Article Writing Motivation Inventory (ERAWMI), and the Chinese Research Article Writing Motivation Inventory (CRAWMI). The demographic section elicited participants' age,

gender, academic rank, discipline, overseas study experience, and respective number of English and Chinese published research articles. The ERAWMI and the CRAWMI were adapted from Lin et al.'s (2014) RAWMI, which was developed to assess EAL graduate students' motivations to write English research articles.

Drawing on Eccles and colleagues' (Eccles, 2009; Eccles et al., 1983) model of expectancy-value theory and Gardner's (2006) socioeducational model of second language learning motivation, Lin et al.'s (2014) RAWMI comprised five factors, namely interest value, utility value, cost, ability self-concept, and connectedness value. The first four factors were culled directly from Eccles' framework, whereas the last one was an identity-related construct that operationalised Eccles's attainment value by recourse to the construct of integrativeness in Gardner's motivation model. While interest value, utility value, cost, and connectedness value related to subjective task values, ability self-concept concerned expectations for task success. Specifically, interest value assessed interest in and enjoyment of writing English research articles. Utility value measured the usefulness of writing English research articles for obtaining long-term goals or external rewards. Cost evaluated effort and price required to write English research articles successfully. Connectedness value assessed perceived value of writing English research articles for establishing and maintaining connections with the disciplinary community. Finally, ability self-concept measured one's confidence in one's ability to successfully write English research articles. In the subscales of interest value, utility value, cost, and connectedness value, participants were asked to rate on a 1-to-5 Likert scale *(1 = strongly disagree; 5 = strongly agree)* to what extent they agreed with each statement. In the ability self-concept subscale, participants were asked to indicate on a 1-to-5 Likert scale *(1 = strongly unconfident; 5 = strongly confident)* to what extent they were confident in carrying out the activity presented in each statement.

The RAWMI went through both exploratory and confirmatory factor analysis, and demonstrated good psychometric properties (Lin et al., 2014). In particular, the Cronbach's alphas for its subscales ranged from .81 to .90, indicating good internal consistency. As the RAWMI measured English research article writing motivations, we created a corresponding inventory (CRAWMI) assessing Chinese research article writing motivations and renamed RAWMI as ERAWMI to fit the purpose of this study. To facilitate our participants' comprehension, both inventories were presented in simplified Chinese. A principal-axis factoring analysis was conducted on each inventory

using the promax rotation method to check the factor structures of the ERAWMI and CRAWMI in this study. The principal axis factoring analyses confirmed the overall structure of the RAWMI (Lin et al., 2014), except that the factors of utility and connectedness value in the original instrument loaded on the same factor in both the ERAWMI and CRAWMI, indicating that the two factors were indistinguishable in the current sample.[1] As a result, they were combined to form a new utility scale. The internal consistency estimates for the factors of both inventories ranged from .80 to .96. All intercorrelations except that between interest value and cost in the ERAWMI and that between cost and ability self-concept in the CRAWMI were significant. These results show evidence of reasonably acceptable convergent validity for both inventories. To facilitate interpretation, the factor scores were scaled to the same metric (1-5) for item scores.

### 3.3. Data collection and analysis

We used *Wenjuan xing* (http://www.sojump.com/), an online survey tool widely used in mainland China, to collect the data. Specifically, we explained in class announcements the purpose of the study: to find out Chinese university faculty's motivation and language choice for English and Chinese scholarly publishing. We invited potential participants to answer an online survey and forwarded them a link to it. One week later, we sent the link to them again with a reminder encouraging those who had not answered the survey to answer it within a week. The survey was prefaced with an informed consent statement informing participants of the purpose of the study, their rights not to participate, and our commitment to protect confidentiality and anonymity.

To examine the effects of publication language, disciplinary background, and overseas academic experience on participants' research article writing motivation, a mixed-design three-way ANOVA was conducted respectively on their scores on each of the four subscales identified in the exploratory factor analyses. In each case, discipline (HSS vs. STM) and overseas study experience (With OSE vs. Without OSE) were the between-subjects variables; language (English vs. Chinese) was the within-subjects variable. As regards participants' actual language choice, they could publish either in Chinese only, English only, or in both Chinese and English. Therefore, a multinomial logistic regression was performed to explore the associations of their disciplinary background, overseas study experience, and motivation for research article writing to their language choice with the former three sets of

variables as the predictors and the last one as the criterion variable. To facilitate interpretation of the results, all the motivation factor scores were standardised to a mean of 0 and a standard deviation of 1 (Tabachnick & Fidell, 2007).

