

科技部補助專題研究計畫成果報告 期末報告

從句法音韻介面觀點研究卓蘭饒平五字組及多字組之連讀變調 (第2年)

計畫類別：個別型計畫
計畫編號：MOST 105-2410-H-004-181-MY2
執行期間：106年08月01日至107年12月31日
執行單位：國立政治大學語言學研究所

計畫主持人：蕭宇超

計畫參與人員：碩士班研究生-兼任助理：田多惠
碩士班研究生-兼任助理：陳怡臻
碩士班研究生-兼任助理：葉德偉
碩士班研究生-兼任助理：吳欣蓉
博士班研究生-兼任助理：凌旺楨
博士班研究生-兼任助理：黃子權
博士班研究生-兼任助理：高仲良

報告附件：出席國際學術會議心得報告

中華民國 108 年 03 月 15 日

中文摘要：本計畫建構一個卓蘭饒平客語的變調語料庫，討論此客語方言長句之變調與語調詞組形成。本研究探討嚴曾假設時發現語調詞組的形成並不是建立於意義單位之上，而根據語料庫的數據顯示，語料詞組的長度也受到節奏上的限制。本文採用標準韻律理論，提出了一套制約架構，並指出配合理論缺乏合理的動機且會導致不正確的預測。

中文關鍵詞：變調
語調詞組
語料庫
卓蘭饒平客語
韻律

英文摘要：This project constructs a corpus of tone sandhi of Zhuolan Raoping, and discusses tone sandhi and intonational phrasing in long sentences of this Hakka dialect. While examining the strict layer hypothesis, this research observes that the intonational phrase (I) is not sensitive to the formation of sense unit. The statistics of the corpus also indicates that the I-length is under restrictions. I have proposed a constraint ranking under the standard prosodic theory, and shown that the match theory is not well-motivated and may result in incorrect predictions.

英文關鍵詞：Tone sandhi
Intonational phrase
Corpus
Zhuolan Raoping Hakka
Prosody

Pentasyllabic and polysyllabic tone sandhi in Zhuolan Raoping: a perspective from the syntax-phonology interface

MOST 105-2410-H-004-181-MY2

Yuchau E. Hsiao (蕭宇超)

National Chengchi University, Taipei

0. Introduction

This project investigates pentasyllabic and polysyllabic tone sandhi in Zhuolan Raoping from the perspective of syntax-phonology interface. In this report, I will first address the theoretical background and the tonal basics of this dialect. I will then explain the corpus I built in this research, and propose an analysis. Finally I will comment on an alternative analysis, and then offer a conclusion.

1. Standard prosodic theory

The partial hierarchy in (1) is posited by the Standard Prosodic Theory (Nespor and Vogel 1986, Hayes 1989, Hsiao 1991, among others). An intonational phrase consists of one or more phonological phrases, and a phonological phrase consists of one or more phonological words.

(1) Prosodic Hierarchy

- ι Intonational Phrase
- φ Phonological Phrase
- ω Phonological Word

The Strict Layer Hypothesis in (2) is a constraint for the prosodic hierarchy (Nespor and Vogel 1986, Hayes 1989, Hsiao 1991, among others). A prosodic constituent at a given level of the hierarchy is composed of constituent(s) at the next lower level of the hierarchy. There is no recursion, inversion, nor skipping of prosodic level.

(2) Strict Layer Hypothesis

There is a hierarchy of prosodic constituent types such that, in a prosodic tree, any constituent at a given level of the hierarchy consists exclusively of constituents at the next lower level of the hierarchy.

Selkirk (1986) posits four end-based parameters to construct a phonological phrase, as in (3); namely, a phonological phrase boundary is marked at the right or left edge of an XP or X^{head} .

(3) Phonological Phrasing (Selkirk 1986)

$$\varphi = \text{XP}, [\text{XP}, X^{\text{head}}], [X^{\text{head}}$$

In Hsiao (1991, 1995), as in (4) and (5), I observed that a phonological phrase boundary in Taiwanese is marked at the right edge of a non-adjunct and non-clitic XP (cf. also Chen 1987, 2000).

