

## ***Evaluating the Impact of Oral Test Anxiety and Speaking Strategy Use on Oral English Performance***

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The present research explored the effect of Chinese university students' oral test anxiety and speaking strategy use on their oral English performance. 1697 university students answered the 19-item Achievement Test Anxiety Scale and the 32-item Oral Communication Strategy Inventory (OCSI) (speaking part) in study 1. In study 2, 493 university students answered the 25-item Oral English Test Anxiety Scale and the OCSI immediately after they had finished the oral English proficiency test. The major findings are: (1) although the respondents generally perceived test anxiety to be more facilitating than debilitating, oral test anxiety did exist during the oral English test and significantly debilitated their test performance, (2) more proficient students tended to be significantly less anxious during the oral test; (3) the participants used speaking strategies to varying degrees during the oral English test, and more proficient students tended to use more effective speaking strategies significantly more frequently; (4) speaking strategies both enhanced and debilitated students' oral test performance; and (5) oral test anxiety was significantly correlated with the use of different categories of speaking strategies.

**Keywords:** test anxiety; oral English performance; speaking strategy use

## **INTRODUCTION**

As described in Bachman and Palmer (1996), test performance is attributed to the characteristic of test-takers and test tasks. The test-taker characteristics consist of (a) topical knowledge, (b) language knowledge, (c) personal characteristics, (d) strategic competence, and (e) affective schemata. Although all the variables merit investigation in that our decisions or inferences based on test performance depend on these characteristics, test anxiety and strategy use are of special importance in that both anxiety and strategy use have been revealed to be closely related to second/foreign language (SL/FL) learning outcomes (Cohen, 2008; Dörnyei & Scott, 1997; Elkhafafi, 2005; Goberman, Hughes & Haydock, 2011; Horwitz, 2001; Huang, 2010; In'nami, 2006).

Anxiety in SL/FL classroom learning situations has been extensively researched and revealed to play a predominantly debilitating role in learning the SL/FL (Gardner & MacIntyre, 1992; Horwitz, Horwitz & Cope, 1986; MacIntyre & Gardner, 1994). However, anxiety in SL/FL testing situations has not been adequately researched, although tests, especially oral tests, have proved to be highly evaluative and anxiety-provoking (Horwitz et al., 1986; Young, 1991). Likewise, little research has been done to explore how learners use strategies when interacting with others in actual SL/FL testing situations (Purpura, 1999; Swain, Huang, Barkaoui, Brooks & Lapkin, 2009). Even less research can be found on how test anxiety and strategy use affect test performance simultaneously in any real testing situation. For these reasons, the present research aimed to explore the effect of Chinese university students' oral test anxiety and speaking strategy use on their oral English performance.

### **Literature Review**

#### *Oral Test Anxiety*

As tests have become a vital tool for decision making in our competitive society, test anxiety has become one of the variables most commonly associated with

underachievement and students' abilities to benefit from instruction (Spielberger, 1972; Tobias, 1979; Wolf & Smith, 1995; Zeidner, 1998).

As a "special case of general anxiety consisting of phenomenological, physiological, and behavioral responses" related to a fear of failure (Sieber, 1980, p. 17), test anxiety is the tendency to worry about one's own performance (e.g., expectations of failure) and aptitude (e.g., self-deprecatory thoughts) under evaluative or test conditions (Calvo & Carreiras, 1993). Under test conditions, anxiety is frequently associated with performance impairments in complex cognitive tasks (Darke, 1988). However, test-anxious people do not always suffer from performance impairments in test situations, not even in 'difficult' tasks (Blankstein, Flett, Boase & Toner, 1990).

Although foreign language anxiety has been consistently shown to principally debilitate language learning outcomes measured either in test performance, course grades, or ratings of proficiency (Elkhafaifi, 2005; Horwitz, 2001; MacIntyre, 1998; Matsuda & Gobel, 2004; Phillips, 1992; Woodrow, 2006), no clear-cut relationship between test anxiety and performance has been revealed though it is an important component of foreign language anxiety (Elkhafaifi, 2005; Horwitz, 2001; Phillips, 1992). For example, test anxiety was negatively and moderately correlated with course grades in beginner-level, French audio-lingual classes, but positively and very weakly correlated in beginner-level, regular French, German and Spanish classes (Chastain, 1975). It was negatively though weakly related to final grades in the case of introductory-level, foreign language students (Horwitz, 1986). In'nami's (2006) study of 79 Japanese 1<sup>st</sup>-year university students showed that test anxiety did not affect listening test performance, which supported the finding in Aida (1994) and MacIntyre and Gardner (1989). These contradictory findings might be due to the fact that test anxiety is measured by only two items in the Foreign Language Classroom Anxiety Scale developed by Horwitz, Horwitz and Cope (1986) which are not specifically designed for real testing situations.

Empirical research on the subject of SL/FL test affect has been rather limited (Calvo & Carreiras, 1993; Gao, 2010; Liu, 2007; Madsen, 1982; Shohamy, 1980). Madsen (1982) assessed how detrimental the effects of anxiety were in ESL language exams. 114 students ranging in ability from beginning to advanced

answered a battery of six different ESL examinations and the Alpert and Haber Achievement Anxiety Test. Performance on the most anxiety-producing subtest was shown to be debilitating for the most anxious-prone students. The study demonstrated that high anxiety-producing ESL tests not only were psychologically debilitating but also were less valid and potentially biased in favor of students with low test anxiety. Young's (1990) study with 60 participants showed significant negative correlations between anxiety and the foreign language oral proficiency ratings, but once the effects of ability were accounted for, the correlations were no longer significant.

Even though public speaking has always been considered the most fearful event in SL/FL learning (Horwitz et al., 1986; MacIntyre & Gardner, 1989; Young, 1990), little effort has been made to develop a scale to measure oral test anxiety and its effect on test performance (Gao, 2010; Liu, 2007; Shomoossi & Kassaian, 2009). To explore anxiety during oral English tests in Chinese undergraduate EFL students at three different proficiency levels, Liu (2007) developed a 34-item Oral English Test Anxiety Scale, which covered three dimensions of oral English tests: preparation for tests, feelings about tests, and concerns about tests. She found that the majority of the students felt somewhat anxious about oral English tests and that the more proficient students tended to be less anxious. A total of Iranian freshmen of English participated in Shomoossi and Kassaian's (2009) study of the effect of test anxiety on listening and speaking. The results indicated that anxiety was a more serious factor in the oral tests than in the listening comprehension tests, and that no significant difference was found between test anxiety before and after the listening comprehension test.