# 4. Results

## 4.1. Effects of language, disciplinary background, and overseas study experience on motivation

Table 1 presents the descriptive statistics for the ERAWMI and CRAWMI by language, disciplinary background, and overseas study experience. Table 2 summarises the ANOVA results for interest value, utility value, cost, and ability self-concept. As shown in Table 2, the ANOVAs detected a significant main effect of language on interest value, utility value, cost, and ability self-concept. The participants as a whole reported significantly greater interest (3.12 vs. 2.88) and ability self-concept (3.39 vs. 2.72), but significantly lower utility value (3.67 vs. 3.96) and cost (3.20 vs. 3.58) in Chinese than in English research article writing. The ANOVAs also identified a significant main effect of discipline on cost with the HSS participants ($M = 3.65$, $SE = 0.12$) reporting significantly greater cost of research article writing (English and Chinese combined) than their STM counterparts ($M = 3.13$, $SE = 0.06$). No significant main effect of overseas study experience was found.

| Disci-pline | OSE | Interest Value | | | Utility Value | | | Cost | | | Ability Self-Concept | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | n | M | SD | n | M | SD | n | M | SD | n | M | SD |
| HSS | Without | 66 | **2.62**[a] | **0.93** | 66 | **3.72** | **0.88** | 68 | **3.55** | **0.93** | 68 | **2.38** | **0.82** |
| | OSE | | 3.13 | 0.96 | | 3.91 | 0.82 | | 3.49 | 0.82 | | 3.37 | 0.86 |
| | With | 10 | **3.08** | **1.41** | 10 | **4.06** | **1.07** | 10 | **3.68** | **0.79** | 10 | **2.80** | **0.95** |
| | OSE | | 3.44 | 0.97 | | 3.99 | 0.96 | | 3.90 | 0.58 | | 3.25 | 1.03 |
| STM | Without | 189 | **2.98** | **0.93** | 188 | **4.10** | **0.60** | 192 | **3.60** | **0.77** | 192 | **2.92** | **0.79** |
| | OSE | | 2.99 | 0.81 | | 3.61 | 0.87 | | 2.85 | 0.88 | | 3.41 | 0.76 |
| | With | 36 | **2.84** | **0.89** | 36 | **3.98** | **0.76** | 36 | **3.51** | **0.76** | 36 | **2.78** | **0.67** |
| | OSE | | 2.92 | 0.82 | | 3.16 | 0.84 | | 2.56 | 0.89 | | 3.51 | 0.89 |

Note. [a] The statistics for the ERAWMI are in bold.

Table 1: Descriptive Statistics for the ERAWMI and CRAWMI by Language, Discipline, and Overseas Study Experience (OSE).