(4) Phonological Phrasing (Hsiao 1991)

$$\varphi = \{\text{Right}, \text{XP}^{-\text{a}}\} \quad \text{where } -\text{a} = \text{non-adjunct}$$

(5) Phonological Phrasing (Hsiao 1995)

$$\varphi = \{\text{Right}, \text{XP}^{-\text{a}\wedge-\text{c}}\} \quad \text{where } -\text{a} = \text{non-adjunct}; -\text{c} = \text{non-clitic}$$

There are also some proposals regarding intonational phrasing. Selkirk (1984) suggests that the immediate constituents of an intonational phrase may be grouped into a sense unit, as in (6). She proposes a Sense Unit Condition, which considers that two

constituents may form a sense unit if they show a modifier-head relation or an argument-head relation, as in (7).

(6) Intonational Phrasing (Selkirk 1984)

The immediate constituents of an intonational phrase must together form a sense unit.

(7) Sense Unit Condition: (Selkirk 1984)

Two constituents C_i , C_j form a sense unit if (a) or (b) is true of the semantic interpretation of the sentence:

- a. C_i modifies C_j (a head)
- b. C_i is an argument of C_j (a head)

In (8), Nespov and Vogel (1986) follow the Strict Layer Hypothesis and indicate that phonological phrases are grouped into an intonational phrase, and in (9), they suggest that there is a preference of constructing intonational phrases of average length.

(8) Intonational Phrasing (Nespov and Vogel 1986)

Join into an n-ary branching ι all ϕ s included in a string delimited by the definition of the domain of ι .

(9) ι -Length (Nespov and Vogel 1986)

There is a tendency to establish ι 's of a more or less uniform, average length.

2. Tonal basics

There are six base tones in Zhuolan Raoping, including three high-register tones and three low-register tones, as in (10). In addition, there is a derived mid tone that occurs only in the surface, as in (11). The rule in (12) shows that high-falling, high-level and low-falling map to mid before any low-register tone, but they map to low before any high-register tone. The low-level, 11, does not undergo tone sandhi.

(10) Tone inventory

High-registered: 55, 53 and 5

Low-registered: 11, 31 and 2 (where checked tones are underlined)

(11) Derived tone

High-registered: 33

(12) Tone sandhi

$$\begin{array}{ccc} \left[\begin{array}{c} 53 \\ 55 \\ 31 \end{array} \right] & \longrightarrow & 33 / \text{---} \left[\begin{array}{c} 11 \\ 31 \end{array} \right] \\ & & \underline{2} \\ & & \longrightarrow 11 / \text{---} \left[\begin{array}{c} 53 \\ 55 \end{array} \right] \\ & & \underline{5} \end{array}$$

3. The corpus

In this research, I build a corpus of Zhuolan Raoping, with the help of five informants, aged 63-77. The corpus contains 2,568 pentasyllabic line tokens, 672 hexasyllabic line tokens, and ,3426 longer line tokens. There are 26,484 syllable tokens in total. The tone occurrences in the data are coded with different structures, as in (13). (13a) indicates an SU-final, a non-adjunct XP-final and line final position. (13b) indicates an SU-final and a non-adjunct XP-final but not line final position. (13c) indicates an SU-final and adjunct XP-final but not a line final position. (13d) indicates SU-final or non-final.

(13) Structural coding:

- a. $)^{SU}]^{XP-a}]^{LF}$: SU-final, non-adjunct XP-final and line final position.
- b. $)^{SU}]^{XP-a}$: SU-final and non-adjunct XP-final but not line final position.
- c. $)^{SU}]^{XP+a}$: SU-final and adjunct XP-final but not line final position.

d. Y:

d.1)^{SU}: SU-final and non-XP-final but not line final position.

d.2 Z: non-SU-final, non-XP-final and not line final position.

An example is given in (14), where there are two possible ways to parse the sense units. For this line, we obtained two actual renderings, as in (14a) and (14b). (15a) and (15b) show how the tone occurrences in (14a) and (14b) are counted respectively. (16) is the sum of (15a) and (15b).

(14) [*lo moi*]^{NP} [*da [ten fa]*]^{NP}]^{VP}

老 妹 打 電 話

sister call phone 'My sister called.'

