Appendices-Tables

Model	Variable	В	SE	р	β	В	SE	р	β	В	SE	р	β	В	SE	р	β	В	SE	р	β	В	SE	р	β
1	Gender	.02	.37	.97	01	.14	.37	.71	.04	.01	.36	.97	.00	.09	.36	.81	.02	.21	.37	.57	.05	.09	.36	.81	.02
	Age	08	.13	.54	08	12	.13	.35	13	11	.13	.40	12	13	.13	.29	14	15	.13	.27	15	13	.13	.29	14
	Ethnic	.52	.23	.03	.45	.51	.23	.03	.21	.44	.23	.06	.18	.43	.22	.05	.18	.51	.23	.03	.21	.43	.22	.05	.18
	Grade	.05	.21	.81	.03	.03	.20	.87	.02	01	.20	.96	01	.01	.19	.94	.01	.06	.20	.78	.04	.01	.19	.94	.01
	Length	.18	.03	<.001	.51	.17	.03	<.001	.51	.17	.03	<.001	.50	.18	.03	<.001	.52	.18	.03	<.001	.52	.18	.03	<.001	.52
2	IM					.63	.25	.02	.27	.48	.26	.07	.21	.32	.27	.24	.14	.51	.26	.05	.22	.32	.27	.24	.14
	EM					25	.29	.40	09	.02	.31	.95	.01	17	.32	.60	06	43	.31	.18	16	17	.32	.60	06
3a	ANX									43	.20	.04	21	49	.20	.02	24								
4a	STR													.56	.29	.06	.22								
3b	STR																	.45	.30	.13	.17	.56	.29	.06	.22
4b	ANX																					49	.20	.02	24
Model		F(5, 7	76)=7.	50, p<.001	l	F(7, 7	74)=6.6	66, p<.001	l	F(8, 7	73)=6.6	65, p<.001	l	F(9, 7	(2)=6.5	55, p<.00	l	F(8, 7	73)=6.2	2, p<.001	l	F(9, 7	72)=6.5	55, p<.00	1
Model		R ² =.3	3, Ad	justed R ² =	.29	R ² =.3	9, Adj	usted R ² =	.33	$R^2 = .4$	2, Adj	usted R ² =	.36	$R^2 = .4$	5, Adj	usted R ² =	.38	$R^2 = .4$	1, Adj	usted R ² =	.34	$R^2 = .4$	5, Adj	usted R ² =	38

Table 5 Summary of hierarchical regression analysis (dependent variable: self-rated Chinese language proficiency; motivation entered as the 2nd step)

Table 6 Summary of model comparisons (dependent variable: self-rated Chinese language proficiency; motivation entered as the 2nd step)

Model	Model	ΔR^2	F	df1	df2	р
1	2	0.05	3.21	2	74	0.05
2	3a	0.04	4.44	1	73	0.04
3a	4a	0.03	3.74	1	72	0.06
2	3b	0.02	2.31	1	73	0.13
3b	4b	0.04	5.88	1	72	0.02

Model	Variable	В	SE	р	β	В	SE	р	β	В	SE	р	β	В	SE	р	β	В	SE	р	β	В	SE	р	β
1	Gender	.02	.37	.97	01	14	.37	.7	12	.01	.36	.97	0	.09	.36	.81	.02	.05	.36	.90	.01	.09	.36	.81	.02
	Age	08	.13	.54	08	1	.13	.42	11	11	.13	.4	12	13	.13	.29	14	11	.12	.36	12	13	.13	.29	14
	Ethnic	.52	.23	.03	.45	.45	.23	.06	.39	.44	.23	.06	.18	.43	.22	.05	.18	.42	.22	.06	.17	.43	.22	.05	.18
	Grade	.05	.21	.81	.03	.02	.2	.9	.02	01	.2	.96	01	.01	.19	.94	.01	.01	.19	.95	.01	.01	.19	.94	.01
	Length	.18	.03	<.001	.51	.18	.03	<.001	.51	.17	.03	<.001	.5	.18	.03	<.001	.52	.18	.03	<.001	.52	.18	.03	<.001	.52
2	Anxiety					45	.19	.02	22	43	.2	.04	21	49	.2	.02	24	57	.19	.00	28	49	.20	.02	24
3a	IM									.48	.26	.07	.21	.32	.27	.24	.14								
	EM									.02	.31	.95	.01	17	.32	.6	06								
4a	STR													.56	.29	.06	.22								
3b	STR																	.67	.24	.01	.26	.56	.29	.06	.22
4b	IM																					.32	.27	.24	.14
	EM																					17	.32	.60	06
Model		F(5, 7	6)=7.6	0, p<.001		F(6, 7	(5)=7.6	3, p<.001		F(8, 7	3)=6.6	5, p<.001		F(9, 7	2)=6.5	5, p<.001		F(7, 7	4)=8.2	8, p<.001		F(9, 7	2)=6.55	5, p<.001	
		R ² =.3	3, Adju	sted R ² =.2	29	R ² =.3	8, Adju	isted R ² =.3	33	R ² =.4	2, Adju	isted R ² =.3	36	R ² =.4	5, Adju	isted R ² =.3	38	R ² =.4	4, Adju	isted R ² =.3	39	$R^2 = .4$	5, Adju	sted R ² =	38