| Source | SS | df | MS | F | p | Partial η² |
|---|---|---|---|---|---|---|
| | | Interest Value | | | | |
| Language (L) | 6.14 | 1 | 6.14 | 5.22 | .02 | 0.02 |
| Discipline (D) | 0.47 | 1 | 0.47 | 0.90 | .34 | 0.003 |
| Overseas Study Experience (OSE) | 0.53 | 1 | 0.53 | 1.01 | .32 | 0.003 |
| L * D | 4.28 | 1 | 4.28 | 3.85 | .05 | 0.01 |
| L * OSE | 0.05 | 1 | 0.05 | 0.05 | .83 | <0.001 |
| D * OSE | 1.65 | 1 | 1.65 | 3.12 | .08 | 0.01 |
| L * D * OSE | 0.33 | 1 | 0.33 | 0.30 | .59 | 0.001 |
| Error (L) | 330.07 | 297 | 1.11 | | | |
| Error (Between Subjects) | 156.74 | 297 | 0.53 | | | |
| | | Utility Value | | | | |
| Language (L) | 9.58 | 1 | 9.58 | 13.54 | <.001 | 0.04 |
| Discipline (D) | 1.16 | 1 | 1.16 | 2.62 | .11 | 0.009 |
| Overseas Study Experience (OSE) | 0.04 | 1 | 0.04 | 0.09 | .77 | <0.001 |
| L * D | 13.81 | 1 | 13.81 | 19.51 | <.001 | 0.06 |
| L * OSE | 2.24 | 1 | 2.24 | 3.16 | .08 | 0.01 |
| D * OSE | 1.68 | 1 | 1.68 | 3.81 | .05 | 0.01 |
| L * D * OSE | 0.02 | 1 | 0.02 | 0.03 | .86 | <0.001 |
| Error (L) | 209.46 | 296 | 0.71 | | | |
| Error (Between Subjects) | 130.84 | 296 | 0.44 | | | |
| | | Cost | | | | |
| Language (L) | 15.77 | 1 | 15.77 | 19.45 | <.001 | 0.06 |
| Discipline (D) | 7.50 | 1 | 7.50 | 15.20 | <.001 | 0.05 |
| Overseas Study Experience (OSE) | 0.05 | 1 | 0.05 | .09 | .76 | <0.001 |
| L * D | 23.57 | 1 | 23.57 | 29.08 | <.001 | 0.09 |
| L * OSE | 0.05 | 1 | 0.05 | 0.06 | .80 | <0.001 |
| D * OSE | 1.39 | 1 | 1.39 | 2.82 | .09 | 0.01 |
| L * D * OSE | 1.52 | 1 | 1.52 | 1.87 | .17 | 0.01 |
| Error (L) | 244.74 | 302 | 0.81 | | | |
| Error (Between Subjects) | 148.98 | 302 | 0.49 | | | |
| | | Ability Self-Concept | | | | |
| Language (L) | 47.67 | 1 | 47.67 | 52.76 | <.001 | 0.15 |
| Discipline (D) | 1.13 | 1 | 1.13 | 2.74 | .10 | 0.01 |
| Overseas Study Experience (OSE) | 0.11 | 1 | 0.11 | 0.28 | .50 | 0.002 |
| L * D | 0.34 | 1 | 0.34 | 0.38 | .54 | 0.001 |
| L * OSE | 0.65 | 1 | 0.65 | 0.72 | .40 | 0.002 |
| D * OSE | 0.09 | 1 | 0.19 | 0.46 | .50 | 0.002 |
| L * D * OSE | 4.00 | 1 | 4.00 | 4.43 | .04 | 0.01 |
| Error (L) | 272.87 | 302 | 0.90 | | | |
| Error (Between Subjects) | 124.45 | 302 | 0.41 | | | |

Table 2: Summary of ANOVA Results.

More interestingly, a significant interaction effect between language and discipline was found for interest value, utility value, and cost, indicating that the significant main effects of language on these factors noted above were qualified by discipline. Figures 1-3 display the interaction effect on each factor, respectively. As shown in Figure 1, the HSS participants reported significantly greater interest in Chinese research article writing ($M$ = 3.29, $SE$ = 0.15) than not only their reported interest in English research article writing ($M$ = 2.85, $SE$ = 0.16) but also their STM counterparts' reported interest in both English ($M$ = 2.91, $SE$ = 0.09) and Chinese ($M$ = 2.95, $SE$ = 0.08) research article writing. As Figure 2 shows, the STM participants reported significantly lower utility value of Chinese research article writing