31 31 31 55 55 Input

() (()) SU pattern 1

(()) () SU pattern 2

a. 33 31 /P 11 33 55 /P Actual rendering 1

b. 33 31 11 33 55 /P Actual rendering 2

33 31 11 /P 33 55 /P Unacceptable

(15) Instances of calculating

a. = (14a)

	Words	B	S	Total	Percentage	/P
) ^{SU}] ^{XP-a}] ^{LF}	<i>fa</i> 話	1	0	1	20%	1
) ^{SU}] ^{XP-a}	<i>moi</i> 妹	1	0	1	20%	1
) ^{SU}] ^{XP+a}						
Y	<i>lo</i> 老, <i>da</i> 打, <i>ten</i> 電	0	3	3	60%	0
Total		2	3	5	100%	2
Percentage		40%	60%	100%		

b. = (14b)

	Words	B	S	Total	Percentage	/P
) ^{SU}] ^{XP-a}] ^{LF}	<i>fa</i> 話	1	0	1	20%	1
) ^{SU}] ^{XP-a}	<i>moi</i> 妹	1	0	1	20%	0
) ^{SU}] ^{XP+a}						
Y	<i>lo</i> 老, <i>da</i> 打, <i>ten</i> 電	0	3	3	60%	0
Total		2	3	5	100%	1
Percentage		40%	60%	100%		

(16) Sum of (15a) + (15b)

	Words	B	S	Total	Percentage	/P
) ^{SU}] ^{XP-a}] ^{LF}	<i>fa</i> 話	2	0	2	20%	2
) ^{SU}] ^{XP-a}	<i>moi</i> 妹	2	0	2	20%	1
) ^{SU}] ^{XP+a}						
Y	<i>lo</i> 老, <i>da</i> 打, <i>ten</i> 電	0	6	6	60%	0
Total		4	6	10	100%	3
Percentage		40%	60%	100%		

Another example is given in (17), where there are also two possible ways to parse the sense units. For this line, we obtained three actual renderings, as in (17a-c). (18a-c) show how the tone occurrences in (17a-c) are counted respectively. (19) is the sum of (18a-c).

(17) [*lo moi*]^{NP} [*teu ha*]^{AdvbP} [*gong [oi shid pon]*]^{VP}]^{VP}

老妹 頭下 講 愛食飯

Sister just say like eat meal 'My sister just said she wanted to eat.'

31 31 53 55 31 31 5 55 Input

- () () (()) SU pattern 1
 () (()) (()) SU pattern 2
- a. 33 31 /P 33 55 /P 33 33 2 55 /P Actual rendering 1
 b. 33 31 33 55 /P 33 33 2 55 /P Actual rendering 2
 c. 33 31 33 55 33 33 2 55 /P Actual rendering 3
 d. 33 31 /P 33 55 33 33 2 55 /P Marginal
 e. 33 31 33 55 33 /P 33 2 55 /P Unacceptable

(18) Instances of calculating

a. = (17a)

	Words	B	S	Total	Percentage	/P
) ^{SU}] ^{XP-a}] ^{LF}	<i>pon</i> 飯	1	0	1	12.5%	1
) ^{SU}] ^{XP-a}	<i>moi</i> 妹	1	0	1	12.5%	1
) ^{SU}] ^{XP+a}	<i>ha</i> 下	1	0	1	12.5%	1
Y	<i>lo</i> 老, <i>teu</i> 頭, <i>gong</i> 講, <i>oi</i> 愛, <i>shid</i> 食	0	5	5	62.5%	0
Total		3	5	8	100.0%	3
Percentage		37.5%	62.5%	100%		

b. = (17b)

	Words	B	S	Total	Percentage	/P
) ^{SU}] ^{XP-a}] ^{LF}	<i>pon</i> 飯	1	0	1	12.5%	0
) ^{SU}] ^{XP-a}	<i>moi</i> 妹	1	0	1	12.5%	1
) ^{SU}] ^{XP+a}	<i>ha</i> 下	1	0	1	12.5%	1
Y	<i>lo</i> 老, <i>teu</i> 頭, <i>gong</i> 講, <i>oi</i> 愛, <i>shid</i> 食	0	5	5	62.5%	0

Total		3	5	8	100.0%	2
Percentage		37.5%	62.5%	100%		

c. = (17c)

