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## Chapter

# The Interaction of Expectancy-Value Beliefs and Anxiety in Learning Academic Oral English in Bilingual Chinese Postgraduate Students

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## Abstract

Despite the plethora of research on speaking anxiety, most studies focus on speaking for general purposes in various bilingual contexts, particularly ESL/EFL (English as second/foreign language) contexts. Little research has been done on anxiety when speaking English for academic purposes in bilingual students. Even fewer studies are available on the interaction between academic oral communication (AOC) anxiety and expectancy-value beliefs —important concepts of language learning motivation. Hence, the present longitudinal study examined the interaction of expectancy-value beliefs and AOC anxiety in bilingual Chinese postgraduate students when learning academic oral English. In addition to interviews, a set of matching questionnaires on AOC anxiety and expectancy-value beliefs were collected from 74 Chinese postgraduate learners of English in week 2 (phase 1) and week 14 (phase 2) of a 16-week semester. Analyses of the data revealed the following major findings: (1) One-third to half of the participants experienced AOC anxiety and had low expectancy of themselves about AOC, and more than half of them held high attainment, intrinsic value, utility value and cost value of AOC in English, (2) significant increase occurred in expectancy but not in AOC anxiety or any value over the semester, and (3) expectancy was a great negative predictor for AOC anxiety in phase 1, while expectancy, intrinsic value and cost value were powerful predictors for the latter in phase 2. Based on these findings, some implications for teaching and learning AOC to bilingual students are discussed.

**Keywords:** academic oral communication, anxiety, expectancy-value beliefs, interaction, bilingual

## 1. Introduction

Posing various obstacles to learners, second/foreign language (SL/FL) learning is far more complicated than first language acquisition. As a consequence, learners inevitably experience a myriad of emotions when learning a SL/FL, which is especially true for adults in the process of becoming bilingual. Negative emotions, such as anxiety, anger, disgust, boredom, scare, and hostility [1], due to their

primarily debilitating effects on learners' learning outcomes, have long caught the attention of researchers in the field of second language acquisition (SLA) [2]. In particular, anxiety has been much researched in SLA since the 1970s [2–5], which shows that speaking is the most anxiety-provoking SL/FL learning activity [2, 5]. Consequently, a large body of research has been done on speaking anxiety in SLs/FLs [2, 6–11], most of which focuses on speaking for general purposes in bilingual students. As English has become the leading language in academia, students of higher education, especially postgraduate students, desire to be proficient in speaking English for academic purposes so that they can be better involved in academic activities such as classroom discussions, conference presentations, seminar presentations and oral research proposal defenses. Obviously, this could be far more challenging and anxiety-provoking. Yet, not much research is available on anxiety in bilingual learners when learning academic oral English [12].

Likewise, learning motivation has proved to be a facilitator in SL/FL learning and interacts with many other factors like anxiety, confidence, learning strategies, task difficulty and so on [13–17]. Nevertheless, as important concepts and components of learning motivation, expectancy-value beliefs have not been adequately researched [12, 13]. Even scarcer studies can be found on the interaction between expectancy-value beliefs and anxiety in bilingual students when learning the second language for academic purposes [12]. For these reasons, the present study aimed to examine the interaction between expectancy-value beliefs and anxiety in bilingual Chinese postgraduates when learning academic oral English, hoping to better the teaching and learning of academic oral communication to bilingual students.

## **2. Literature review**

### **2.1 Foreign language anxiety**

Anxiety is the subjective feeling of tension, apprehension, nervousness, and worry associated with an arousal of the automatic nervous system [18]. Such emotion also exists in SL/FL learning and is known as foreign language anxiety (FLA) [2, 19]. In early stages of FLA research, inconsistent findings were revealed due to different definitions and measurements used by researchers [20]. Subsequently, scholars realized the importance of specifying the type of anxiety in research. Thereafter, [2] proposed the theory of foreign language classroom anxiety (FLCA). As explained in this theory, FLCA is a specific type of FLA and refers to the negative emotions arising from the teaching and learning of a SL/FL in classrooms. It covers three dimensions: speech apprehension, fear of negative evaluation, and test anxiety. To measure FLCA, [2] designed the 33-item 5-point Likert Foreign Language Classroom Anxiety Scale (FLCAS), which then has been widely utilized in empirical studies in various bilingual/multilingual learners though the FLCAS primarily measures speaking anxiety [3, 9, 21–25]. These studies generally show that anxiety exists in almost all aspects of SL/FL learning, such as in speaking, reading, listening, writing, and translation, and negatively affects SL/FL learning outcomes [8, 26–32]. They also indicate that speaking is the most anxiety-provoking activity and the greatest source of anxiety in language classrooms [23, 33, 34], and that speaking anxiety is strongly negatively correlated with oral performance in a SL/FL and changes as the learning context changes [6–9, 11, 34]. For example, in [6], three teachers and eighty-eight students from four intact classes in a Thai university voiced their perceptions of speaking anxiety in English classrooms via videotaped interviews. The results corroborated the existence of speaking anxiety

among bilingual learners in classrooms, especially when accompanied by tests, which hindered students' English performance to varying degrees. The study attributed students' speaking anxiety to their lack of self-confidence, low English proficiency, as well as lagging motivation in using English. Qualitative studies even reveal that students with high anxiety may speak with trembling voices, forget what they know, and do not know what to say, suffering from negative impacts rendered by anxiety to their performance and learning of the SL/FL [10, 35, 36].