#### *Speaking Strategy Use*

Learning strategies are the conscious thoughts and behaviors used by learners to help them better understand, learn, and remember the SL/FL information (Chamot, 2005; Murphy, 2008; Nakatani, 2005; O'Malley & Chamot, 1990; Oxford, 1990). Numerous research has demonstrated that strategies make SL/FL learning more efficient and successful (Cohen, 1998; Collier, 2010; Grenfell & Macaro, 2007;

O'Malley & Chamot, 1990; Oxford, 1996; Takeuchi, Griffins & Coyle, 2007; Wenden & Rubin, 1987). Oxford and her colleagues made a great contribution to learning strategy identification (Nyikos & Oxford, 1993; Oxford, 1990). They developed the Strategy Inventory for Language Learning (SILL) as an instrument for assessing the frequency of good strategy use by learners and placed a whole range of learning strategies into six categories: *memory*, *cognitive*, *compensation*, *metacognitive*, *affective*, and *social*. Although a useful instrument, the SILL mainly deals with general statements which may not be relevant for identifying task-specific strategies (Nakatani, 2006; Oxford, 1996).

During recent decades, researchers have also believed that learners can improve communicative proficiency by developing an ability to use specific communication strategies (CSs) that enable them to compensate for their deficiency in the target language (TL) (Collier, 2010; Dörnyei, 1995; Dörnyei & Scott, 1997; Faerch & Kasper, 1983; Nakatani, 2006, 2010; Tarone, 1980). As the first to recognize learners' problem-solving behavior during SL/FL communication as "communication strategy", Tarone, Cohen, and Dumas (1976) argued that learners tended to employ CSs to compensate for their lack of appropriate SL/FL knowledge when expressing or decoding the meaning of their intended utterances. Tarone (1980) regarded CSs as the "mutual attempts of two interlocutors to agree on a meaning in a situation where the requisite meaning structures do not seem to be shared" (p. 420). Canale and Swain (1980) defined CSs as strategic competence involving the ability to use verbal and nonverbal strategies to avoid communication breakdowns that might be caused by learners' lack of appropriate knowledge of the TL. Faerch and Kasper (1983, p. 36) defined CSc as "potentially conscious plans for solving what to a participant in a communicative exchange presents itself as a problem in reaching a particular communicative goal". As such, communication strategies have been generally categorized into two types: *achievement or compensatory strategies* and *reduction or avoidance strategies* (Dörnyei & Scott, 1997; Faerch & Kasper, 1983; Nakatani, 2005). The former allows learners to come up with an alternative plan for reaching the original goal via whatever available resources; the latter enables learners to avoid solving a communication problem and allows them not to convey the original message. According to Nakatani (2010),

achievement strategies consist of *compensatory strategies* and *retrieval strategies*. The former includes *code-switching*, *interlingual transfer*, *intralingual transfer*, *interlanguage (IL)-based strategies*, *cooperative strategies*, and *nonlinguistic strategies*. Reduction strategies comprise *formal reduction strategies*—using a reduced system to avoid producing nonfluent or incorrect utterances—and *function reduction strategies*—avoiding a specific topic or giving up on sending a message. To conclude, CSs can be any of a learner's attempts to overcome their difficulties and generate the TL to achieve communicative goals in actual interaction (Nakatani, 2010).

To date, few studies have focused on strategies for communication (Huang & Van Naerssen, 1987; Nakatani, 2006; Politzer, 1983; Politzer & McGroarty, 1985). Politzer (1983) developed a 5-point scale, self-report questionnaire consisting of three parts: general behaviors, classroom behaviors, and interaction behaviors. However, the questionnaire was criticized for lacking validity and not focusing on actual strategy use in real learning tasks (Nakatani, 2006). In order to determine which individual learning behaviors were significantly related to student language test score gains, Politzer and McGroarty (1985) designed a *yes-no* questionnaire consisting of three parts: classroom behaviors, individual study, and oral communication strategy use outside the classroom, using explicit oral communication strategy items. However, some researchers believe that the items of this questionnaire were based either on the researchers' intuitions or on suggestions from other research (Nakatani, 2006). To investigate the learning strategies of Chinese EFL students in oral communication, Huang and Van Naerssen (1987) developed a questionnaire comprising three parts: student perceptions of useful strategies for improving their listening and speaking abilities, frequency of strategy use for oral communication, and student selection of techniques for language learning tasks. They found that in oral communication successful EFL learners utilized certain strategies that less successful learners did not employ. Although some items on the questionnaire seem to be useful, Huang and Van Naerssen assessed student strategies for oral communication by correlating them with other learning strategies unrelated to oral communication (Nakatani, 2006). To find links between an increase in the use of certain strategies and an improvement in student

performance on the tasks, Cohen, Weaver and Li (1998) designed a 5-point Likert scale to evaluate a three-stage process for strategy use: preparation before the tasks, self-monitoring during the tasks, and self-reflection after the tasks. Though the checklists seem to be well designed to investigate real strategy use, the main concern was to focus on speakers' metacognitive strategy use but not on the interactional aspects of communication (Nakatani, 2006).

To study how valid information about learner perception of strategy use during communicative tasks could be gathered systematically from EFL learners, Nakatani (2006) developed the Oral Communication Strategy Inventory (OCSI). Validated in different ways, the OCSI finally includes 8 categories of strategies for coping with speaking problems and 7 categories for coping with listening problems during communication. An empirical study using the OCSI showed that students with high oral proficiency tended to use specific strategies, such as social affective strategies, fluency-oriented strategies, and negotiation of meaning. Considering its high reliability and validity, the speaking part of the OCSI was adopted in the present study.