	Words	B	S	Total	Percentage	/P
) ^{SU}] ^{XP-a}] ^{LF}	<i>pon</i> 飯	1	0	1	12.5%	1
) ^{SU}] ^{XP-a}	<i>moi</i> 妹	1	0	1	12.5%	0
) ^{SU}] ^{XP+a}	<i>ha</i> 下	1	0	1	12.5%	0
Y	<i>lo</i> 老, <i>teu</i> 頭, <i>gong</i> 講, <i>oi</i> 愛, <i>shid</i> 食	0	5	5	62.5%	0
Total		3	5	8	100.0%	1
Percentage		37.5%	62.5%	100%		

(19) Sum of (17a) + (17b) + (17c)

	Words	B	S	Total	Percentage	/P
) ^{SU}] ^{XP-a}] ^{LF}	<i>pon</i> 飯	3	0	3	12.5%	3
) ^{SU}] ^{XP-a}	<i>moi</i> 妹	3	0	3	12.5%	1
) ^{SU}] ^{XP+a}	<i>ha</i> 下	3	0	3	12.5%	2
Y	<i>lo</i> 老, <i>teu</i> 頭, <i>gong</i> 講, <i>oi</i> 愛, <i>shid</i> 食	0	15	15	62.5%	0
Total		9	15	24	100.0%	6
Percentage		37.5%	62.5%	100%		

(20) shows the total number of tones occurring in difference structures. The parentheses indicate the numbers of the low-level tone.

(20) Statistics including 11

	B	S	Total	Percentage	/P
) ^{SU}] ^{XP-a}] ^{LF}	3888 (990)	396 (0)	4284 (990)	16.18%	3
) ^{SU}] ^{XP-a}	4464 (408)	786 (18)	5250 (426)	19.82%	1
) ^{SU}] ^{XP+a}	438 (48)	312 (18)	750 (66)	2.83%	2
Y	4506 (3336)	11538 (330)	16044 (3666)	60.57%	0
Total	13830 (4782)	12654 (366)	26484 (5148)	100.0%	6
Percentage	52.22%	47.78%	100%		

The low-level tone, 11, is irrelevant to tone sandhi, and thus the occurrences of this base tone are deducted, as in (21a-d), which show accurate statistic numbers and percentages of tone sandhi.

(21) Statistics excluding 11

a. SU-final, non-adjunct XP-final and line final

	B	S	Total
) ^{SU}] ^{XP-a}] ^{LF}	2898	396	3294
Percentage	87.98%	12.02%	100%

b. SU-final and non-adjunct XP-final but not line final

	B	S	Total
) ^{SU}] ^{XP-a}	4056	768	4824
Percentage	84.08%	15.92%	100%

c. SU-final and non-adjunct XP-final but not line final

	B	S	Total
) ^{SU}] ^{XP+a}	390	294	684
Percentage	57.02%	42.98%	100%

d. SU-final or non-final

	B	S	Total
Y	1170	11208	12378
Percentage	9.45%	90.55%	100%

4. Proposed analysis

In this section, I propose an analysis using standard prosodic theory and general alignment. But before that, several patterns are observed from the corpus. First, line-final tones mostly retain their base forms, found in 87.98% of the data. Second, non-adjunct XP-final tones mostly retain their base forms, found in 84.08% of the data. Third, half of the adjunct XP-final tones retain their base forms, found in 57.02% of the data, while half of them surface with their sandhi forms, found in 49.98% of the data. Fourth, the formation of sense unit does not affect tone sandhi; a SU-final tone surfaces with its sandhi form. Fifth, a pause may optionally occur after an XP. Sixth, a pause cannot be preceded by a sandhi tone, but base tone is not necessarily followed by a pause. Finally, the length difference between the established ι 's within an utterance is no more than three syllables. Based on the corpus, I propose a set of constraints in (22), and a partial constraint ranking is proposed in (23).

(22) Constraints

- a. $\text{ALIGN-R}(\varphi, \text{XP}^{-\text{a}})$: assign one violation mark for every phonological phrase, φ , whose right edge does not coincide with the right edge of a non-adjunct XP.
- b. $\text{ALIGN-R}(\varphi, \text{XP}^{+\text{a}})$: assign one violation mark for every phonological phrase, φ , whose right edge does not coincide with the right edge of an adjunct XP.
- c. $\text{ALIGN-R}(\iota, \varphi)$: assign one violation mark for every intonational phrase, ι , whose right edge does not coincide with the right edge of a phonological phrase, φ .