As English becomes the lingua franca of the world, it also becomes a dominant language in academia. Naturally, what students of higher education desire to be proficient in is not only speaking English for general purposes but also speaking English for academic purposes. This is especially so for postgraduate students who are often more frequently involved in academic activities such as classroom discussions, conference presentations, seminar presentations and oral research proposal defenses [37]. Consequently, their academic oral communication (AOC) ability has become an increasingly crucial measure of their overall academic performance [38]. Still, AOC is far more anxiety-provoking and challenging since it requires both the knowledge of English and research [5, 39–41]. Moreover, fewer chances of practicing AOC also add to the anxiety experienced by postgraduate ESL/EFL (English as a second/foreign language) students. Unfortunately, little research on AOC anxiety is available in the current literature [12].

## 2.2 Expectancy-value beliefs

As individuals make efforts to learn a SL/FL to become bilingual/multilingual because of interest and/or the desire to seek satisfaction from the learning experience, learner motivation is another heating research topic during the recent 50 years [42, 43]. Along with this, a number of motivation theories have been developed, such as the socio-educational theory [43], the social cognitive theory [44], the L2 motivational self-system [45], the self-determination theory [46], the self-efficacy theory [47], and the expectancy-value theory [48], all of which pinpoint the importance of motivation in SL/FL learning and elucidate factors affecting this motivation. These ideas are generally supported by empirical studies [16, 42, 49–51], which also reveal that language learning motivation is dynamic and interacts with many other factors to have a joint impact on SL/FL learning.

Among these theories, an influential yet not much researched one is the expectancy-value theory (EVT) pioneered by [52] and further elaborated by [48]. This theory emphasizes the multiplicative roles of expectancy and value beliefs in predicting learners' achievement-related activities, such as choices, effort, persistence and performance [17, 53, 54]. According to this theory, 'expectancy' and 'values' specify the strength of learners' achievement motive. 'Expectancy' or 'expectancy for success' concerns an individual's competence beliefs about achieving tasks either immediately or in the future [55], which is closely related to the individual's real life experience of success or failure from task completion. 'Value' or 'subjective task value' deals with learners' impetus and rationale for choosing and doing a certain task or activity [55], which is further divided into four separate facets: attainment value (the importance of doing well in a task), intrinsic value (the enjoyment from completing a task or participating in an activity with interest), utility value (the usefulness of a task in relation to learners' present and future goals) and cost value (the estimated amount of effort, mostly negative, in doing a task). It is assumed that these beliefs vary according to time, task, context and individual learner.

To explore learners' expectancy-value beliefs, several instruments have been developed, such as the Self-Description Questionnaire [56], the EVT model [48] and the Expectancy-Value Beliefs Inventory [17]. Studies applying these

instruments generally show that expectancy has a more long-lasting effect on academic achievement or performance while task values have a stronger connection in predicting academic efforts and the choice of self-regulation strategies [13, 15, 17, 57]. They also demonstrate a strong relevance of expectancy-value beliefs to learner emotions because of its emphasis on the multiplicative effects of learner beliefs and subjective value appraisals on achievement motives [58–60]. For example, [49] collected data from 631 Chinese primary school students aged 9 to 12. They found that expectancy and value components varied markedly with participant characteristics: motivation declined with age and girls were more motivated and had higher values than boys. They also found that expectancy was a stronger predictor for achievement than value components across all ages and for both genders. [60] investigated the levels of expectancy, importance (attainment value), interest (intrinsic value), listening anxiety, listening metacognitive awareness, and listening test scores of 548 Chinese first-year undergraduate students and the interactive effects of these variables by structural equation modeling. He found that learners' FLA was negatively correlated with their expectancy and intrinsic value but positively connected with attainment value. The researcher proposed to enhance learners' expectancy beliefs and intrinsic value and mitigate anxiety to improve their listening competence.

### **3. Research questions**

As reviewed above, motivation is often considered as a facilitator while FLA a debilitator in the process of becoming bilingual/multilingual. Despite that much research has been done on both motivation and anxiety, little attention has been paid to AOC anxiety or motivation in learning AOC, much less to the interaction between expectancy-value beliefs and FLA [59, 60], though it is quite clear that self-perception (or one's thoughts in general) is an important element associated with anxiety [61]. The limited studies available reveal that learners' foreign language anxiety is negatively correlated with their expectancy and intrinsic value while positively connected with attainment value [60], that anxiety mediates the relation between perceived task value and FL achievement [59], and that increased value appraisal boosts positive emotions in FL learning [58]. In spite of such significance, the relation between domain-specific expectancy for success and subjective task values from the developmental perspective still remains inconclusive [53] and calls for more research. All these motivated the present study, which aimed to investigate the interaction between expectancy-value beliefs (attainment, intrinsic, utility and cost value) and AOC anxiety in bilingual Chinese postgraduates when learning academic oral English. The specific research questions were:

1. How do students' academic oral communication anxiety and expectancy-value beliefs change during the 16-week semester?
2. How does students' academic oral communication anxiety interact with expectancy-value beliefs?