#### *Rationale for the Study*

As reviewed, test anxiety may result in an inability to concentrate, to read with comprehension, to remember or organize known materials (Burke, 1999), which ultimately affects students' performance in tests. It is especially so with SL/FL tests (Young, 1991). Anxiety in SL/FL classroom learning situations has been extensively researched and revealed to play a predominantly debilitating role in learning the target language (Gardner & MacIntyre, 1992; Horwitz et al., 1986; MacIntyre & Gardner, 1994). However, anxiety in target language testing situations has not been adequately researched. Since tests are highly evaluative, learners often experience more anxiety in these situations, especially in oral tests (Horwitz et al., 1986; Young, 1991). Likewise, there has been little attention paid to examining how learners use strategies when interacting with their communication peers in actual SL/FL testing situations (Purpura, 1999; Swain, Huang, Barkaoui, Brooks & Lapkin, 2009), which has indicated complex interrelations between learners'

strategy use and L2 performance. Moreover, some researchers (Chen, 1990; Huang & Van Naerssen, 1987; Rost & Ross, 1991) argue that the type and frequency of strategy use for communication varies according to learners' oral proficiency level, and low-proficiency students may have difficulties in choosing appropriate strategies and recognizing the effects of using strategies. Thus, it is important to explore whether the use of oral communication strategies is equivalent across high- and low-proficiency students (Nakatani, 2010). For these purposes, the present study explored the effect of oral test anxiety and speaking strategy use on Chinese university students' oral English test performance. And the following research questions are of particular interest:

- (1) What are the general patterns of Chinese university students' oral test anxiety and speaking strategy use during the oral English proficiency test?
- (2) How does the students' oral test anxiety relate to their speaking strategy use?
- (3) What are the effects of the students' oral test anxiety and speaking strategy use on their oral English test performance?

### **The Present Research**

To answer the three questions, the present research conducted two studies. Administering the well-established Achievement Anxiety Test (Alpert & Haber, 1960) and the Oral Communication Strategy Inventory (Nakatani, 2006) to more than 1,000 students, study 1 aimed to reveal how university students generally perceived anxiety during tests and how they used speaking strategies during oral tests. Because study 1 was conducted in classroom learning situations, the findings not only served as the baseline for but needed to be confirmed by study 2 which specifically examined students' anxiety levels and strategy use during an actual oral English test and their effects on the students' test performance. It is hoped that the findings of the two studies would be complementary and enable us to better understand the nature of oral test anxiety and speaking strategy use and their interactive effect on oral test performance.

## STUDY 1

### Method

#### *Participants*

A total of 1697 (921 female and 776 male) students from five universities of varied ranks in Mainland China participated in study 1. With an average age of 19 and an age range of 16 to 24, the participants came from various disciplines such as business management, civil engineering and environmental engineering, with a majority being first-year students (1169/68.9%), 481 (28.3%) being second-year, 43 (2.5%) being third-year and 4 (2%) fourth-year students.

#### *The instrument*

The participants answered the 19-item Achievement Anxiety Test and the 32-item Oral Communication Strategy Inventory (speaking part), as detailed below.

#### *The Achievement Anxiety Test*

This 19-item Achievement Anxiety Test (AAT) was adopted from that developed by Alpert and Haber (1960), consisting of facilitating anxiety scale which measures the degree to which test anxiety improves student performance, and a debilitating anxiety scale which measures the interference effect of test anxiety. In study 1, the overall AAT achieved a reliability score ( $\alpha$ ) of .5935, and the 9-item facilitative anxiety scale (FAS) and the 10-item debilitating anxiety scale (DAS) achieved an  $\alpha$  of .7398 and .8042 respectively. And the two scales were significantly negatively correlated ( $r = -.315, p < .01$ ). Placed on a 5-point Likert scale, each item has five alternatives, ranging from 'strongly disagree' to 'strongly agree', with values of 1-5 assigned to the alternatives respectively.

*Oral Communication Strategy Inventory (speaking part)*

This 32-item Oral Communication Strategy Inventory (speaking part) (OCSI) was adopted from that developed by Nakatani (2006), which aims to address strategies for coping with speaking problems. Achieving an  $\alpha$  of .8808 (it was .86 in Nakatani (2006) in study 1, this OCSI consists of 8 subcomponents: the 6-item OCSI1 (social affective strategies), the 6-item OCSI2 (fluency-oriented strategies), the 4-item OCSI3 (negotiation for meaning while speaking strategies), the 5-item OCSI4 (accuracy-oriented strategies), the 3-item OCSI5 (message reduction and alteration strategies), the 2-item OCSI6 (nonverbal strategies while speaking), the 4-item OCSI7 (message abandonment strategies), and the 2-item OCSI8 (attempt to think in English strategies). Placed on a 5-point Likert scale, each item has five alternatives, ranging from 'never or almost never true of me' to 'always or almost always true of me', with values of 1-5 assigned to the alternatives respectively.

*Procedure and Data Analysis*

This battery of questionnaires was administered to 20 intact classes of around 2000 students at the beginning of a normal class session in the middle of an 18-week long academic term. Finally, 1821 questionnaires were collected, of which 1697 were considered valid for further analyses and the others were discarded because of incompleteness. All the survey data were subject to statistical analyses by SPSS 18. For each measure, the mean and standard deviation were calculated to determine the overall patterns of the students' achievement anxiety and speaking strategy use. Then correlational analyses were run to examine the relationship between the students' achievement anxiety and speaking strategy use.

## **Results**

*General Patterns of the Students' Achievement Anxiety and Speaking Strategy Use*

In order to know the general tendency of the students' achievement anxiety and speaking strategy use, the mean and standard deviation of the FAS, the DAS, the

OCSI and its subcomponents were computed. Considering that all the items were on a 5-point Likert scale, a score of 4 to 5, 3 to 4, and below 3 on the DAS means high, moderate, and low debilitating anxiety respectively; a score of 4 to 5, 3 to 4, and below 3 on the FAS means high, moderate, and low facilitating anxiety respectively; and a score of 4-5 on the OCSI or its subscales means frequent use of the strategies, a score a score of 3-4 on the OCSI or its subscales indicates a medium use of the strategies, and a score below 3 on the OCSI or its subscales suggests low use of the strategies. Results of statistical analyses of the two scales are presented in Table 1.