Table 7 Summary of hierarchical regression analysis (dependent variable: self-rated Chinese language proficiency; anxiety entered as the 2nd step)

Table 8 Summary of model comparisons (dependent variable: self-rated Chinese language proficiency; anxiety entered as the 2nd step)

Model	Model	ΔR^2	F	df1	df2	р
1	2	0.05	5.54	1	75	0.02
2	3a	0.04	2.68	2	73	0.08
3a	4a	0.03	3.74	1	72	0.06
2	3b	0.06	7.95	1	74	0.01
3b	4b	0.01	0.71	2	72	0.49

Model	Variable	В	SE	р	β	В	SE	р	β	В	SE	р	β	В	SE	р	β	В	SE	р	β	В	SE	р	β
1	Gender	.02	.37	.97	01	.19	.37	.61	.16	.05	.36	.90	.04	.09	.36	.81	.08	.21	.37	.57	.18	.04	.09	.36	.81
	Age	08	.13	.54	08	08	.13	.51	09	11	.12	.36	12	13	.13	.29	14	15	.13	.27	15	12	13	.13	.29
	Ethnic	.52	.23	.03	.45	.51	.23	.03	.44	.42	.22	.06	.37	.43	.22	.05	.37	.51	.23	.03	.44	.37	.43	.22	.05
	Grade	.05	.21	.81	.03	.05	.20	.81	.03	.01	.19	.95	.01	.01	.19	.94	.01	.06	.20	.78	.04	.01	.01	.19	.94
	Length	.18	.03	<.001	.51	.18	.03	<.001	.52	.18	.03	<.001	.52	.18	.03	<.001	.52	.18	.03	<.001	.52	.18	.03	<.001	.52
2	STR					.51	.24	.04	.20	.67	.24	.006	.26	.56	.29	.06	.22	.45	.30	.13	.17	.56	.29	.06	.22
3a	ANX									57	.19	.003	28	49	.20	.02	24								
4a	IM													.32	.27	.24	.14								
	EM													17	.32	.60	06								
3b	IM																	.51	.26	.05	.22	.32	.27	.24	.14
	EM																	43	.31	.18	16	17	.32	.60	06
4b	ANX																					49	.20	.02	24
Model		F(5, 7	76)=7.6	i0, p<.001		F(6. 7	(5)=7.3	84, p<.001		F(7, 7	(4)=8.2	28, p<.001		F(9, 7	(2)=6.5	5, p<.001		F(8, 7	/3)=6.2	2, p<.001		F(9, 7	2)=6.55	i, p<.001	
		$R^2 = .3$	3, Adji	usted R ² =.	29	$R^2 = .3$	7, Adji	usted R ² =	.32	$R^2 = .4$	4, Adj	usted R ² =.	38	$R^2 = .4$	5, Adj	usted R ² =.	38	$R^2 = .4$	1, Adju	usted R ² =.	34	R ² =.4	5, Adju	sted R ² =.3	88

Table 9 Summary of hierarchical regression analysis (dependent variable: self-rated Chinese language proficiency; strategy entered as the 2nd step)

Table 10 Summary of model comparisons (dependent variable: self-rated Chinese language proficiency; strategy entered as the 2nd step)