By exploring the changes in and interaction between expectancy-value beliefs and AOC anxiety related to learning academic oral English, this study was expected to help improve the teaching and learning of AOC in bilingual/multilingual students by enhancing their motivation and lowering anxiety. The results would also enrich the current literature.

## 4. Methodology

### 4.1 Context

The Advanced Speaking Course for Academic Communication (ASCAC) was specifically for postgraduate non-English majors, aiming to integrate English learning into students' research, and provide them with opportunities to practice their conference and seminar presentation and chairing skills. To this end, a variety of activities was practiced in the class, like pair work, group discussion, individual and group presentations on differing topics followed by questions and answers. Example topics for these activities included progress in a project, communication with the supervisor and peers, participation in a lecture/seminar/conference, artificial intelligence, use of technology in different areas, internet and privacy protection, and so forth. The class met once per week for 90 minutes and lasted for 16 weeks.

In order to increase students' exposure to real English speaking scenarios and practice of English speaking, especially English speeches in formal situations, students were encouraged to watch and model on TED talks ([www.ted.com](http://www.ted.com)) in English at their own paces (TED is a nonprofit organization devoted to spreading ideas, usually in the form of short and powerful virtual talks, and covers almost all fields, from science and business to global issues, such as collaborative consumption, positive emotion, artificial intelligence, bitcoin and design in life).

### 4.2 Participants

The participants in this study were 74 doctoral students (57 male, 17 female) enrolled in ASCAC at a university in China. With an age range of 21 to 35 and an average age of 24.73 (SD = 3.47), 62 (83.8%) of the participants were first-year Ph. D students, 10 (13.5%) second-year and 2 (2.7%) third-year Ph.D students. These participants came from various disciplines including natural sciences, engineering, arts and humanities. Of these participants, 7 were randomly invited for informal interviews in an effort to elicit more insider views of AOC anxiety and expectancy-value beliefs of AOC. They all reported having little chance of speaking English outside the English class, 4 reported seldom speaking English in academic situations, 2 spoke English for AOC purpose twice a year and 1 did so one to two times per week.

### 4.3 Instruments

The participants in the present study answered a survey which consisted of three parts. Part 1 covered such background information as name, gender, age, year of study, and major. Part 2 was the 12-item Academic Oral Communication Anxiety Scale (AOCAS) adopted from that used in [12], which was adapted from the Second Language Speaking Anxiety Scale (SLSAS) constructed in [62]. The SLSAS intends to measure SL speaking anxiety in different communicative situations (e.g., in-class and out-of-class situations) to different interlocutors (e.g., the number of speakers, the status of the speakers and whether the speaker is a native or non-native speaker of English). The adapted AOCAS aimed to measure respondents' anxiety levels when speaking English about their research in various formal situations like classroom discussion, individual presentation, seminars and conferences. Example items were 'I feel anxious when talking to other people about my research findings in English' and 'I feel anxious when presenting (or will present) my research in English in an international conference'.

Part 3 was the 15-item Expectancy-Value Beliefs Inventory (EVBI) adapted from [17]. Similar to the original inventory, this adapted EVBI also comprised five dimensions: 5-item Expectancy, 3-item Attainment Value (AV), 3-item Intrinsic Value (IV), 2-item Utility Value (UV), and 2-item Cost Value (CV). To better fit the present situation, the item ‘I am good at communicating with my peers in English’ was added to the original 4-item Expectancy, indicating the expectation of oneself as a person being able to communicate in English with peers about his/her research. Another example item was ‘I have difficulty talking about my research project in English’. The three AV items were reflective of the importance of having the ability to communicate in English about research. An example AV item was ‘Being able to communicate academic study in English is important to me’. The 3-item IV was concerned with intrinsic/internal desire to learn academic oral communication. An example IV item was ‘I would like to have more classes like this to practice my English for academic communication’. The 2-item UV suggested the value of good academic communication skills. For example, ‘Good grades in academic oral English can be of great value to me later’. The 2-item CV was about the investment in learning academic oral English. An example CV item was ‘I’d have to invest a lot of time to improve my academic speaking English’.

Items in parts 2 and 3 were all placed on a 7-point Likert scale, ranging from ‘strongly disagree’ to ‘strongly agree’ with values 1 to 7 assigned to each of the descriptors respectively. Thus, a higher AOCAS score meant greater anxiety about academic oral communication; a higher expectancy score meant great expectation of oneself at communicating in English about academic study; and a higher AV/IV/UV/CV score indicated greater attainment/intrinsic desire/practical value/investment of/in having the ability to communicate in English about academic study.

As shown in **Table 1**, both the AOCAS and the EVBI scales except Expectancy were highly reliable in both phases, with reliability scores ranging from .764 to .988 in phase 1 and from .676 to .957 in phase 2, respectively.

Meanwhile, some survey respondents were invited to informal interviews to elicit more inside views about AOC anxiety as well as expectancy and value beliefs about AOC in both phases. The lead questions in phase 1 covered such issues as reasons for learning AOC, expectations for the course, efforts intended to learn AOC, importance of learning AOC well, feelings when presenting research in English in different situations, and causes for feeling anxious. The core questions in phase 2

	No. of items	Phase 1		Phase 2	
		Reliability	Mean item-total correlation (p = .01)	Reliability	Mean item-total correlation (p = .01)
AOCAS	12	.968	.831	.957	.786
Expectancy	5	.392	.268	.245	.160
Attainment Value (AV)	3	.936	.867	.775	.634
Intrinsic Value (IV)	3	.837	.541	.676	.511
Utility Value (UV)	2	.793	.657	.844	.762
Cost Value (CV)	2	.764	.618	.820	.696

Notes: AOCAS = Academic Oral Communication Anxiety Scale.