**TABLE 1**  
**Statistical Analyses of the DAS, the FAS and the OCSI (N = 1698)**

	Mean	Standard deviation
DAS	2.765	.635
FAS	3.032	.577
OCSI1	3.495	.638
OCSI2	3.378	.671
OCSI3	3.291	.683
OCSI4	3.385	.600
OCSI5	3.585	.672
OCSI6	3.513	.842
OCSI7	2.987	.620
OCSI8	3.289	.819
OCSI	3.364	.441

Notes: DAS = debilitating anxiety;

OCSI1 = social affective strategies;

OCSI3 = negotiation for meaning while speaking

OCSI4 = accuracy-oriented strategies;

OCSI 6 = nonverbal strategies while speaking;

OCSI8 = attempt to think in English

FAS = facilitating anxiety

OCSI2 = fluency-oriented strategies

OCSI5 = message reduction and alteration

OCSI7 = message abandonment

As shown in Table 1, the participants reported to have moderate or even low debilitating anxiety ( $m = 2.765$ ) and moderate though to the lower end facilitating anxiety during tests ( $m = 3.032$ ). With a score range of 3.289 to 3.585, the participants reported to have a moderate use of social affective (OCSI1), fluency-oriented (OCSI2) and accuracy-oriented strategies (OCSI4), strategies of negotiation for meaning while speaking (OCSI3) and message reduction and alteration (OCSI5), nonverbal strategies while speaking (OCSI6), and strategies of attempt to think in English (OCSI8). Meanwhile, they reported to have a low but to the upper end use of the strategies of message abandonment (OCSI7) ( $m = 2.987$ ). They had a medium use of the overall strategy as well (OCSI) ( $m = 3.364$ ).

*Correlation between Oral Test Anxiety and Speaking Strategy Use*

In order to examine the relationship between achievement anxiety and speaking strategy use, correlational analyses between the DAS, the FAS and the OCSI were done, the results of which are reported in Table 2.

**TABLE 2**  
**Correlations between the DAS, the FAS, the OCSI and its Subscales**

	FAS	OCSI1	OCSI2	OCSI3	OCSI4	OCSI5	OCSI6	OCSI7	OCSI8	OCSI
DAS	-.315**	-.161**	-.178**	-.103**	-.124**	.015	-.123**	.153**	.014	-.125**
FAS	1	.284**	.266**	.212**	.240**	.094**	.195**	-.098**	.099**	.276**
OCSI1		1	.645**	.508**	.551**	.274**	.549**	-.025	.210**	.795**
OCSI2			1	.506**	.614**	.260**	.567**	-.028	.261**	.819**
OCSI3				1	.484**	.261**	.511**	.106**	.233**	.722**
OCSI4					1	.303**	.466**	.040	.250**	.766**
OCSI5						1	.195**	.254**	.350**	.515**
OCSI6							1	-.007	.160**	.673**
OCSI7								1	.170**	.245**
OCSI8									1	.445**

Note:  $p < .01$

Table 2 shows that the DAS was significantly negatively correlated with the OCSI and its subscales ( $r = -.103 \sim -.178$ ,  $p < .01$ ) except OCSI5 ( $r = .015$ ), OCSI7 ( $r = .153$ ,  $p < .01$ ), and OCSI8 ( $r = .014$ ), while the FAS was significantly positively related to the OCSI and its subscales ( $r = .094 \sim .284$ ,  $p < .01$ ) with the exception of OCSI7 ( $r = -.098$ ,  $p < .01$ ). Namely, the more debilitating a respondent perceived anxiety to be during tests, s/he tended to use less frequently social affective, fluency-oriented, and accuracy-oriented strategies, the strategies of negotiation for meaning while speaking, nonverbal strategies while speaking, and the overall speaking strategies, but more frequently the strategies of message reduction and alteration (OCSI5), message abandonment (OCSI7) and attempt to think in English (OCSI8). By contrast, the more facilitating a respondent perceived anxiety to be during tests, s/he tended to use more frequently social affective, fluency-oriented, and accuracy-oriented strategies, the strategies of negotiation for meaning while speaking, nonverbal strategies while speaking, strategies of message reduction and alteration and attempt to think in English, and the overall speaking strategies, but less frequently the strategies of message abandonment (OCSI7).

## STUDY 2

### Method

#### *Context*

Study 2 was conducted in a highly prestigious university in Beijing, which is especially renowned for science and technology. Because generally only top middle school graduates from each province across the country can be admitted to the University, all her undergraduate non-English majors have been exempt from College English Test band 4 (CET-4), a nation-wide English proficiency and exit test for undergraduate non-English majors by the Ministry of Education. Nevertheless, to motivate them to learn English, they have to pass a school-based English proficiency and exit test, abbreviated as TEPT1, to graduate in time.

TEPT1, consisting of a written test and a speaking test, is administered on the same day once a term, twice a year. The students can choose to take it any time during their college years.

### *Participants*

493 (346 male and 147 female) students from various disciplines participated in study 2, with an average age of 20.95 and an age range of 17 to 27.

### *The Instrument*

The participants answered a 25-item self-developed Oral English Test Anxiety Scale and the 32-item Oral Communication Strategy Inventory (speaking part), as detailed below.

#### *Oral English Test Anxiety Scale*

This 25-item Oral English Test Anxiety Scale (OETA) was adapted from that in Liu (2007) and Gao (2010), which covers two dimensions of oral English test anxiety: 1) general anxiety about the oral test which has 20 items, and 2) worry about the test result, which has 5 items. Placed on a 5-point Likert scale, each item has five alternatives, ranging from ‘strongly disagree’ to ‘strongly agree’, with values of 1-5 assigned to the alternatives respectively. It achieved a reliability of .8699 in study 2.

#### *Oral Communication Strategy Inventory (speaking part).*

This 32-item Oral Communication Strategy Inventory (speaking part) (OCSI) is the same as that described in study 1.

#### *Oral English test performance*

The participants’ oral English test performance was measured via the speaking test of the TEPT1 which consisted of two parts: teacher-student conversation and student-student conversation in the form of card or topic-based discussion. The

assessing of the students' speaking proficiency consisted of 4 parts: pronunciation and intonation, grammar and vocabulary, communication skills and discourse management, and overall assessment, all on a scale of 1 to 5. Then, the scores were computed and converted according to a prescribed proportion to a scale of 1-15, which became the testees' final scores in the test.

#### *Data Analysis*

All the survey data were subject to statistical analyses by SPSS 18. For each measure, the mean and standard deviation were calculated to determine the overall patterns of the students' oral test anxiety and speaking strategy use. Then, the students were categorized into low-, mid-, and high- proficiency groups according to their final scores in the oral English proficiency test. ANOVA (Duncan's) was run to explore the differences in oral test anxiety and speaking strategy use among the three groups. Correlational analyses were run to examine the relationships between the students' oral test anxiety and speaking strategy use. Finally, the relationship between the measured variables and the students' oral English test performance was explored in terms correlational analyses and multiple regression analyses.