Model	Model	ΔR^2	F	df1	df2	р
1	2	0.04	4.37	1	75	0.04
2	3a	0.07	9.16	1	74	0.00
3a	4a	0.01	0.71	2	72	0.49
2	3b	0.04	2.17	2	73	0.12
3b	4b	0.04	5.88	1	72	0.02

Model	Variable	В	SE	р	β	В	SE	р	β	В	SE	р	β	В	SE	р	β	В	SE	р	β	В	SE	р	β
1	Gender	.07	.07	.34	.34	.07	.07	.36	.33	.05	.07	.49	.25	.06	.07	.43	.29	.08	.07	.32	.37	.06	.07	.43	.29
	Age	01	.03	.62	07	01	.03	.85	03	003	.03	.90	02	01	.03	.82	04	01	.03	.79	04	01	.03	.82	04
	Ethnic	.05	.05	.32	.22	.05	.05	.32	.22	.04	.05	.43	.18	.04	.05	.43	.18	.05	.05	.32	.23	.04	.05	.43	.18
	Grade	01	.04	.77	05	01	.04	.73	05	02	.04	.63	07	02	.04	.68	06	01	.04	.78	04	02	.04	.68	06
	Length	.02	.01	<.001	.38	.02	.01	<.001	.37	.02	.01	<.001	.36	.02	.01	<.001	.38	.02	.01	<.001	.38	.02	.01	<.001	.38
2	IM					05	.05	97	.34	07	.05	.20	17	09	.06	.13	21	06	.05	.26	15	09	.06	.13	21
	EM					.05	.06	.91	.37	.09	.06	.18	.19	.07	.07	.32	.14	.03	.06	.59	.07	.07	.07	.32	.14
3a	ANX									05	.04	.19	15	07	.04	.16	17								
4a	STR													.06	.06	.32	.13								
3b	STR																	.05	.06	.44	.10	.06	.06	.32	.13
4b	ANX																					07	.04	.16	17
Model		F(5, 7	76)=3.7	76, p=.004	ļ	F(7, 7	(4)=2.8	82, p=.01		F(8, 73)=2.71	, p=.01		F(9, 7	72)=2.5	52, p=.01		F(8, 7	(3)=2.5	53, p=.02		F(9, 7	72)=2.5	52, p=.01	
		$R^2 = .2$	20, Adj	usted R ² =	.15	R ² =.2	21, Adj	usted R ² =	.14	R ² =.23	, Adjus	ted R ² =.1		$R^2 = .2$	24, Adj	usted R ² =	.14	R ² =.2	2, Adj	usted R ² =	.13	$R^2 = .2$	24, Adj	usted R ² =	=.14

Table 11 Summary of hierarchical regression analysis (dependent variable: accuracy rate in vocabulary size test; motivation entered as the 2nd step)

Table 12 Summary of model comparisons (dependent variable: accuracy rate in vocabulary size test; motivation entered as the 2nd step)

Model	Model	ΔR^2	F	df1	df2	р
1	2	0.01	0.58	2	74	0.56
2	3a	0.02	1.73	1	73	0.19
3a	4a	0.01	1.00	1	72	0.32
2	3b	0.01	0.60	1	73	0.44
3b	4b	0.02	2.12	1	72	0.15