($M$ = 3.38, $SE$ = 0.08) than not only their reported utility value of English research article writing ($M$ = 4.04, $SE$ = 0.07) but also their HSS peers' reported utility value of both English ($M$ = 3.89, $SE$ = 0.12) and Chinese ($M$ = 3.95, $SE$ = 0.15) research article writing. Similarly, as shown in Figure 3, the STM participants reported significantly lower cost of Chinese research article writing ($M$ = 2.70, $SE$ = 0.08) than not only their reported cost of English research article writing ($M$ = 3.55, $SE$ = 0.07) but also their HSS counterparts' reported cost of both English ($M$ = 3.61, $SE$ = 0.14) and Chinese ($M$ = 3.70, $SE$ = 0.15) research article writing.
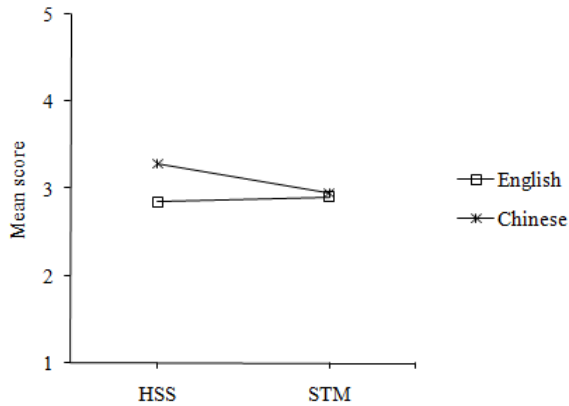
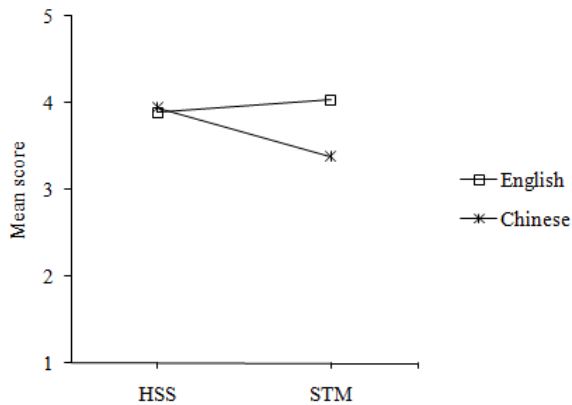Figure 1: Mean scores for interest value by discipline and language.

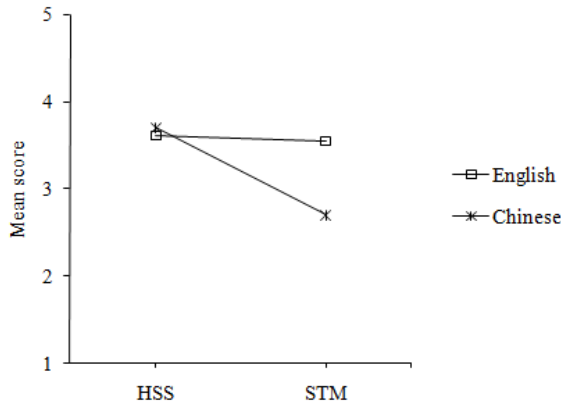Figure 2: Mean scores for utility value by discipline and language.

Figure 3: Mean scores for cost by discipline and language.

Moreover, there was a significant interaction effect between discipline and overseas study experience on utility value. Figure 4 plots the interaction effect for English and Chinese research article writing separately. Although both interactions were statistically nonsignificant, they showed clear contrasting patterns between the participants' perceived utility of English and Chinese research article writing. As shown in Figure 4, while the HSS participants with overseas study experience perceived considerably higher utility value of English research article writing than did their peers without overseas study experience, the STM participants with overseas study experience perceived markedly lower utility value of Chinese research article writing than did their peers without overseas study experience.
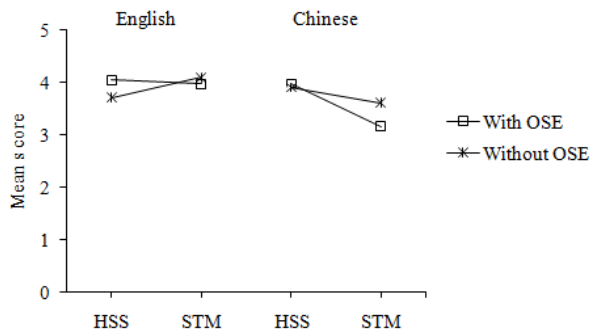


Figure 4: Mean scores for utility value of English and Chinese research article writing by discipline and overseas study experience.