### **Results**

#### *General Pattern of the Students' Oral Test Anxiety and Speaking Strategy Use 'Overall Pattern'*

In order to know the general tendency of students' oral test anxiety and speaking strategy use during the test, the mean and standard deviation of the OETA, the OCSI and their subcomponents were computed. When computing these scores, the researcher reversed the values assigned to different alternatives from 'Strongly Disagree' (1) to 'Strongly Agree' (5) of the items expressing confidence or little/no anxiety. Thus, a high OETA score revealed a high degree of oral test anxiety, so did the OETA1 and OETA2 scores. Given that the OETA is a five-point Likert scale, a score of 4 to 5 means high test anxiety, a score of 3 to 4 indicates moderate high

anxiety, and a score of below 3 reflects low or little test anxiety. It was the same with the OCSI and its subscales, as described in study 1. Results of the statistical analyses of the two scales are presented in Table 3.

**TABLE 3**  
**Statistical Analyses of the OETA and the OCSI (N = 493)**

	Mean	Standard deviation
OETA1	2.93	.69
OETA2	2.39	.739
OETA	2.82	.66
OCSI1	3.55	.538
OCSI2	3.40	.603
OCSI3	3.24	.629
OCSI4	3.33	.559
OCSI5	3.73	.595
OCSI6	3.38	.846
OCSI7	2.89	.625
OCSI8	2.94	.815
OCSI	3.34	.349

**Notes:** OETA1 = general anxiety during the oral test

OETA2 = worry about test results;

OETA = oral English test anxiety

OCSI1 = social affective strategies;

OCSI2 = fluency-oriented strategies

OCSI3 = negotiation for meaning while speaking

OCSI4 = accuracy-oriented strategies;

OCSI5 = message reduction and alteration

OCSI 6 = nonverbal strategies while speaking;

OCSI7 = message abandonment

OCSI8 = attempt to think in English

As shown in Table 3, the participants reported to have moderate or even low general anxiety during the test (OETA1) ( $m = 2.93$ ), be generally not anxious about test results (OETA2) ( $m = 2.39$ ), and be moderately or not anxious during the oral

test (OETA) ( $m = 2.82$ ). With a score range of 3.24 to 3.73, the participants reported to have a moderate use of social affective (OCSI1), fluency-oriented (OCSI2) and accuracy-oriented strategies (OCSI4), strategies of negotiation for meaning while speaking (OCSI3) and message reduction and alteration (OCSI5), and nonverbal strategies while speaking (OCSI6). Meanwhile, they reported to have a low but to the upper end use of two strategies—message abandonment (OCSI7) and attempt to think in English (OCSI8) ( $m = 2.89 \sim 2.94$ ). They had a medium use of the overall strategy as well (OCSI) ( $m = 3.34$ ).

#### *Within-Group Pattern*

As noted from Table 4, the participants scored 6.70 to 15 in the speaking test of the TEPT1, with a median of 12.35 and a mode of 12. Based on the scores, the participants were classified into low-proficiency ( $6.70 \leq \text{scores} < 11$ ), intermediate-proficiency ( $11 \leq \text{scores} < 13$ ), and high-proficiency ( $13 \leq \text{scores} \leq 15$ ) groups. A total of 113 (22.9%) of the participants fell in the low-proficiency group, 232 (47.1%) were in the intermediate-proficiency group, and 148 (30%) were in the high-proficiency group.

**TABLE 4**  
**Statistical Analysis of the Speaking Test Scores (N = 493)**

	Mean	Standard deviation	Median	mode	Range
Speaking test score	12.089	1.56	12.35	12	6.70-15

Results of the statistical analyses of the three proficiency groups' level of oral test anxiety and use of speaking strategies during the test are summarized in Table 5. The results show that the low-proficiency students reported to be the most anxious during the speaking test and worried about test results the most, while the high-proficiency group reported to be the least anxious during the test and worried the least about test results. Meanwhile, the low-proficiency group reported to make the least use of social affective, fluency-oriented, and accuracy-oriented strategies,

the strategies of negotiation for meaning while speaking, nonverbal strategies while speaking, and the overall speaking strategies, but the most use of the strategies of message reduction and alteration, message abandonment and attempt to think in English; it was just the reverse for the high-proficiency group.

**TABLE 5**  
**Statistical Analyses of the OETA**  
**and the OCSI Across Proficiency Levels**

	Low-proficiency (N = 113)		Intermediate-proficiency (N = 232)		High-proficiency (N = 148)	
	Mean	SD	Mean	SD	Mean	SD
OETA1	3.297	.583	2.956	.631	2.604	.701
OETA2	2.731	.737	2.415	.697	2.081	.685
OETA1	3.184	.567	2.848	.606	2.499	.663
OCSI1	3.369	.523	3.508	.484	3.768	.562
OCSI2	3.199	.563	3.356	.558	3.623	.633
OCSI3	3.150	.631	3.175	.578	3.395	.679
OCSI4	3.177	.543	3.305	.539	3.484	.569
OCSI5	3.858	.606	3.691	.569	3.680	.618
OCSI6	3.261	.848	3.299	.839	3.608	.820
OCSI7	3.120	.604	2.908	.576	2.691	.654
OCSI8	3.261	.843	2.935	.715	2.713	.865
OCSI11	3.281	.337	3.299	.312	3.431	.395

As evidenced by the ANOVA results presented in Table 6, the differences in all the scales between the three proficiency groups were statistically significant. Alternatively, the low-proficiency group was significantly more anxious about the oral test, worried significantly more about the test results, used significantly less frequently five categories (OCSI1, OCSI2, OCSI3, OCSI4 & OCSI6) but more

frequently three categories (OCSI5, OCSI7 and OCSI8) of the speaking strategies than the intermediate- and high-proficiency groups. By contrast, the high-proficiency group was significantly less anxious about the oral test, worried significantly less about the test results, used significantly more frequently five categories (OCSI1, OCSI2, OCSI3, OCSI4 & OCSI6) but less frequently three categories (OCSI5, OCSI7 and OCSI8) of the speaking strategies than the intermediate- and low-proficiency groups.