**Table 1.**  
Characteristics of AOCAS and EVBI Scales (N = 74).

included gains from the course, efforts made to learn the course, feelings when presenting research in English in different situations, causes for feeling anxious, etc.

#### 4.4 Data collection procedure and analysis

The data were collected at two time points of the 16 week semester: The first in week 2 and the second in week 14. At both time points, students answered the survey and a consent form in about 10 minutes in class. Additionally, the informants were required to self-rate their anxiety and motivation levels in weeks 3, 6, 9 and 12, respectively in phase 2. Immediately after the students answered the survey, 6 of them were randomly invited to be informally interviewed during class break, before or after the class. Each interview was conducted in Chinese with a mixture of English and lasted around eight minutes. The collected survey data were analyzed via SPSS 20. Paired samples t-tests were run to examine changes in anxiety levels and value beliefs. Correlation analyses were run to answer research question 2 about the relationship between anxiety and value beliefs. Multiple (stepwise) regression analyses were conducted to explore the effects of value beliefs on students' academic oral communication anxiety.

All the interviews were first transcribed, double-checked and then subjected to thematic content analyses [63]. Based on the questions, the interviewees' responses were analyzed according to ideas, which were repeatedly grouped into larger categories. The final themes adopted in the present study included reasons for taking the course and gains from the course, feelings of high/low/no anxiety when communicating in English about academic studies, and causes for AOC anxiety, and so on. To protect privacy, pseudonyms were used for interviewees when their remarks were cited in the paper.

## 5. Results

### 5.1 Survey results

#### 5.1.1 Levels of and changes in AOC anxiety, expectancy and value beliefs

As reported in **Table 2**, the respondents scored 3.94 in phase 1 and 3.56 in phase 2 on AOCAS, below though close to the scale midpoint 4. This finding indicated that around one-third of the respondents were anxious about speaking English for

	Phase 1		Phase 2		Paired samples t-test results		
	Mean	SD	Mean	SD	t	p	Cohen's d
AOCAS	3.94	1.59	3.56	1.45	1.67	.100	/
Expectancy	3.60	.82	3.85	.83	-1.99*	.050	0.04
Attainment	5.89	1.25	5.74	1.27	.791	.432	/
Intrinsic	5.29	1.19	5.54	1.099	-1.38	.171	/
Utility	5.76	1.27	5.97	1.22	-1.06	.295	/
Cost	5.27	1.20	5.35	1.27	-.617	.539	/
Score	35.61	1.52	35.97	.92	-1.65	.103	/

**Table 2.**  
*Means, Standard Deviations and Paired Samples t-test Results of AOCAS and EVBI Scales in Both Phases (N = 74).*

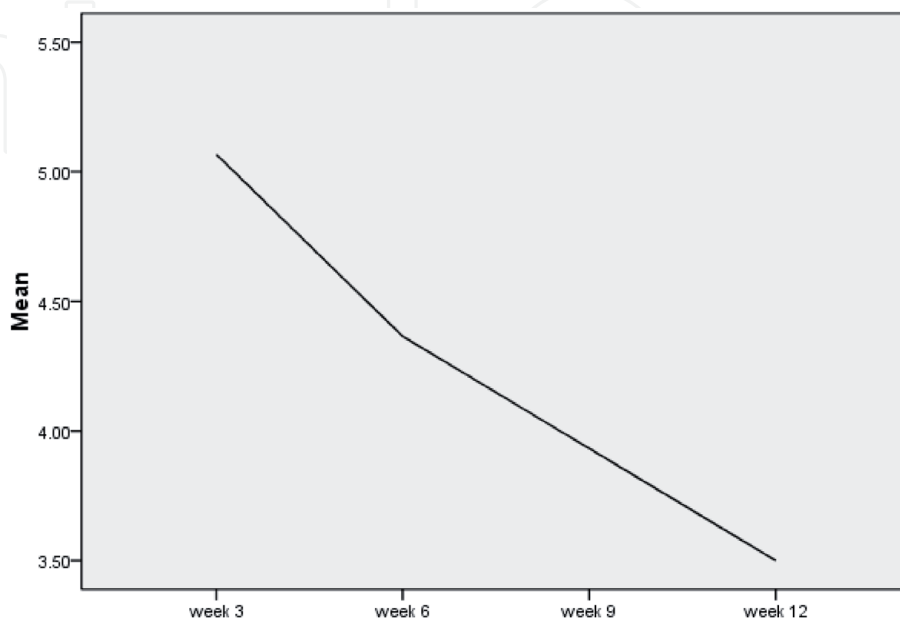


academic purposes in both phases of the semester. Meanwhile, the students scored 3.60 in phase 1 and 3.85 in phase 2 on Expectancy, below the scale midpoint 4, suggesting that they generally had low expectancy of themselves as people who were good at communicating in English on academic studies. In addition, the students scored 5.27 to 5.89 in phase 1 and 5.35 to 5.97 in phase 2 on Attainment Value, Intrinsic Value, Utility Value and Cost Value, respectively, above the scale midpoint 4. These findings showed that more than half of the students believed that it was important to be able to communicate in English about their research, that they internally liked to and hoped to learn AOC well, that good oral English communication skills were important, and that they must invest a lot to learn AOC well.