Finally, and notably, the ANOVAs also revealed a significant three-way interaction on ability self-concept. As Figure 5 shows, while the participants rated similarly on ability self-concept in Chinese research article writing regardless of their discipline and overseas study experience, the HSS participants without overseas study experience ($M$ = 2.38, $SE$ = 0.10) rated considerably lower on ability self-concept in English research article writing than did the STM participants both with ($M$ = 2.79, $SE$ = 0.13) and without ($M$ = 2.92, $SE$ = 0.06) overseas study experience as well as the HSS participants with overseas study experience ($M$ = 2.80, $SE$ = 0.25).
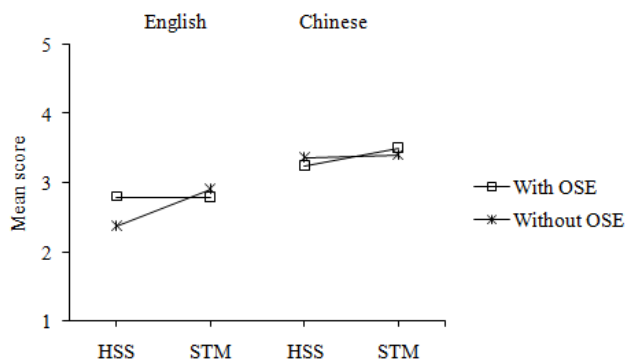


Figure 5: Mean scores for ability self-concept in English and Chinese research article writing by discipline and overseas study experience.

## 4.2. Associations of disciplinary background, overseas study experience, and motivation with language choice

The participants had published an average of 5.91 ($n$ = 317, $SD$ = 10.99) English research articles and 14.63 ($n$ = 316, $SD$ = 15.78) Chinese research articles. One hundred and ninety-seven (62%) participants had published (at least one research article) in English, and 293 (92%) in Chinese. While 180 (57%) participants had published in both English and Chinese, 113 (35%) and 17 (5%) had published only in Chinese and English, respectively. Eight participants (3%) had published neither in Chinese nor in English.

The multinomial logistic regression run to examine the associations of disciplinary background, overseas study experience and motivations with language choice demonstrated acceptable model fit, $R^2$ = .44 (Cox & Snell), .54 (Nagelkerke); $\chi^2(20)$ = 163.33, $p$ < .001. Table 3 presents a summary of the results from the multinomial logistic regression with the Chinese only group as the reference group. As shown in the table, disciplinary

background, overseas study experience, and perceived ability in English research article writing significantly predicted whether the participants published in Chinese only or in both Chinese and English. The odds ratio for discipline indicated that as the disciplinary background changed from HSS (0) to STM (1), the change in the odds of publishing in both Chinese and English rather than in Chinese only was 0.05. In other words, the odds of a STM professor publishing in both Chinese and English compared to publishing only in Chinese were 20 (1/0.05) times more likely than for a HSS professor. Similarly, the odds ratio for overseas experience showed that as the overseas study experience changed from without (0) to with (1) overseas study experience, the change in the odds of publishing in both Chinese and English relative to Chinese only was 0.32. In other words, the odds of a professor with overseas study experience publishing in both Chinese and English compared to publishing only in Chinese were 3.13 (1/0.32) times more likely than for a professor without overseas experience. Finally, the odds ratio for perceived ability in English research article writing demonstrated that with one unit increase in perceived ability to write English research articles, the change in the odds of publishing in both Chinese and English compared to publishing only in Chinese was 2.31. In other words, participants with a one unit increase in their perceived ability to write English research articles were 2.31 times more likely to publish in both Chinese and English than in Chinese only.

No predictors were found significant in distinguishing the English only and the Chinese only groups. Another multinomial logistic regression run with the English only group as the reference group indicated that none of the predictors was significant in distinguishing the English only and the both Chinese and English groups, either. In view of the peculiar standard error (.000) for disciplinary background in distinguishing the English only and the Chinese only groups, a cross-tabulation was run between disciplinary background and language choice, which revealed that all of the 17 participants who published in English only came from the STM. This along with the small sample size in the English only group might have contributed to the predictors' failure to significantly distinguish it from the other two groups.

As a whole, the model accounted for 54% of the variation in the criterion variable (Nagelkerke's $R^2$ = .54) (Tabachnick and Fidell, 2007) and classified 79.6% of the participants correctly, with 71.0% of the Chinese only group and 92.3% of the both Chinese and English group being classified correctly.