**TABLE 6**  
**ANOVA Results of the OETA and the OCSI**

	Sum of squares	df	Mean square	F	p	Location of significant differences (p = .05)	Effect size ( $\hat{\omega}^2$ )
OETA1	31.158	2	15.579	37.746	.000	all	.130
OETA2	27.398	2	13.699	27.75	.000	all	.098
OETA	30.386	2	15.193	40.145	.000	all	.137
OCSI1	11.148	2	5.574	20.812	.000	all	.075
OCSI2	12.357	2	6.178	18.196	.000	all	.065
OCSI3	5.432	2	2.716	7.019	.001	Low- & high-; medium- & high proficiency groups	.024
OCSI4	6.293	2	3.146	10.432	.000	all	.037
OCSI5	2.572	2	1.286	3.662	.026	Low- & medium-; low- & high proficiency groups	.011
OCSI6	10.821	2	5.411	7.754	.000	Low- & high-; medium- & high proficiency groups	.027
OCSI7	11.892	2	5.946	16.139	.000	all	.058
OCSI8	19.286	2	9.643	15.354	.000	all	.055

OCSI	1.986	2	.993	8.346	.000	all	.029
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*Correlation between Oral Test Anxiety and Speaking Strategy Use*

In order to examine the relationship between oral test anxiety and speaking strategy use, correlational analyses between the OETA and the OCSI were done, the results of which are reported in Table 7.

**TABLE 7**  
**Correlation between the OETA and the OCSI and Their Subscales**

	OETA2	OETA	OCSI1	OCSI2	OCSI3	OCSI4	OCSI5	OCSI6	OCSI7	OCSI8	OCSI
OETA1	.693**	.987**	-.316**	-.338**	-.223**	-.227**	.118**	-.220**	.311**	.230**	-.231**
OETA2	1	.800**	-.226**	-.223**	-.157**	-.192**	.050	-.123**	.295**	.258**	-.127**
OETA1		1	-.313**	-.331**	-.221**	-.273**	.109*	-.211**	.324**	.249**	-.221*
OCSI1			1	.483**	.423**	.460**	.138**	.396**	-.069	-.089*	.708**
OCSI2				1	.408**	.560**	.107**	.479**	-.130**	-.108**	.738**
OCSI3					1	.438**	.114*	.461**	-.058	.013	.665**
OCSI4						1	.100*	.365**	-.075	-.012	.714**
OCSI5							1	.139**	.242**	.141**	.380**
OCSI6								1	-.034	-.040	.624**
OCSI7									1	.366**	.216**
OCSI8										1	.183**

Notes: \*\* =  $p < .01$ ; \* =  $p < .05$

Table 7 shows that, the OETA and its subscales were all significantly correlated with the OCSI and its subscales. The OETA and its subscales were all significantly negatively related to the OCSI and its subscales except the OCSI5, the OCSI7 and the OCSI8. Alternatively, the more anxious a respondent reported to be during the

test, or the more worried s/he was about the test result, s/he tended to use less frequently social affective, fluency-oriented, and accuracy-oriented strategies, the strategies of negotiation for meaning while speaking, nonverbal strategies while speaking, and the overall speaking strategies, but more frequently the strategies of message reduction and alteration, message abandonment and attempt to think in English.

*Effect of Oral Test Anxiety and Speaking Strategy Use on Oral English Proficiency*

In order to explore the effect of oral test anxiety and speaking strategy use on oral English test performance, we first ran the correlational analyses between the OETA, the OCSI, their subscales and the students' speaking test scores. The results are demonstrated in Table 8, which shows that the OETA and its subscales were all significantly reversely correlated with the different measurements of the students' oral English test performance: pronunciation and intonation, grammar and vocabulary, communication skills and discourse management, overall assessment and the final test scores, with a coefficient range of -.287 to -.400 ( $p < .01$ ). Social affective, fluency-oriented and accuracy-oriented strategies, the strategies of negotiation for meaning while speaking, nonverbal strategies while speaking, and the overall speaking strategies were all significantly positively related to the students' oral English test performance measured in different ways, but the strategies of message reduction and alteration, message abandonment and attempt to think in English were significantly inversely related to the latter.

**TABLE 8**  
**Correlations between the OETA, the OCSI and the Test Scores**

	OET A1	OET A2	OET A	OCSI 1	OCSI 2	OCSI 3	OCSI 4	OCSI 5	OCSI 6	OCSI 7	OCSI 8	
P&I	-.352**	-.331**	-.366**	.255**	.233**	.109*	.156**	-.091*	.126**	-.284**	-.242**	.118**
G&V	-.350**	-.287**	-.355**	.278**	.273**	.100*	.154**	-.040	.121**	-.218**	-.219**	.161**
C&D	-.380**	-.344**	-.393**	.269**	.275**	.142**	.192**	-.124**	.138**	-.283**	-.283**	.143**
Overall	-.367**	-.322**	-.377**	.276**	.264**	.148**	.209**	-.119**	.140**	-.279**	-.266**	.151**

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Total	-.388**	-.345**	-.400**	.288**	.280**	.136**	.193**	-.104*	.142**	-.287**	-.273**	.153**
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**Notes:** P&I = pronunciation and intonation; G&V = grammar and vocabulary

C&D = communication skills and discourse management

Overall = overall assessment of students' oral English test performance

Total = final speaking test score

### The Regression Model

The results of the correlational analyses discussed above show numerous bivariate relationships, which failed to indicate the influence of one variable on another. Better clues can be provided by multiple regression analyses. A stepwise method was employed in forming regression models in the present study, with different measures of oral English test performance as dependent variables and the OETA, the OCSI and their subscales as independent variables. Altogether 4 models were resulted with the change in  $R^2$  being all significant for pronunciation and intonation: .132 for model 1 (OETA) ( $p = .000$ ), .161 for model 2 (OETA, OCSI7) ( $p = .000$ ), .183 for model 3 (OETA, OCSI7, OCSI1) ( $p = .000$ ), and .192 for model 4 (OETA, OCSI7, OCSI1, OCSI8) ( $p = .000$ ).