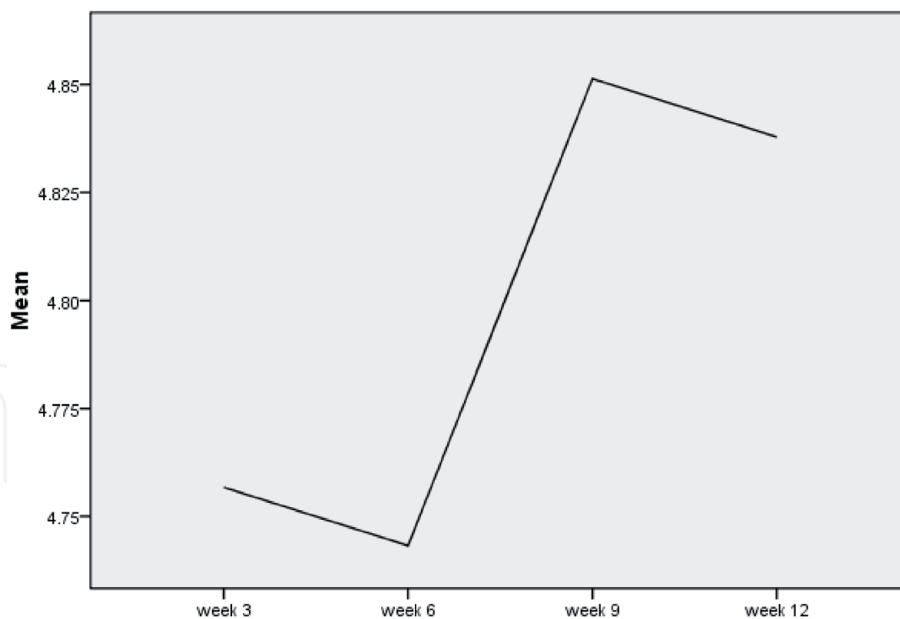
Concurrently, comparison of the scores at two time points showed that the respondents scored lower on AOCAS and Attainment Value but higher on other scales in phase 2. This meant that, by the end of the semester, the students became less anxious about speaking English for academic purposes and held lower attainment value, but had higher expectancy, and greater intrinsic value, utility value and cost value about AOC. This tendency was further supported by the students' self-reported anxiety and motivation levels in weeks 3, 6, 9 and 12 respectively, as shown in **Figures 1** and 2. Nevertheless, significant difference occurred only in expectancy, indicating that the students had significantly higher expectancy of themselves as people who were able to communicate in English about academic study by the end of the semester, as evidenced by paired samples t-test results reported in **Table 2**.

### 5.1.2 Correlations between AOC anxiety and expectancy-value beliefs

**Table 3** presents the coefficients between AOCAS and EVBI scales in both phases. It shows that AOCAS was significantly negatively correlated with expectancy ( $r = -.542, p \leq .008$ ) in phase 1, while significantly negatively related to expectancy ( $r = -.434, p \leq .008$ ) and intrinsic value ( $r = -.358, p \leq .008$ ) but positively to cost value ( $r = .307, p \leq .008$ ) in phase 2. This meant that in both phases, a respondent who had higher AOC anxiety held lower expectancy of himself/herself as a person who was able to communicate in English about academic study. In addition, this person tended to place lower intrinsic value and greater cost value on AOC in phase 2.



**Figure 1.**  
Self-reported anxiety levels from week 3 to week 12.



**Figure 2.**  
 Self-reported motivation levels from week 3 to week 12.

	Expectancy	AV	IV	UV	CV
OCAS	-.542** / -.434**	-.095 / -.106	-.215 / -.358**	-.156 / -.208	.083 / .307**
Expectancy		.028 / .039	.159 / .157	.042 / 0.060	-.065 / -.376**
AV			.754** / .629**	.683** / .746**	.463** / .246*
IV				.767** / .773**	.465** / .231*
UV					.452** / .424**

Note: The first number refers to the coefficient in phase 1 and second refers to the coefficient in phase 2; coefficient of determination: small =  $r \leq 0.1$ ; medium =  $r = 0.3$ ; large =  $r \geq 0.5$ .

\* =  $p \leq .05$ .

\*\* =  $p \leq .008$ .

**Table 3.**  
 Correlations between AOCAS and EVBI Scales in Both Phases ( $N = 74$ ).

**Table 3** also indicates that expectancy was only significantly negatively correlated with cost value ( $r = -.376$ ,  $p \leq .008$ ) in phase 2, while attainment value, intrinsic value and cost value were significantly positively related to each other in both phases, with coefficients ranging from .452 to .767 ( $p \leq .008$ ) in phase 1 and from .231 to .773 ( $p \leq .05$ ) in phase 2. Alternatively, in phase 2, a person who had greater expectancy of himself/herself about AOC tended to invest less to learn AOC. By contrast, in both phases, a person who placed higher attainment value on AOC tended to place higher intrinsic value, utility value and cost value on AOC, or vice versa.