However, no participants were accurately classified into the English only group. This might also have to do with the small number of participants in this group and the empty cell at the intersection of HSS and English only. Still, the model is useful in that it significantly distinguishes two of the largest groups and correctly classifies nearly four-fifths of the participants.

| Groups | B | SE | Wald | p | Exp(B) | 95% CI |
|---|---|---|---|---|---|---|
| Both English and Chinese vs. Chinese only | | | | | | |
| Intercept | 2.50 | 0.54 | 21.75 | <.001 | | |
| HSS | -2.92 | 0.47 | 39.20 | <.001 | 0.05 | [0.02, 0.14] |
| STM | 0[a] | | | | | |
| Without OSE | -1.13 | 0.54 | 4.37 | .04 | 0.32 | [0.11, 0.93] |
| With OSE | 0[a] | | | | | |
| C-Interest[b] | -0.15 | 0.30 | 0.25 | .61 | 0.86 | [0.48, 1.55] |
| E-Interest | 0.15 | 0.27 | 0.30 | .58 | 1.16 | [0.69, 1.96] |
| C-Utility | -0.33 | 0.33 | 0.98 | .32 | 0.72 | [0.38, 1.38] |
| E-Utility | 0.35 | 0.30 | 1.34 | .25 | 1.41 | [0.79, 2.54] |
| C-Cost | -0.38 | 0.26 | 2.03 | .15 | 0.69 | [0.41, 1.15] |
| E-Cost | -0.32 | 0.25 | 1.66 | .20 | 0.73 | [0.45, 1.18] |
| C-Ability | 0.23 | 0.27 | 0.72 | .40 | 1.26 | [0.74, 2.15] |
| E-Ability | 0.84 | 0.25 | 11.10 | .001 | 2.31 | [1.41, 3.79] |
| English only vs. Chinese only | | | | | | |
| Intercept | -0.71 | 0.96 | 0.55 | .46 | | |
| HSS | -21.84 | 0.00 | — | — | 3.27E-10 | [3.27E-10, 3.27E-10] |
| STM | 0[a] | | | | | |
| Without OSE | -0.28 | 0.97 | 0.08 | .78 | 0.76 | [0.11, 5.12] |
| With OSE | 0[a] | | | | | |
| C-Interest | -0.61 | 0.50 | 1.50 | .22 | 0.55 | [0.21, 1.44] |
| E-Interest | -0.01 | 0.45 | 0.001 | .98 | 0.99 | [0.41, 2.40] |
| C-Utility | -0.65 | 0.55 | 1.40 | .24 | 0.53 | [0.18, 1.53] |
| E-Utility | 0.39 | 0.52 | 0.56 | .46 | 1.48 | [0.53, 4.10] |
| C-Cost | -0.35 | 0.50 | 0.48 | .49 | 0.71 | [0.27, 1.88] |
| E-Cost | -0.39 | 0.43 | 0.81 | .37 | 0.68 | [0.29, 1.58] |
| C-Ability | 0.29 | 0.39 | 0.58 | .45 | 1.34 | [0.63, 2.86] |
| E-Ability | 0.47 | 0.45 | 1.13 | .29 | 1.61 | [0.67, 3.84] |

Note.
[a] This parameter is set to zero because it is redundant.
[b] C-Interest = Interest in Chinese RA writing; E-Interest = Interest in English RA writing; C-Utility = Utility value in Chinese RA writing; E-Utility = Utility value in English RA writing; C-Cost = Cost in Chinese RA writing; E-Cost = Cost in English RA writing; C-Ability = Ability in Chinese RA writing; E-Ability = Ability in English RA writing.
$R^2$ = .44 (Cox & Snell), .54 (Nagelkerke); $\chi^2(20)$ = 163.33, $p < .001$.

Table 3: Results from the Multinomial Logistic Regression on Language Choice as a Function of Disciplinary Background, Overseas Study Experience, and Motivation ($N = 285$).