Altogether 4 models were resulted with the change in  $R^2$  being all significant for grammar and vocabulary: .124 for model 1 (OETA) ( $p = .000$ ), .153 for model 2 (OETA, F1) ( $p = .000$ ), .169 for model 3 (OETA, OCSI1, OCSI8) ( $p = .000$ ), and .177 for model 4 (OETA, OCSI1, OCSI8, OCSI2) ( $p = .000$ ). Five models were resulted with the change in  $R^2$  being all significant for communication skills and discourse management: .153 for model 1 (OETA) ( $p = .000$ ), .188 for model 2 (OETA, OCSI8) ( $p = .000$ ), .209 for model 3 (OETA, OCSI8, OCSI1) ( $p = .000$ ), .222 for model 4 (OETA, OCSI8, OCSI1, OCSI7), and .228 for model 5 (OETA, OCSI8, OCSI1, OCSI7, OCSI2) ( $p = .000$ ). Four models were resulted with the change in  $R^2$  being all significant for overall assessment: .141 for model 1 (OETA) ( $p = .000$ ), .171 for model 2 (OETA, OCSI8) ( $p = .000$ ), .196 for model 3 (OETA, OCSI8, OCSI1) ( $p = .000$ ), and .209 for model 4 (OETA, OCSI8, OCSI1, OCSI7). And five models were resulted with the change in  $R^2$  being all significant for the final test score: .158 for model 1 (OETA) ( $p = .000$ ), .189 for model 2 (OETA, OCSI8) ( $p = .000$ ), .216 for model 3 (OETA, OCSI8, OCSI1) ( $p = .000$ ), .216 for model 4 (OETA, OCSI8, OCSI1, OCSI7), and .216 for model 5 (OETA, OCSI8, OCSI1, OCSI7, OCSI2) ( $p = .000$ ).

= .000), .230 for model 4 (OETA, OCSI8, OCSI11, OCSI7), and .235 for model 5 (OETA, OCSI8, OCSI11, OCSI7, OCSI2).

The results are shown in Table 9, which reports coefficients from the regression models, as well as their levels of significance.

**TABLE 9**  
**Regression Coefficients and Significance**

		OETA	OCSI7	OCSI11	OCSI8	OCSI2
Pronunciation and intonation	$\beta$	-.238	-.154	.159	-.113	
	$t$	-5.24	-3.412	3.728	-2.555	
	$p$	.000	.001	.000	.011	
	VIF	1.259	1.241	1.113	1.181	
Grammar and vocabulary	$\beta$	-.241		.136	-.134	.111
	$t$	-5.318		2.862	-3.178	2.321
	$p$	.000		.004	.002	.021
	VIF	1.228		1.350	1.066	1.372
Communication skills and discourse management	$\beta$	-.241	-.126	.121	-.155	.102
	$t$	-5.320	-2.858	2.628	-3.602	2.189
	$p$	.000	.004	.009	.000	.029
	VIF	1.308	1.242	1.354	1.181	1.374
Overall assessment	$\beta$	-.242	-.137	.177	-.140	
	$t$	-5.382	-3.057	4.184	-3.217	
	$p$	.000	.002	.000	.001	
	VIF	1.259	1.241	1.113	1.181	
Final speaking	$\beta$	-.245	-.134	.143	-.140	.095

test scores	<i>t</i>	-5.420	-3.053	3.122	-3.256	2.052
	<i>p</i>	.000	.002	.002	.001	.010
	VIF	1.308	1.242	1.354	1.181	1.374

Regression analyses show that overall oral English test anxiety, OCSI7, OCSI1, and OCSI8 were powerful predictors of pronunciation and intonation and overall assessment of the students' oral English test performance, that overall oral English test anxiety, OCSI7, OCSI1, OCSI8 and OCSI2 were powerful predictors of grammar and vocabulary, communication skills and discourse management, and the final speaking test scores.

## DISCUSSION

Study 1 shows that the participants generally perceived anxiety not to be debilitating but moderately facilitating during tests. This is further confirmed by study 2 participants who reported to be moderately or not anxious and generally did not worry about test results during the oral test. Though contrary to the finding in Liu (2007) and Gao (2010) who found that more than half of Chinese university students became (highly) anxious during (oral) English tests, this finding of the present study might be attributed to the fact that the students had taken numerous tests, including oral tests in a foreign language, in order to get into a good college. It might also be owing to the fact that increasingly more and more middle school graduates could go to college for higher education in recent years in China, which made tests less challenging and dreadful to most testees but more motivating to many of them. Tests became even less dreadful in universities. Even the TEPT1, an English proficiency and exit test, was not that risky in that the students could take it many times until they passed it during their college years. A higher-stake test, like China's College Entrance Examination, might drive testees more anxious. Meanwhile, study 2 shows that the low-proficiency students reported to be the most anxious during the test and worried about test results the most while the

high-proficiency group reported to be the least anxious during the test and worried the least about test results, as found in Liu (2007) and Gao (2010). And the difference was statistically significant. This implies that test anxiety was a severe problem to low-proficiency testees though it might be a facilitator to more proficient students.

As far as speaking strategy use is concerned, study 1 reveals that the participants had a moderate use of all categories of strategies, including the overall speaking strategy use, except the strategies of message abandonment which had a low but to the upper end use. It was the same with the study 2 sample except that they had a low yet to the upper end use of two strategies—message abandonment and attempt to think in English.

Meanwhile, study 2 shows that the low-proficiency group reported to make the least use of social affective, fluency-oriented, and accuracy-oriented strategies, the strategies of negotiation for meaning while speaking, nonverbal strategies while speaking, and the overall speaking strategies, but the most use of the strategies of message reduction and alteration, message abandonment and attempt to think in English; it was just the opposite for the high-proficiency group, as happened in (Huang & Van Naerssen, 1987; Nakatani, 2006; Politzer, 1983). And the differences in all the scales among the three groups were statistically significant. This suggests that more proficient testees were able to use more frequently more effective strategies to help them accomplish the speaking tasks, while low proficient testees tended to use more frequently less effective strategies during the oral test, as found in O'Malley and Chamot (1990), Rubin (1987) and Cohen (1998). In either case, this finding further confirms the long-held belief that learners can develop an ability to use specific communication strategies to enable them to compensate for their target language deficiency (Collier, 2010; Dörnyei, 1995; Dörnyei & Scott, 1997; Faerch & Kasper, 1983; Nakatani, 2006, 2010). Although the less effective strategies such as message reduction and alteration and message abandonment might have helped low-proficiency students successfully accomplish the test tasks, they had negatively affected their performance in the test, as evidenced by the results of correlational analyses and regression analyses of the present research.