- d. ALIGN-R(ι , B): assign one violation mark for every intonational phrase, ι , whose right edge does not coincide with the right edge of a base tone, B.
- e. *S/P: assign one violation mark for every pause, P, which is preceded by a sandhi tone, S.
- f. ι -RHYTHM: assign one violation mark for every pair of intonational phrases, ι 's, whose lengths differ in four syllables or more.

(23) Constraint ranking

*S/P, ALIGN-R(ι , B), ALIGN-R(ι , φ) >> ι -RHYTHM

Tableaux (24) and (25) show how this analysis works.

(24) $[lo\ moi]^{NP} [da\ [ten\ fa]^{NP}]^{VP}$

		*S/P	ALIGN-R (ι , B)	ALIGN-R (ι , φ)	ι - RHYTHM
☞ a.	$((lo\ moi)_{\varphi})_{\iota} /P ((da\ ten\ fa)_{\varphi})_{\iota} /P$ S B S S B				
☞ b.	$((lo\ moi)_{\varphi} (da\ ten\ fa)_{\varphi})_{\iota} /P$ S B S S B				
c.	$((lo\ moi)_{\varphi} da)_{\iota} /P ((ten\ fa)_{\varphi})_{\iota} /P$ S B S S B	*(!)	*(!)	*(!)	

(25) $[lo\ moi]^{NP} [teu\ ha]^{AdvbP} [gong\ [oi\ shid\ pon]^{VP}]^{VP}$

		*S/P	ALIGN- R(ι , B)	ALIGN- R(ι , φ)	ι - RHYTHM
☞ a.	$((lo\ moi)_{\varphi})_{\iota} /P ((teu\ ha)_{\varphi})_{\iota} /P ((gong\ oi\ shid\ pon)_{\varphi})_{\iota} /P$				

	S B S B S S S B				
☞ b.	$((lo\ moi)_\varphi (teu\ ha)_\varphi)_l /P ((gong\ oi\ shid\ pon)_\varphi)_l /P$ S B S B S S S B				
☞ c.	$((lo\ moi)_\varphi (teu\ ha)_\varphi (gong\ oi\ shid\ pon)_\varphi)_l /P$ S B S B S S S B				
d.	$((lo\ moi)_\varphi)_l /P ((teu\ ha)_\varphi (gong\ oi\ shid\ pon)_\varphi)_l /P$ S B S B S S S B				*!
e.	$((lo\ moi)_\varphi (teu\ ha)_\varphi gong)_l /P ((oi\ shid\ pon)_\varphi)_l /P$ S B S S S S B	*(!)	*(!)		

In (24), candidate (c) can be ruled out by any of the higher-ranked constraints, and then candidates (a) and (b) are both selected. In (25), candidate (e) can be ruled out either by star sandhi tone pause or align base tone; candidate (d) is ruled out by I-rhythm, and then candidates (a), (b) and (c) emerge.

5. Alternative analysis

At this moment, we can consider an alternative analysis using Selkirk's Match theory. This theory proposes that there is a tendency for prosodic constituents to mirror syntactic constituents. In this sense, the syntax-prosody match is no longer a matter of alignment but operates on correspondence. Selkirk's match constraints are given in (26), which require a match between phonological phrase and XP, and between intonational phrase and clause. A constraint ranking can be posited as (27).

(26) Constraints

- a. MATCH(φ , XP): assign one violation mark for every phonological phrase, φ , that is not matched by a corresponding XP.
- b. MATCH(XP, φ): assign one violation mark for every XP that is not matched by a corresponding phonological phrase, .

- c. MATCH(ι , CL): assign one violation mark for every intonational phrase, ι , that is not matched by a corresponding clause.
- d. MATCH(CL, ι): assign one violation mark for every clause that is not matched by a corresponding intonational phrase, ι .