### 5.1.3 Predictive effects of expectancy and value beliefs on AOC anxiety

To examine the predictive effects of expectancy and value beliefs on AOC anxiety, multiple regression analyses were conducted in both phases, with AOC anxiety being the dependent variable and the EVBI scales being the independent variables. The results are reported in **Table 4**, which shows that the analyses produced only one model in phase 1 with  $R^2 = .278$  ( $p = .000$ ): expectancy ( $\beta = -.527$ ,  $t = -5.26$ ,  $p = .000$ ), which was a powerful negative predictor for AOC anxiety.

		Expectancy		
AOC anxiety in phase 1	$\beta$	-.527		
	t	-5.26		
	p	.000		
	VIF	1.000		
	Cohen's f2	.39		
		Expectancy	Intrinsic value	Cost value
AOC anxiety in phase 2	$\beta$	-.261	-.386	.298
	t	-2.404 <sup>*</sup>	-3.727 <sup>**</sup>	2.703 <sup>**</sup>
	p	.019	.000	.009
	VIF	1.257	1.1400	1.295
	Cohen's f2	.23	.08	.07

Notes. Effect size of Cohen's f2: small = f2 ≤ .02; medium = f2 = .15; large = f2 ≥ .35 [64].  
<sup>\*</sup> = p ≤ .05.  
<sup>\*\*</sup> = p ≤ .01.

**Table 4.**  
Multiple Regression Coefficients and Significance of Predictors for AOC Anxiety.

As seen from **Table 2**, the analyses produced three models in phase 2: model 1 (expectancy) (R2 = .188, p = .000), model 2 (expectancy, intrinsic value) (R2 = .274, p = .005) and model 3 (expectancy, intrinsic value, cost value) (R2 = .343, p = .009), with model 3 being the best one. Model 3 reveals that expectancy was the most powerful predictor for AOC anxiety ( $\beta = -.261$ ,  $t = -2.404$ ,  $p = .019$ ), followed by intrinsic value ( $\beta = -.386$ ,  $t = -3.727$ ,  $p = .000$ ) and cost value ( $\beta = .298$ ,  $t = 2.703$ ,  $p = .009$ ).

When AOC anxiety score at phase 2 was used as the dependent variable and expectancy-value beliefs at phase 1 as independent variables, no model was yielded.

## 5.2 Interview results

At the beginning of the semester (phase 1), all the 7 interviewees reported that they took the ASCAC because they were required to take an English course to graduate on time and that they held the following expectations of the course: To improve English, especially speaking and listening English (5/71.42%), to become brave to speak English (2/28.57%), to improve academic oral English (2/28.57%), and to learn English way of thinking (1/14.29%). Except for one interviewee who remarked that he would hardly need to speak English for academic purposes in the future, the other six were fully aware of the importance of learning AOC well to their research and future career. They thus all were willing to make efforts to study the course well and planned to “take notes, listen to and practice the instructor’s suggestions, work on assignments seriously, and try to speak English as much as possible” (Luo, phase 1). Two interviewees also planned to memorize as many English words as possible. However, they generally could not invest more time in learning English due to heavy load from work or research projects. Hence, during the first few weeks, when speaking English in groups in class, 3 interviewees reported feeling anxious in that they were not confident due to poor spoken English, limited vocabulary, inability to understand what the instructor said, and/or often forgetting words when speaking English. Three reported not feeling anxious because “... It’s ok to make mistakes or switch to Chinese, because it was between us

students” (Wang, phase 1) and “... The purpose was to practice and improve spoken English” (Ya, phase 1). Dou said that he was not anxious when the topics were familiar to him but anxious when the topics were unfamiliar or difficult.

When presenting research results in class, Dou reported not feeling anxious if his research was good but the other six did feel anxious to varying degrees because “... The other students were so good at English” (Luo, phase 1), “I’m afraid of forgetting words” (Pan, phase 1) and “I’m not well-prepared” (Ya, phase 1). When presenting research results in conferences, only Luo remarked that he was not anxious because he was prepared, the other six felt anxious to varying degrees due to the following reasons: a) Listeners were experts; b) they could not understand others well; c) the audience was big, d) the situation was quite formal and they feared making mistakes, e) they feared forgetting words when answering questions, and f) experts asked hard-to-answer questions. As passive listeners in lectures and seminars, all the interviewees would not feel anxious. Yet they became anxious when presenting if they were unable to express their ideas clearly in English, forgot words when answering questions, could not understand questions, and/or were not prepared or saw an expert in the audience.