### **Correlation between Oral Test Anxiety and Speaking Strategy Use**

Study 1 shows that, the debilitating anxiety was significantly negatively correlated with all categories of speaking strategies except the strategies of attempt to think in English, while the facilitating anxiety was significantly positively related to all categories of speaking strategies with the exception of the strategies of message reduction. Study 2 reveals that oral test anxiety was significantly negatively related to all categories of speaking strategies except the strategies of message reduction and alteration, message abandonment and attempt to think in English. Although few studies have examined the relationship between oral test anxiety and speaking strategy use, the findings of the present research indicate that less anxious students tended to use more often more effective strategies to complete speaking task, while a more anxious testee tended to use more often less effective strategies during an oral test. As Tobias (1979) claimed, anxiety, especially high anxiety, can block a person's mental thinking and (severely) impairs his/her cognitive behavior. Hence, in order to complete the test tasks, anxious testees, especially high-anxious testees, had to reduce or alter messages, avoid attempting to think in English, or even abandon some messages while speaking to the interlocutor or his/her peer.

### **Effects of Oral Test Anxiety and Speaking Strategy Use on Oral English Test Performance**

Study 2 indicates that oral test anxiety was significantly reversely correlated with the different measurements of the students' oral English proficiency—pronunciation and intonation, grammar and vocabulary, communication skills and discourse management, overall assessment and the final test scores. Meanwhile, overall oral English test anxiety was proved to be a powerful negative predictor of the latter. This finding, though opposite to that in a number of studies (Aida, 1994; Blankstein et al., 1990; In'nami, 2006; MacIntyre & Gardner, 1989), is in accordance with the mainstream finding that test anxiety impairs test performance (Chastain, 1975; Culler

& Holahan, 1980; Gao, 2010; Liu, 2007; Madsen, 1982; Wolf & Smith, 1995; Young, 1990; Zeidner, 1998).

In addition, study 2 discovers that social affective, fluency-oriented, and accuracy-oriented strategies, strategies of negotiation for meaning while speaking, nonverbal strategies while speaking, and the overall speaking strategies were all significantly positively related to the Student's oral English test performance measured in different ways, but strategies of message reduction and alteration, message abandonment and attempt to think in English were significantly negatively related to the latter. Meanwhile, strategies of message abandonment, social affective strategies, and strategies of attempt to think in English were revealed to be powerful predictors of pronunciation and intonation and the overall assessment of the students' oral English test performance, while strategies of message abandonment, social affective strategies, strategies of attempt to think in English and fluency-oriented strategies were powerful predictors of grammar and vocabulary, communication skills and discourse management, and the final oral test scores. Consistent with that in Cohen et al. (1998), Nakatani (2006), Takeuchi et al. (2007), this finding further supports the idea that good strategies make SL/FL oral communication more efficient and successful (Cohen, 1998; Collier, 2010; Grenfell & Macaro, 2007; Oxford, 1990, 1996; Wenden & Rubin, 1987), while poor strategies hinders oral communication in the target language.

As such, though test anxiety might be facilitating and testees might perceive themselves not to be so anxious during (oral) tests, test anxiety actually significantly debilitated their performance in the oral test. In this sense, it might be necessary for test anxiety to become a part of the oral test rubric. When all people (e.g., language educators, testees, and test assessors) are aware of the existence of and the negative effect of test anxiety, more efforts may be made to help learners reduce or even eliminate test anxiety (Gao, 2010; Horwitz et al., 1986; Liu, 2007; Young, 1991). And even if some students still become (high) anxious during (oral tests), they may not be much unfavorably assessed due to test anxiety.

With regard to speaking strategy use, since some speaking strategies proved to be effective and helpful while others could impair students' performance during the oral test, it's also necessary for all people to beware the existence and effect of

different categories of speaking strategies. Thus, different activities may be designed to help practice using various strategies to accomplish speaking tasks accordingly. Dörnyei's (1995) six-week training experiment in Hungary with 109 students in the use of three communication strategies revealed that instruction might alter students' frequency and quality of strategy use, which is supported by a number of subsequent studies (Lam, 2006, 2010; Maleki, 2007; Meyerhoff, 2009; Nalatano, 2010; Weyers, 2010). Maleki's (2007) study further proved that it was feasible to incorporate communication strategies into school syllabi. The study showed that communication strategies were conducive to language learning and that language teaching materials with communication strategies were more effective than those without them.

Meanwhile, it is important for learners to beware how they usually process speaking tasks and how certain strategies may help or hinder them when performing different speaking tasks (Huang, 2010). As suggested in (Huang, 2010), it is important for teachers to provide necessary, suitable meditational tools and opportunities to practice different speaking strategies, it is more crucial for learners to internalize the strategic process and take full control of using an oral language. Learners need to engage in research-like activities about their own practices, as discussed in Engeström (1991). Every learner is or need to become an active transformer instead of a passive recipient of input.

## CONCLUSIONS

The present research explored the effect of Chinese university students' oral test anxiety and speaking strategy use on their oral English performance. The following conclusions can be guaranteed from the present research.

First, statistical analyses showed that although the respondents generally perceived test anxiety to be more facilitating than debilitating, oral test anxiety did exist during the oral test and significantly debilitated their test performance. It was especially so with the low-proficiency students. More proficient students tended to be significantly less anxious during the oral test. The present study also revealed

that the participants used speaking strategies to varying degrees during the oral test; and more proficient students tended to use more effective speaking strategies significantly more frequently. Some speaking strategies enhanced students' oral test performance while some debilitated their test performance. Finally, oral test anxiety was significantly correlated with the use of different categories of speaking strategies.

As such, the present study revealed insightful findings, which can be generalized to other EFL/ESL contexts because of the large sample size. Even so, more research is called for in other similar contexts because oral test anxiety, oral communication strategy use and test performance are all dynamic and situation specific. Moreover, the validity and reliability of the self-developed Oral English Test Anxiety Scale need to be further confirmed with various data in varying situations. Furthermore, although the present study focused on the effect of oral test anxiety and speaking strategy use on students' test performance, it did not consider cultural and nonverbal factors which might be related to students' emotion and affect their performance as well. As discussed in Pan and Qian (2013), nonverbal delivery, as demonstrated by eye contact, gesture and head movement, can be an important indicator for assessing candidates' overall spoken English production. Therefore, in future research, it may be better to incorporate body language into the examination of the correlations of oral test anxiety, speaking strategy use and oral test performance.

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