



The roles of standard, bimodal, and reversed subtitles on English vocabulary learning

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Appendices

Appendix A A sample test item

Part 1

Items	L2 prompt	Answer
The feeling of wanting to do something แรงจูงใจให้ทำสิ่งใดสิ่งหนึ่ง	M _____	Motivation

Part 2

My _____ in studying is to make my parents happy.

A. prevention B. motivation C. celebration D. declaration

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Appendix B Descriptive statistics and *t*-test results of pre-tests and immediate post-tests average mean scores

Items	Standard Group						
	Pre-Tests		Immediate Post-Tests		<i>t</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Part 1: Form (20 items/10 pts)	1.68	0.69	1.98	1.01	-2.23	35	.09
Part 2: Meaning (20 items/10 pts)	2.63	0.68	8.61	0.17	-1.67	35	.00*
Total (40 items/20 pts)	4.31	1.06	10.59	1.16	-1.57	35	.00*
Items	Bimodal Group						
	Pre-Tests		Immediate Post-Tests		<i>t</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Part 1: Form (20 items/10 pts)	1.47	0.62	1.67	1.13	-1.58	42	.06
Part 2: Meaning (20 items/10 pts)	2.95	0.85	8.82	0.13	-1.63	42	.00*
Total (40 items/20 pts)	4.42	0.33	10.49	2.26	-1.08	42	.04*
Items	Reversed Group						
	Pre-Tests		Immediate Post-Tests		<i>t</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Part 1: Form (20 items/10 pts)	1.42	0.48	4.89	1.21	-1.19	37	.02*
Part 2: Meaning (20 items/10 pts)	2.73	0.88	8.52	0.14	-2.27	37	.02*
Total (40 items/20 pts)	4.15	0.75	13.41	2.41	-1.76	37	.00*

p* ≤ .05.Appendix C** A post-hoc test result of participants' average mean score or immediate vocabulary post-tests

Immediate Post-Tests (Form)	Standard	Bimodal	Reversed
	<i>p</i>	<i>p</i>	<i>p</i>
Standard	-	.12	.04*
Bimodal	-	-	.03*
Reversed	-	-	-
Immediate Post-Tests (Meaning)	Standard	Bimodal	Reversed
	<i>p</i>	<i>p</i>	<i>p</i>
Standard	-	.01*	.27
Bimodal	-	-	.04*
Reversed	-	-	-
Overall Immediate Post-Tests (Total)	Standard	Bimodal	Reversed
	<i>p</i>	<i>p</i>	<i>p</i>
Standard	-	.00*	.03*
Bimodal	-	-	.00*
Reversed	-	-	-

p* ≤ .05.Appendix D** Descriptive statistics results of the participants' average mean scores of comprehension tests

Sections	Comprehension Test	
	<i>M</i>	<i>SD</i>
Standard Section	5.27	1.16
Bimodal Section	5.76	0.92
Reversed Section	5.95	0.99

Appendix E Participant 7, Standard, Interview

"I think what I have learned most from this way of vocabulary learning was not from subtitles since they were Thai. New vocabulary is learned from listening to the English audio to match with the actions on the screen. I can also understand the story line better with Thai subtitles and English audio."

Appendix F Participant 3, Bimodal, Interview

“When the spoken and written inputs were matched, I think it was really helpful in understanding how the words are really pronounced and their corresponding actions.”

Appendix G Participant 2, Reversed, Interview

“First, I thought it was strange to learn English this way when the audio was in Thai, but as time passed by, I think I learnt a lot more new vocabulary than I thought I would. I didn’t have to pay attention to the audio to understand what they were saying, so I paid more attention to the texts.”

Appendix H Descriptive statistics and t-test results of average mean scores of immediate and delayed post-tests

Items	Standard Group						
	Immediate Post-Tests		Delayed Post-Tests		<i>t</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Form (20 items/10 pts)	1.98	1.01	1.04	1.56	-1.31	35	.04*
Meaning (20 items/10 pts)	8.61	0.17	7.68	1.24	-2.45	35	.00*
Total (40 items/20 pts)	10.59	1.16	8.72	2.13	-7.19	35	.03*
Items	Bimodal Group						
	Immediate Post-Tests		Delayed Post-Tests		<i>t</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Form (20 items/10 pts)	1.67	1.13	1.02	2.01	-3.34	42	.03*
Meaning (20 items/10 pts)	9.82	0.13	8.75	0.17	2.28	42	.02*
Total (40 items/20 pts)	11.49	2.26	9.77	1.23	-2.04	42	.02*
Items	Reversed Group						
	Immediate Post-Tests		Delayed Post-Tests		<i>t</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Form (20 items/10 pts)	4.89	1.21	4.73	2.98	2.36	37	.54
Meaning (20 items/10 pts)	8.52	0.14	8.37	0.14	13.75	37	.27
Total (40 items/20 pts)	13.41	2.41	13.10	1.92	11.18	37	.38

* $p \leq .05$.

Appendix I A post-hoc test result of participants’ average mean score of delayed post-tests

Delayed Post-Tests (Word Form)	Standard	Bimodal	Reversed
	<i>p</i>	<i>p</i>	<i>p</i>
Standard	-	.00*	.00*
Bimodal	-	-	.00*
Reversed	-	-	-
Delayed Post-Tests (Word Meaning)	Standard	Bimodal	Reversed
	<i>p</i>	<i>p</i>	<i>p</i>
Standard	-	.00*	.00*
Bimodal	-	-	.01*
Reversed	-	-	-
Overall Delayed Post-Tests (Total)	Standard	Bimodal	Reversed
	<i>p</i>	<i>p</i>	<i>p</i>
Standard	-	.00*	.00*
Bimodal	-	-	.02*
Reversed	-	-	-

* $p \leq .05$.

Appendix J Participant 10, Standard subtitle, Interview

“The subtitles in L1 really help me with understanding the content and the audio in L2 helps me with learning how those translation phrases in subtitles are really used. I think sometime translation is not word by word but meaning as a whole. So, I am not sure about word-by-word acquisition and how long I can retain those words.”

Appendix K Participant 1, Bimodal subtitle, Interview

“My English proficiency was not that high from the start. So, it affected me when I watched the video. I cannot read the subtitles in time. It affects my understanding of the word presented.”

Appendix L Participant 9, Reversed subtitle, Interview

“I think the reason why I remembered the word for a long time is because when I watched the video, I really paid attention to the video and subtitles. Although I didn’t know that I had to learn new words, I felt comfortable watching it. This feeling increased my motivation, confidence in learning, and engagement in watching. Somehow, I learned new words without knowing it.”