During the semester, in spite of heavy load from work or research projects, all the interviewees managed to increase their English-learning time and the frequency of speaking English and spend (a lot of) time on course assignments. For example, “To prepare for my assignments, I search for information and listen to English every day. And I listen to each of my own recordings several times and redo it until I feel it satisfactory. In addition, I keep on speaking English out in class. I think all these efforts are good and help improve my spoken English” (Ya, phase 2). As Xuan (phase 2) recalled, “I used to learn English kind of mechanically, like memorizing words and doing practice tests. Now to learn this course well, I changed my way of learning English: I came to watch TED talks, English movies and TV episodes and listen to English speeches. I think this kind of input is better than what I got in the past. I learned more practical and more nativelike use of English”. Because of these efforts, they all claimed that their expectations of the course were met and that they gained a lot from the course: a) Logical way of thinking, b) correct pronunciation, c) increased use of English, d) the ability to speak English logically, e) the gut to present research results in the front, f) the ability to understand and respond to questions timely, g) the courage to speak English, h) a more systematic understanding of academic English, and i) new knowledge. As remarked by Dou (phase 2), “... As a Ph.D student, I’ll highly probably present my research in international conferences, for which logic is important. Then, through the practice of each assignment and Dr. Liu’s feedback, I came to understand more logic and English way of thinking. In this way, I gradually know how to develop my ideas.”

As the interviewees became (more) familiar with one another, had increased practice and use of English, and became more logical in developing and presenting ideas, they reported becoming less anxious and more confident as the term progressed. Furthermore, as they got more used to the English way of thinking instead of simply translating from Chinese to English, and became more confident, all the interviewees reported feeling much less (or not) anxious when speaking English in groups in class by the end of the semester. Nevertheless, still three interviewees reported feeling anxious when the topics were not familiar, and one did so when not prepared. When presenting research results in class, three interviewees did not feel anxious because of the following reasons: a) increased exposure to and practice of English (e.g., reading literature in English, speaking English aloud, listening to English speeches and getting involved in discussions in English), b) getting more used to the English way of thinking, c) understanding their own research better, and d) having been trained how to present and answer questions in class. Two

reported feeling anxious, though less anxious compared with how they felt at the beginning of the semester, in that they “still need to know more about research” (Wang, phase 2) and “... It takes time to improve English” (Pan, phase 2). Two reported not feeling anxious if well prepared but anxious if the preparation is insufficient, as “If I am fully prepared, I know more than others do. I can answer their questions. So I don’t feel anxious when presenting my research results” (Dou, phase 2). If presenting research results at conferences, Luo (phase 2) reported not feeling anxious because of adequate preparation, “... I fully understand my research and rehearse my presentations many times in advance”. Ya did not feel anxious either when prepared, yet became anxious in the ‘question and answer session’ in that “I may not understand others’ questions”. The other five interviewees were anxious to varying degrees, because “... My research may not be so good” (Pan, phase 2), “... I may not be able to understand others’ questions and thus cannot answer those questions” (Xuan, phase 2), and “... The audience are experts” (Wang, phase 2). Nevertheless, they reported feeling much less anxious compared with the beginning of the semester, thanks to increased confidence in presenting research in English because of more practice, preparation, and the learned English way of thinking.

## **6. Discussion**

### **6.1 Levels of and changes in AOC anxiety and expectancy-value beliefs**

The present study revealed that nearly half participants reported to be anxious about AOC, as found in their peers in English for general purpose (EGP) situations [7–9, 34]. Moreover, the reduction in the AOC anxiety level was not significant toward the end of the semester, different from many studies in EGP contexts where the participants often report to be significantly less anxious about speaking English after a period of time [3, 4]. This might be because as their exposure and access to English increase, students naturally become less anxious about speaking English. Nevertheless, it is generally more challenging to learn AOC in a SL/FL in that it demands more knowledge from learners, like academic vocabulary, more logical thinking and content knowledge as well as knowledge of research. As reported by the interviewees in the present study. Coupled with the fact that EFL students generally have fewer opportunities to practice AOC in spite of various activities organized in class, students need more time and practice to become significantly less anxious about speaking English for academic purposes, as revealed in the present study. Nevertheless, this needs to be further researched with larger samples in more contexts.

Meanwhile, this study showed that the students had low expectancy of themselves yet placed high attainment value, intrinsic values, utility values and cost values on AOC in both phases. These findings clearly indicated that the participants were not so confident in communicating with others about research in English. However, they knew quite well that it was important and useful to be able to do so, that they wanted to learn AOC well, and that they must make great efforts to learn AOC well, similar to their peers in [12]. This might be largely because as institutions of higher education began to increasingly stress research and publication and strive to become internationally famous, it becomes increasingly important for post-graduates, especially doctoral students, to be able to communicate effectively with peers and present their research projects and findings in such settings as lectures, seminars and conferences, in both oral and written forms. Another interesting finding was that the participants placed the highest attainment value in phase 1 but the highest utility value in phase 2. This result, if viewed from a cross-sectional

perspective, was consistent with the finding that SL/FL learners often have higher instrumental motives relevant to their current and future goals [65, 66].

In addition, the analyses showed that there was significant increase in students' expectancy and insignificant increase in attainment value, intrinsic value, utility value and cost value over the semester, different from the findings in [12, 67]. This can be attributed to the different roles played by expectancy and subjective task values respectively in the learning process, with the former having a stronger association with academic performance while the latter predicting effort-related decision making [49]. As learners approach the end of a learning period, their proficiency in the language would naturally be improved, which in turn boosts their expectancy beliefs. In addition, the statistically insignificant increase in cost value in the present study might be because the participants had already invested a lot in learning AOC in both phases, leaving little room for further sacrifices, as reported by the interviewees.