(27) Constraint ranking

*S/P >> MATCH(CL, ι) >> MATCH(ι , CL) >> ι -RHYTHM

Tableaux (28) and (29) show that under this analysis, an illegal output can be wrongly selected, while the real optimal output can be wrongly ruled out. The symbol \wp indicates a wrongly selected output, while the symbol $\ast\wp$ indicates the real optimal output that is wrongly ruled out.

(28) [*lo moi*]^{NP} [*da [ten fa]*]^{NP}]^{VP}

		*S/P	MATCH (CL, ι)	MATCH (ι , CL)	ι - RHYTHM
$\ast\wp$ a.	$((lo\ moi)_{\wp})_{\iota} /P ((da\ ten\ fa)_{\wp})_{\iota} /P$ S B S S B		*!	**	
\wp b.	$((lo\ moi)_{\wp} (da\ ten\ fa)_{\wp})_{\iota} /P$ S B S S B				
c.	$((lo\ moi)_{\wp} da)_{\iota} /P ((ten\ fa)_{\wp})_{\iota} /P$ S B S S B	*!	*	*	

(29) [*lo moi*]^{NP} [*teu ha*]^{AdvbP} [*gong [oi [shid pon]*]^{NP}]^{VP}]^{VP}

		*S/P	MATCH (CL, ι)	MATCH (ι , CL)	ι - RHYTHM
$\ast\wp$ a.	$((lo\ moi)_{\wp})_{\iota} /P ((teu\ ha)_{\wp})_{\iota} /P ((gong\ oi$		*!	**	

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科技部補助專題研究計畫出席國際學術會議心得報告

日期：2018年12月17日

計畫編號	MOST 105-2410-H-004 -181 -MY2		
計畫名稱	從句法音韻介面觀點研究卓蘭饒平五字組及多字組之連讀變調 2/2		
出國人員姓名	蕭宇超 凌旺楨	服務機構及職稱	國立政治大學語言學研究所教授 國立政治大學語言學研究所博士生
會議時間	2018年6月28日 至 2018年6月29日	會議地點	Kyung Hee University, Seoul, Korea 韓國慶熙大學
會議名稱	(英文) 2018 Linguistic Society of Korea (LSK) Conference		
發表題目	(英文) The pause-tone connection in Taiwanese and Raoping Hakka		

2018年6月28~29日赴韓國慶熙大學參加「2018 Linguistic Society of Korea (LSK)」會議，發表論文題目為：The pause-tone connection in Taiwanese and Raoping Hakka。承蒙科技部研究計畫補助旅費，特此感謝。

本會議投稿人數眾多且審查過程嚴謹，每份投稿摘要皆由相關領域之語言學專家匿名審稿。其中有許多摘要被研討會拒絕，以維持會議的品質。此外，本會議並無海報報告的場次，因此篩選過程更加嚴格。

本會議舉辦兩天，就有45場演講與報告。與會者的論文發表題目涵括語言學的各個領域，包括音韻學、句法學、語意學、語用學、心理語言學、語料庫語言學、語音學、詞彙學，等個主題。此外，也有領域間介面研究的論文發表。

計畫主持人蕭宇超的論文發表安排於6月29日(週五)13:20~13:50。內容以音韻理論觀點，研究、比較閩南語以及卓蘭饒平客語停頓對於變調的影響。報告結束後，學者們除就理論分析提出問題討論，也有學者對閩南語變調感興趣，在會後留下討論。

本次會議也聆聽了許多其他學者的發表，其中Neurocognitive approach on the perception of Korean vowels /ε/ and /e/: A comparison between younger and older generation. 與本計畫研究相關，因此向此學者提出問題討論，切磋琢磨，以期讓彼此的研究更上一層樓。參加此次會議，可謂獲益良多。