Model	Variable	В	SE	р	β	В	SE	р	β	В	SE	р	β	В	SE	р	β	В	SE	р	β	В	SE	р	β
1	Gender	.07	.07	.34	.34	.06	.07	.43	.08	.05	.07	.49	.08	.06	.07	.43	.09	.07	.07	.35	.10	.06	.07	.43	.29
	Age	01	.03	.62	07	01	.03	.58	08	.00	.03	.90	02	01	.03	.82	04	01	.03	.57	09	01	.03	.82	04
	Ethnic	.05	.05	.32	.22	.04	.05	.37	.10	.04	.05	.43	.09	.04	.05	.43	.08	.04	.05	.39	.09	.04	.05	.43	.18
	Grade	01	.04	.77	05	01	.04	.73	05	02	.04	.63	07	02	.04	.68	06	01	.04	.72	05	02	.04	.68	06
	Length	.02	.01	<.001	.38	.02	.01	<.001	.38	.02	.01	<.001	.36	.02	.01	<.001	.38	.02	.01	<.001	.38	.02	.01	<.001	.38
2	Anxiety					03	.04	.43	09	05	.04	.19	15	06	.04	.15	17	04	.04	.34	11	06	.04	.15	17
3a	IM									07	.05	.20	17	09	.06	.13	21								
	EM									.09	.06	.18	.19	.07	.07	.32	.14								
4a	STR													.06	.06	.32	.13								
3b	STR																	.04	.05	.40	.09	.06	.06	.32	.13
4b	IM																					09	.06	.13	21
	EM																					.07	.07	.32	.14
Model		F(5, 7	6)=3.7	76, p=.004		F(6, 7	(5)=3.2	3, p=.007		F(8, 7	3)=2.71	, p=.01		F(9, 7	2)=2.5	52, p=.01		F(7, 7	(4)=2.8	6, p=.01		F(9, 7	2)=2.5	2, p=.01	
		R ² =.2	0, Adj	usted R ² =.	.15	R ² =.2	1, Adjı	usted R ² =.	14	$R^2 = .2$	3, Adju	sted R ² =.14		$R^2 = .2$	4, Adj	usted R ² =.1	4	R ² =.2	1, Adju	usted R ² =.1	4	R ² =.2	4, Adjı	usted R ² =.	.14

Table 13 Summary of hierarchical regression analysis (dependent variable: accuracy rate in vocabulary size test; anxiety entered as the 2nd step)

Table 14 Summary of model comparisons (dependent variable: accuracy rate in vocabulary size test; anxiety entered as the 2nd step)

Model	Model	ΔR^2	F	df1	df2	р
1	2	0.01	0.64	1	75	0.43
2	3a	0.02	1.12	2	73	0.33
3a	4a	0.01	1.00	1	72	0.32
2	3b	0.01	0.72	1	74	0.40
3b	4b	0.03	1.26	2	72	0.29

Model	Variable	В	SE	р	β																				
1	Gender	.07	.07	.34	.34	.08	.07	.29	.12	.07	.07	.35	.10	.06	.07	.43	.09	.08	.07	.32	.11	.06	.07	.43	.29
	Age	01	.03	.62	07	01	.03	.62	08	01	.03	.57	09	01	.03	.82	04	01	.03	.79	04	01	.03	.82	04
	Ethnic	.05	.05	.32	.22	.05	.05	.32	.11	.04	.05	.39	.09	.04	.05	.43	.08	.05	.05	.32	.11	.04	.05	.43	.18
	Grade	01	.04	.77	05	01	.04	.76	05	01	.04	.72	05	02	.04	.68	06	01	.04	.78	04	02	.04	.68	06
	Length	.02	.01	<.001	.38	.02	.01	<.001	.38	.02	.01	<.001	.38	.02	.01	<.001	.38	.02	.01	<.001	.38	.02	.01	<.001	.38
2	STR					.03	.05	.52	.07	.04	.05	.40	.09	.06	.06	.32	.13	.05	.06	.44	.10	.06	.06	.32	.13
3a	ANX									04	.04	.34	11	06	.04	.15	17								
4a	IM													09	.06	.13	21								
	EM													.07	.07	.32	.14								
3b	IM																	06	.05	.26	15	09	.06	.13	21
	EM																	.03	.06	.59	.07	.07	.07	.32	.14
4b	ANX																					06	.04	.15	17
Model		F(5, 7	76)=3.7	'6, p=.004		F(6, 7	75)=3.1	8, p=.01		F(7, 7	(4)=2.8	6, p=.01		F(9, 7	72)=2.5	52, p=.01		F(8, 7	/3)=2.5	3, p=.02		F(9, 7	2)=2.5	2, p=.01	
		$R^2 = .2$	0, Adj	usted R ² =.	15	$R^2 = .2$	0, Adj	usted R ² =.	14	$R^2 = .2$	1, Adj	usted R ² =.	14	$R^2 = .2$	4, Adj	usted R ² =.	.14	$R^2 = .2$	2, Adjı	isted R ² =.	13	$R^2 = .2$	4, Adjı	isted R ² =.	.14

Table 15 Summary of hierarchical regression analysis (dependent variable: accuracy rate in vocabulary size test; strategy entered as the 2nd step)