## **6.2 Interaction between expectancy-value beliefs and AOC anxiety**

As found in a number of existing studies on relationships between foreign language anxiety and expectancy or self-efficacy [2, 21, 68, 69], the present study showed that expectancy was not only significantly negatively correlated with AOCAS but also a powerful negative predictor for AOC anxiety in both phases, similar to that in [12]. Understandably, a higher expectancy of success or one's ability often leads to higher confidence and lower anxiety. This might also partly explain why the reduction in AOC anxiety was accompanied by the increase in expectancy of success in the present study. Moreover, this result highlighted the long-term impact of expectancy on learning achievement motives. As reported in [53] on applying expectancy-value principles in daily teaching, the expectancy component of motivation has a closer association than subjective task values with learners' conscious learning experience. Consequently, it is of great necessity to help students to establish strong expectancy for success [29].

Echoing with the negative correlation between AOCAS and intrinsic value and the positive correlation between AOCAS and cost value in phase 2, intrinsic value was revealed to be a powerful negative while cost value a positive predictor for AOC anxiety in phase 2, as found in [70]. These findings indicated that learners who had greater internal desire to learn AOC well experienced lower AOC anxiety. This is because intrinsic motivation is a greater force in learning, as discussed in [42]. These findings also suggested that students who believed that they had to sacrifice a lot to be good at AOC experienced higher levels of anxiety. This might be because students knew that it took time and efforts to learn AOC well while they worried about the learning outcome at the same time. They were afraid that their learning outcomes might not deserve the sacrifices they made. This might also in return partly explain why the participants had rather low expectancy of themselves on AOC in the present study. Probably just because the respondents were not confident in speaking English for academic purposes, they experienced high AOC anxiety, even though they had internal desire to and were willing to invest a lot to learn it well. Hence, it remains important to enhance learners' perceived self-worth and expectancy of success/themselves, as discussed in [70]. On the other hand, however, this might alert us to the possibility that exclusively boosting one component may not necessarily translate to an overall increased achievement motive or enhanced learning experience. In effect, the improvement of one component is very likely to be constrained by the others due to interactive effects between them. Therefore, we need to be well aware of the multiplicative effects generated by all expectancy and value components of motivation. This also justifies more research

on the complicated interaction mechanism of expectancy-value beliefs so that the power of the whole really becomes greater than the sum of its parts.

## **7. Conclusion**

The present study investigated the interaction between expectancy-value beliefs (attainment, intrinsic, utility and cost value) and AOC anxiety in Chinese postgraduate EFL learners. Analyses of 74 matching sets of questionnaires and seven interviews at two points of a 16-week semester revealed the following major findings:

1. One-third to half of the participants experienced AOC anxiety and had low expectancy of themselves about AOC,
2. more than half of them placed great attainment, intrinsic value, utility value and cost value on AOC in English,
3. significant increase occurred in expectancy but not in AOC anxiety or any value over the semester,
4. expectancy was a great negative predictor for AOC anxiety at the beginning of the semester, and,
5. expectancy, intrinsic value and cost value were powerful predictors for AOC anxiety by the end of the semester.

Clearly, Chinese postgraduate students' AOC anxiety and expectancy-value beliefs did change during the Advanced Speaking Course for Academic Communication, though not so much as happened in courses of speaking English for general purposes. This further demonstrates the challenging and anxiety-provoking nature of courses of speaking English for academic purposes. To improve competence in AOC and reduce anxiety, it is important to enhance students' motivation to learn AOC in English. Coupled with the finding that intrinsic value and cost value were powerful predictors for students' AOC by the end of the semester, it is necessary for instructors and students to work together to develop proper expectancy of success about and place appropriate values on AOC in English. Thus, students know what they expect to achieve, how they can achieve their goals and what sacrifices they are willing to make to achieve those goals. With these goals and efforts, they may gradually improve their competence in AOC and become increasingly more confident in and less anxious about speaking English for academic purposes [12]. Meanwhile, exposure to and practice of AOC in English are of supreme importance to students, which can be realized by organizing and participating in various activities like presentations and group discussions in class and listening to and modelling on formal speeches like TED talks after class [3, 4]. In addition to this, a cooperative and supportive classroom environment helps reduce anxiety and increase the comfort of speaking English for academic purposes, as discussed in [3]. Moreover, as timely and constant feedback fuels learning motivation [71, 72], it is important for instructors to give feedback on students' performance and encourage them to do peer review as well, so that students can be cognizant of their learning progress timely and be informed how to do better effectively. All of these can in return develop students' interest in the language and foster intrinsic motivation to learn AOC, which is likely to elicit more efforts from the students to invest in AOC.

Consequently, they become more proficient in the second/foreign language during the process of becoming bilingual/multilingual.

The present study enriched the current literature by examining the interaction of expectancy-value beliefs and anxiety in relation to learning academic oral English in bilingual Chinese graduates. The findings would be more generalizable if a larger sample had been studied. An experimental design would have also helped reveal a causal relationship between expectancy-value beliefs and AOC anxiety and the effects of training. All these will be the focus of future research. As reviewed in [2, 42], anxiety and motivation, as emotional and psychological constructs, play influential roles in SL/FL learning and acquisition and hence remain important research topics in the field. A better understanding of the two issues will thus definitely help facilitate the process of becoming bilingual/multilingual, which thus should be continuously researched in various bilingual/multilingual learners in differing contexts.


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