105年度專題研究計畫成果彙整表

計畫主持人：蕭宇超		計畫編號：105-2410-H-004-181-MY2				
計畫名稱：從句法音韻介面觀點研究卓蘭饒平五字組及多字組之連讀變調						
成果項目		量化	單位	質化 (說明：各成果項目請附佐證資料或細項說明，如期刊名稱、年份、卷期、起訖頁數、證號...等)		
國內	學術性論文	期刊論文	0			
		研討會論文	2	篇	Hsiao, Yuchau. (蕭宇超). 2017/10. Tone sandhi domain and intonational phrase of Zhuolan Raoping Hakka. The 2017 ILAS Workshop on Phonetics and Phonology. Academia Sinica. Hsiao, Yuchau. (蕭宇超). 2017/6. Zhuolan Raoping tonal phrasing and prosodic theories. The 11th International Workshop on Theoretical East Asian Linguistics (TEAL-11). Academia Sinica.	
		專書	0	本		
		專書論文	0	章		
		技術報告	0	篇		
		其他	0	篇		
	智慧財產權及成果	專利權	發明專利	申請中	0	
				已獲得	0	
				新型/設計專利	0	
		商標權		0		
		營業秘密		0	件	
		積體電路電路布局權		0		
		著作權		0		
		品種權		0		
		其他		0		
技術移轉	件數		0	件		
	收入		0	千元		
國外	學術性論文	期刊論文	0			
		研討會論文	1	篇	Hsiao, Yuchau. (蕭宇超). 2018/6. The pause-tone connection in Taiwanese and Raoping Hakka. The 2018 LSK (Linguistic Society of Korea) Conference. Kyung Hee University, Seoul, Korea.	
	專書	0	本			

		專書論文		2	章	Hsiao, Yuchau E. (蕭宇超). 2017, 12. accepted. Intonational Phrasing in Zhuolan Raoping. Proceedings of NACCL-29, Lan Zhang, ed., Rutgers University, New Jercey. Hsiao, Yuchau E. (蕭宇超). 2017. 1, accepted. Sandhi variation of the high-register tones in Raoping Hakka. Proceedings of NACCL-28, Dana Bourgerie, ed., Brigham Young University, Utah.
		技術報告		0	篇	
		其他		0	篇	
智慧財產權 及成果	專利權	發明專利	申請中	0	件	
			已獲得	0		
		新型/設計專利	0			
	商標權			0		
	營業秘密			0		
	積體電路電路布局權			0		
	著作權			0		
	品種權			0		
	其他			0		
技術移轉	件數			0	件	
	收入			0	千元	
參與計畫人力	本國籍	大專生		0	人次	
		碩士生		0		
		博士生		0		
		博士後研究員		0		
		專任助理		0		
	非本國籍	大專生		0		
		碩士生		0		
		博士生		0		
		博士後研究員		0		
		專任助理		0		
其他成果 (無法以量化表達之成果如辦理學術活動、獲得獎項、重要國際合作、研究成果國際影響力及其他協助產業技術發展之具體效益事項等，請以文字敘述填列。)						

科技部補助專題研究計畫成果自評表

請就研究內容與原計畫相符程度、達成預期目標情況、研究成果之學術或應用價值（簡要敘述成果所代表之意義、價值、影響或進一步發展之可能性）、是否適合在學術期刊發表或申請專利、主要發現（簡要敘述成果是否具有政策應用參考價值及具影響公共利益之重大發現）或其他有關價值等，作一綜合評估。

1. 請就研究內容與原計畫相符程度、達成預期目標情況作一綜合評估

達成目標

未達成目標（請說明，以100字為限）

實驗失敗

因故實驗中斷

其他原因

說明：

2. 研究成果在學術期刊發表或申請專利等情形（請於其他欄註明專利及技轉之證號、合約、申請及洽談等詳細資訊）

論文： 已發表 未發表之文稿 撰寫中 無

專利： 已獲得 申請中 無

技轉： 已技轉 洽談中 無

其他：（以200字為限）

Partial findings of this research have been presented at five conferences, and will be published in two conference proceedings. I am writing a manuscript based on this research, and will submit it to

3. 請依學術成就、技術創新、社會影響等方面，評估研究成果之學術或應用價值（簡要敘述成果所代表之意義、價值、影響或進一步發展之可能性，以500字為限）

The contributions of this research are essentially in three ways. First, it establishes the first corpus of long sentences of Zhuolan Raoping Hakka. Second, the corpus-based analysis substantially helps to preserve this vanishing dialect. Finally, it is the first work that employs this dialect to compare standard prosody theory and match theory.

4. 主要發現

本研究具有政策應用參考價值： 否 是，建議提供機關

（勾選「是」者，請列舉建議可提供施政參考之業務主管機關）

本研究具影響公共利益之重大發現： 否 是

說明：（以150字為限）