Table 16 Summary of model comparisons (dependent variable: accuracy rate in vocabulary size test; strategy entered as the 2nd step)

Model	Model	ΔR^2	F	df1	df2	р
1	2	0.00	0.42	1	75	0.52
2	3a	0.01	0.94	1	74	0.34
3a	4a	0.03	1.26	2	72	0.29
2	3b	0.01	0.67	2	73	0.52
3b	4b	0.02	2.12	1	72	0.15

Appendix 1: Online Chinese Learning Motivation Scale (OCLMS) Revised from Noels et al. (2000), originally from Vallerand et al. (1992)

(The questionnaire was presented in Thai, the native language of the participants.)

- 1 I study Chinese for the pleasure that I experience in knowing more about the literature of the second language group.
- 2 I study Chinese for the satisfying feeling I get in finding out new things.
- 3 I study Chinese because I enjoy the feeling of acquiring knowledge about the second language community and their way of life.
- 4 I study Chinese for the pleasure I experience when surpassing myself in my second language studies.
- 5 I study Chinese for the enjoyment I experience when I grasp a difficult construct in the second language.
- 6 I study Chinese for the satisfaction I feel when I am in the process of accomplishing difficult exercises in the second language.
- 7 I study Chinese for the excitement I feel when hearing foreign languages spoken.
- 8 I study Chinese for the excitement that I experience while speaking in the second language.
- 9 I study Chinese for the pleasure I get from hearing the second language spoken by native second language speakers.
- 10 I study Chinese because I have the impression that it is expected of me.
- 11 I study Chinese in order to get a more prestigious job later.
- 12 I study Chinese in order to have a better salary.
- 13 I study Chinese to show myself that I am a good citizen because I can speak a second language.
- 14 I study Chinese because I would feel ashamed if I couldn't speak to my friends from the second language community in their native tongue.
- 15 I study Chinese because I would feel guilty if I didn't know a second language.
- 16 I study Chinese because I choose to be the kind of person who can speak more than one language.
- 17 I study Chinese because I think it is good for my personal development.
- 18 I study Chinese because I choose to be the kind of person who can speak a second language.

Intrinsic Motivations are tested by items 1-9 and 1-3, 4-6, 7-9 indicate factors of *knowledge*, *accomplishment*, and *stimulation* respectively.

Extrinsic Motivations are tested by items 10-18 and 10-12, 13-15, 16-18 indicate factors of *external regulation*, *introjected regulation*, and *identified regulation* respectively.

Appendix 2: Online Chinese Learning Anxiety Scale (OCLAS) Revised from Luo (2015)

(The questionnaire was presented in Thai, the native language of the participants.)

- 1 During my online class, it embarrasses me to volunteer answers.
- 2 During my online class, I can feel my heart pounding when I'm going to be called on.
- ³ During my online class, I feel very self-conscious about speaking Chinese in front of other students.
- 4 During my online study, I feel confident when I speak in Chinese.
- 5 During my online study, I get frustrated when I cannot distinguish among the Chinese tones even after I have worked hard to learn them.
- 6 During my online study, I get nervous when all the Chinese tones sound the same to me.
- During my online study, I get anxious when I don't understand what my classmates are saying in Chinese.
- 8 During my online study, it frightens me when I don't understand what the teacher is saying in Chinese.
- 9 During my online study, I get so confused when I read Chinese and can't remember what I'm reading.
- 10 During my online study, I feel confident when I am reading in Chinese.
- During my online study, I feel intimidated whenever I see a whole page of Chinese in front of me.
- During my online study, I have difficulty distinguishing among the Chinese characters when reading Chinese.
- During my online class, I freeze up when I am unexpectedly asked to write Chinese 13 $^{\rm Chinese}_{\rm characters.}$
- During my online study, writing Chinese characters makes me forget what I'm trying to convey.
- 15 During my online study, I'm usually at ease when I'm writing in Chinese.
- 16 During my online study, I feel unsure of myself when I'm writing in Chinese.

Items 1-4, 5-8, 9-12, and 13-16 indicate factors of *Speaking*, *Listening*, *Reading*, and *Writing* anxiety respectively.