# 5. Discussion

The ANOVAs have yielded several significant effects of language, discipline, and overseas experience on participants' motivation for research article publishing. With regard to language effects, the study detected significant differences between their ratings on all four motivational factors for English and Chinese research article writing. First, while the participants' mean rating on interest value for Chinese research article writing was just above the midpoint of 3, that for English research article writing was below it. This indicated that

overall, the participants did not seem to enjoy very much either English or Chinese research article writing. In addition, the participants perceived greater utility value and cost but lower ability self-concept in English than in Chinese research article writing. These findings are congruent with the findings from previous studies, which found publishing in English to be generally more valuable but more effortful than publishing in their first language for EAL researchers (Flowerdew & Li, 2009; López-Navarro et al., 2015; Shin et al., 2014) and EAL researchers to be less confident in their abilities to publish in English than in their abilities to publish in their first language (Hanauer & Englander, 2011; Martín et al., 2014).

Significant disciplinary effects were also found on interest value, utility value, and cost. First, there was a significant main effect of discipline on cost, indicating that the HSS participants perceived greater cost of research article writing than did the STM participants. One plausible explanation for this might be that research articles constitute a more common and valued form of publication for the STM than for the HSS (Becher & Trowler, 2001; Petersen & Shaw, 2002; Shin et al., 2014). Therefore, with greater familiarity with and more practice in research article writing, the STM researchers may perceive a lower cost of it than their HSS counterparts. Second, disciplinary effects moderated the language effects on interest value, utility value and cost discussed earlier. Notably, only the HSS participants' mean rating on interest in Chinese research article writing exceeded the middle point of 3, indicating that they generally enjoyed writing Chinese research articles. This might be related to the local orientation of the HSS, which might have enabled the HSS participants to derive pleasure and enjoyment from engaging with and contributing to the local community (Gentil & Séror, 2014). Moreover, the STM participants reported a relatively low utility value of Chinese research article writing. This could be explained by the entrenched internationalisation of the STM, which may have rendered local publication less valuable (Burgess et al., 2014; Petersen & Shaw, 2002). Furthermore, the STM participants also reported a relatively low cost of Chinese research article writing, which, as discussed earlier, could be attributed to their greater familiarity with and more practice in research article writing relative to their HSS counterparts.

Compared with language and discipline, overseas study experience had smaller effects, only significant for utility value of research article writing and ability self-concept in English research article writing. Specifically, while the overseas-trained HSS participants perceived greater utility value of English research article writing, the overseas-trained STM participants perceived lower

utility value of Chinese research article writing. In addition, the home-trained HSS participants reported particularly low ability self-concept in English research article writing. These findings suggest that overseas study experience might have boosted the HSS participants' perceived utility value and ability self-concept in English research article writing but decreased the STM participants' perceived utility value of Chinese research article writing. This again might have to do with the differing degrees of internationalisation of the HSS and STM (Gnutzmann & Rabe, 2014; Kuteeva & Mauranen, 2014; Petersen & Shaw, 2002). Because the HSS group tend to be less internationalised than the STM, overseas study experience is more likely to increase the former's than the latter's perceived utility value and ability self-concept in English research article writing. Conversely, because of entrenched internationalisation, the STM tend to perceive low utility value of Chinese research article writing and overseas study experience is likely to further decrease it.

Finally, with regard to language choice for publication, a great majority of the participants published either in both Chinese and English or in Chinese only with a very small proportion of them (5%) publishing in English only. This suggests that despite the seemingly unstoppable spread of English as a lingua franca for research communication, Chinese still remains to be a vibrant language for publication for Chinese university faculty and bilingual publishing appears to be a common practice for many of them.

Regarding the associations of participants' disciplinary background, overseas study experience, and motivation for English and Chinese scholarly publishing with their language choice, the multinomial logistic regression showed that STM researchers were far more likely to publish in both Chinese and English compared to Chinese only than their HSS peers. Notably, the participants who published in English only were all from the STM. These differences might have to do with the fact that STM are more internationalised and more universally-oriented, whereas HSS are more locally-based and -oriented (Gnutzmann & Rabe, 2014; Kuteeva & Mauranen, 2014; Li & Flowerdew, 2009; Petersen & Shaw, 2002). Therefore, while STM researchers are more likely to publish in English and by extension in both English and Chinese, HSS scholars are more inclined to publish in Chinese only.