Appendix 3: Online Chinese Learning Strategies Scale (OCLAS) Derived from Barnard-Brak et al. (2010)

(The questionnaire was presented in Thai, the native language of the participants.)

- 1 I set standards for my assignments in online courses.
- ² I set short-term (daily or weekly) goals as well as long-term goals (monthly or for the semester).
- 3 I keep a high standard for my learning in my online courses.
- 4 I set goals to help me manage studying time for my online courses.
- 5 I don't compromise the quality of my work because it is online.
- 6 I choose the location where I study to avoid too much distraction.
- 7 I find a comfortable place to study.
- 8 I know where I can study most efficiently for online courses.
- 9 I choose a time with few distractions for studying for my online courses.
- ¹⁰ I try to take more thorough notes for my online courses because notes are even more important for learning online than in a regular classroom.
- 11 I read aloud instructional materials posted online to fight against distractions.
- 12 I prepare my questions before joining in the chat room and discussion.
- ¹³ I work extra problems in my online courses in addition to the assigned ones to master the course content.
- 14 I allocate extra studying time for my online courses because I know it is time-demanding.
- 15 I try to schedule the same time every day or every week to study for my online courses, and I observe the schedule.
- Although we don't have to attend daily classes, I still try to distribute my studying time evenly across days.
- 17 I find someone who is knowledgeable in course content so that I can consult with him or 17 her when I need help.
- 18 I share my problems with my classmates online so we know what we are struggling with and how to solve our problems.
- 19 If needed, I try to meet my classmates face-to-face.
- 20 I am persistent in getting help from the instructor through e-mail.
- 1 summarize my learning in online courses to examine my understanding of what I have learned.
- 22 I ask myself a lot of questions about the course material when studying for an online course.
- 23 I communicate with my classmates to find out how I am doing in my online classes.
- I communicate with my classmates to find out what I am learning that is different from what they are learning.

Items 1-5, 6-9, 10-13, 14-16, 17-20, and 21-24 indicate factors of *goal setting*, *environment structuring*, *task strategies*, *time management*, *help seeking*, and *self-evaluation* respectively.

App	pendix 4: Words us	sed for Chinese vocabu	ilary size test	
1.	安抚	42. 回想	83. 伤员	124.支柱
2.	安宁	43. 活力	84. 申请	125.注意
3.	安心	44. 活跃	85. 生日	126.注重
4.	败	45. 或许	86. 示威	127.自豪
5.	半	46. 计算机	87. 适宜	
6.	抱怨	47. 焦点	88. 收听	
7.	遍地	48. 较量	89. 四合院	
8.	表格	49. 解决	90. 送	
9.	不	50. 金融	91. 拓展	
10.	厕所	51. 仅仅	92. 台	
11.	策划	52. 局	93. 体力	
12.	唱歌	53. 巨头	94. 条	
13.	吵架	54. 决赛	95. 投票	
14.	诚实	55. 开学	96. 外文	
15.	承诺	56. 肯定	97. 未	
16.	愁	57. 懒	98. 无所谓	
17.	出院	58. 老实	99. 下手	
18.	处	59. 理	100.先后	
19.	传说	60. 绿色	101.先生	
20.	垂	61. 名牌儿	102.消化	
21.	打包	62. 模样	103.协同	
22.	当地	63. 内外	104.新闻	
23.	倒	64. 念头	105.宣泄	
24.	倒是	65. 培训班	106.学校	
25.	地铁	66. 皮鞋	107.延	
26.	调查	67. 平等	108.一概而论	
27.	董事长	68. 普遍	109.一直	
28.	发型	69. 齐	110.遗产	
29.	粉丝	70. 启事	111.应对	
30.	份额	71. 起飞	112.婴儿	
31.	服装	72. 器材	113.优	
32.	干扰	73. 倾销	114.友情	
33.	拐	74. 清洁工	115.有劲儿	
34.	关怀	75. 清醒	116.玉	
35.	广告	76. 求助	117.园	
36.	规划	77. 曲	118.原料	
37.	好玩儿	78. 驱动	119.月饼	
38.	后果	79. 裙子	120.运转	
39.	滑	80. 人权	121.在乎	
40.	坏人	81. 人手	122.挣扎	
41.	辉煌	82. 认真	123.整顿	