The multinomial logistic regression also found significant and positive associations between overseas study experience and perceived ability in

English research article writing on the one hand and the likelihood of publishing in both Chinese and English compared to Chinese only on the other hand. These findings indicated that overseas study experience and higher perceived abilities to write English research articles were likely to lead participants to publish in English. However, it is worth noting that despite this tendency, only a small proportion of the participants published in English only. This suggests that English does not seem to have replaced Chinese as the predominant language for publication for Chinese university faculty (Ferguson, 2007; Huang, 2011).

## 6. Conclusions

This study has yielded several noteworthy findings about bi/multilingual researchers' motivation and language choice for bi/multilingual scholarly publishing. Most notable among them is the vibrancy of Chinese as a language of academic publication for Chinese university faculty. Also noteworthy is the participants' overall low interest in both English and Chinese research article writing with only the HSS participants reporting moderate interest in Chinese research article writing. Another notable finding of the study concerns participants' privileging of English over Chinese scholarly publishing on the one hand and limited perceived abilities in English research article writing on the other. Furthermore, it is also worth noting that participants' choices of publishing in Chinese only or in both Chinese and English were significantly associated with their disciplinary background, overseas study experience, and perceived ability to write English research articles. Together with other findings discussed earlier, these findings provide some evidence against the seemingly unstoppable spread of English as the lingua franca for scholarly publication and the widely-held view of utility as the single most important driving force behind it, and point to a complex and multidimensional picture of Chinese EAL researchers' motivation and language choice for scholarly publishing.

The findings of this study need to be interpreted with caution because of its several limitations. First, we classified participants' disciplinary backgrounds into the HSS and STM, which might have glossed over more nuanced disciplinary differences. Future research should adopt a finer-grained delineation of disciplinary boundaries and probe potentially subtler disciplinary differences in EAL researchers' motivation and language choice

for scholarly publishing. Second, this study focused only on research article publishing. As noted earlier, different disciplines may privilege different forms of publication. There is thus a need for future research to examine EAL researchers' motivation and language choice for different forms of publication. This research could broaden our understanding of disciplinary differences in scholarly publishing. Third, because of its cross-sectional design, this study was not equipped to establish causal relationships between researchers' motivation and language choice. Future research could take a longitudinal approach and help us better understand how EAL researchers' motivation and language choice for scholarly publishing are related to each other, and whether and how their motivation and language choice and the relationships between them change over time.

Despite these limitations, the findings of this study provide several useful implications. First, Chinese university faculty's varying perceived values and ability self-concepts for research article publishing suggest that while it is important to beware of differences between groups, it is also critical to acknowledge heterogeneity within groups and take a contextualised rather than essentialised approach to these differences. Second, the significant associations of overseas study experience and perceived ability to write English research articles with the likelihood of publishing in both Chinese and English rather than in Chinese only suggest a need to provide Chinese university faculty with overseas training and to foster their abilities to write English research articles in order to promote bilingual publishing. Finally, participants' relatively low interest in both English and Chinese research article writing and low ability self-concept in English research article writing also point to a need for training and/or editorial support on research article writing. In view of the multifarious differences identified in this study, such training and editorial support should be discipline-specific, and better still, individual-specific.

## Acknowledgements

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## NOTES

[1] One possible reason for this discrepancy might be that while the participants in Lin et al.'s study were graduate students, those in our study were university faculty members. Research has shown that connectedness or networking plays a crucial role in publication success (Lillis & Curry, 2010; Shin et al., 2014). Meanwhile, as noted earlier, scholarly publishing is often associated with various utilitarian goals, such as securing promotion and tenure, gaining recognition and reputation, and obtaining monetary rewards. Therefore, under tremendous pressure to publish, the Chinese university faculty in this study perceived connectedness to be part of the utility value of research article publishing. Another possible explanation for the indistinguishability of utility and connectedness value observed in this study concerns the inherently strong correlation between utility and attainment value (Eccles, 2009; Lin et al., 2014), the latter of which the connectedness value in Lin et al.'s instrument was based on. In particular, the correlation between utility and connectedness value in Lin et al.'s study was .87.