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Taiwan Sign Language Online Dictionary: Construction and Expansion

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While spoken languages are communicated by the vocal-auditory modality, signed languages are communicated by the gestural-visual modality. Just like spoken languages around the world, signed languages are all different in different communities and are also composed of a lexicon and a grammar. Taiwan Sign Language (TSL) is the language used by the Deaf in Taiwan and is genetically related to Japanese Sign Language, which was brought to Taiwan by deaf educators during Japan's occupation of Taiwan in 1895-1945.

Since vocabulary is a primary fundamental component of a language, the sign language research team of the Linguistics Institute at the National Chung Cheng University started the construction of the TSL Online Dictionary in 2001. In the dictionary, each lexical item is linked to the video of the TSL sign. The dictionary is bilingual in the sense that all lexical items (signs) and the description of the signs have both Chinese and English translations. The current edition of the TSL Online Dictionary (3rd English edition released in 2017) contains about 3500 lexical items and their dialectal and/or free variations. Information of synonym and polysemy of each lexical item is also provided. Phonological annotations of handshape and location of all lexical items has been added to this third edition of TSL Online Dictionary and thus extended the dictionary to a phonologically annotated corpus. The on-going preparation of the fourth edition of the dictionary includes sample sentences for frequently used TSL signs, especially verbs with special grammatical characteristics, in addition to adding new lexical items.

The TSL Online Dictionary serves as a base for inquiries in both linguistic research and practical usage. For teachers in deaf education or the general public, this dictionary is a tool for teaching or learning TSL. For researchers who are interested in the linguistic structure of TSL, the dictionary provides data for analysis in phonology, morphology, semantics, and syntax. With its being bilingual, the dictionary also provides bases for cross sign language comparisons for international scholars.

Keywords: Taiwan Sign Language, sign language online dictionary, graphic dictionary, vocabulary, dialectal variation, phonological annotation, corpus

1. Introduction

While spoken languages are communicated by the vocal-auditory modality, signed languages are communicated by the gestural-visual modality. Just like spoken languages around the world, signed languages are all different in different communities and are also composed of a lexicon and a grammar. Taiwan Sign Language (TSL) is the language used by the Deaf in Taiwan and is genetically related to Japanese Sign Language (JSL), which was brought to Taiwan by deaf educators during Japanese occupation of Taiwan in 1895-1945.

Since vocabulary is a fundamental component of a language, the sign language research team of the Linguistics Institute at the National Chung Cheng University started constructing a dictionary for TSL in 2001. In order to clearly demonstrate the lexical items (i.e., the signs) of TSL, videos must be used. Therefore, the TSL dictionary was aiming at an online dictionary with each lexical item listed being linked to a video demonstrated by a deaf signer of TSL. Furthermore, one of the primary goals of the construction of the TSL Online Dictionary was to promote the research of TSL to the international academics. The lexical items were all translated into both Chinese and English, and the written descriptions of the signs were also given in both Chinese and English.

In addition, in the third edition of the Chinese and the English versions, released in 2015 and 2017, respectively, two phonological features, i.e., handshape and location, were coded for each sign, promoting the dictionary from a database to a corpus which could be used for more linguistically sophisticated analyses, as well as computational linguistics analyses.

Recently, we have been working on the fourth edition of the dictionary with sample sentences to provide and illustrate syntactic structure of TSL, in addition to adding more lexical items.

This paper is organized as follows. First, some background about TSL is given in Section 2, including a brief history of TSL and the structure of TSL signs. Second, the construction of the TSL Online Dictionary is described in Section 3, followed by a practical guide in Section 4 about how to use the dictionary. Finally, the expansion and projection of the dictionary are presented in Section 5.

2. Background

2.1 A brief history of TSL

The history of TSL can be traced back to the deaf schools established by the Japanese educators during Japan's occupation of Taiwan (1895-1945). Since there were no education institutions for deaf children to get together and form a language community before deaf schools were established, and there is no documentation about what kind of sign language had existed in Taiwan prior to the Japanese occupation, Japanese Sign Language (JSL) has been assumed to be the origin of TSL (Smith 2005). Even today, TSL still shares high degree of mutual intelligibility between the lexicons of TSL and JSL, showing more than 70% lexical similarities according to Su and Tai (2009).

The first deaf school in Taiwan was established in Tainan in 1915, and another deaf school was established in Taipei in 1917. The teachers at the Tainan School for the Blind and Mute (now the Taiwan School for the Hearing-Impaired) were mainly from the Osaka area of Japan, and the teachers at Taipei School for the Blind and Mute (now the Taipei School for the Hearing-Impaired) were from the Tokyo area of Japan.

The dialectal differences of JSL in these two areas thus contributed to the initial differences between the southern (Tainan) and the northern (Taipei) dialects of TSL, indicated by _S and _N, respectively, in the TSL Online Dictionary. However, the two dialects of TSL only differ in the vocabulary and are mutually intelligible. The grammatical structure is basically the same in the two TSL dialects.

After the World War II ended in 1945, the Japanese teachers of the two deaf schools returned to Japan, while the Taiwanese teachers in the deaf schools continued to teach students in JSL. After 1949, Chinese Sign Language (CSL) was brought to Taiwan. Therefore, some signs from CSL may also have been integrated into TSL. See Smith (2005) for a more detailed description of the history of TSL.

2.1 The structure of TSL signs

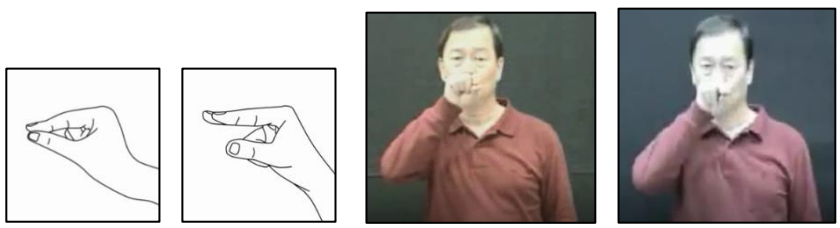
Just like words in spoken languages are made of meaningless phonological elements, the signs in sign languages are also made of meaningless gestural elements. In this section, we introduce the phonological features that compose the signs in TSL, i.e., handshape, location, movement, hand orientation, and non-manual features. All pictures illustrated in this section were extracted from the TSL Online Dictionary.

2.2.1 Handshape

Handshape is the most fundamental element in sign language vocabulary. Sixty-two distinctive handshapes have been identified in TSL (cf. Smith & Ting 1979, 1984; Lee 2003; Chang, Su, & Tai 2005; Tai & Tsay 2015a, 2015b; Tai & Tsay 2017). See Appendix I for the list of handshapes in TSL. Examples are given to illustrate the contrastive characteristics of handshapes.

As shown in (1a) and (1b), 'Bent-baby-O' and 'Extended-N' are two contrastive handshapes. CHICKEN and DUCK form a minimal pair that contrast only in handshape.[1] In CHICKEN, the handshape Bent-baby-O is used, while in DUCK the handshape Extended-N is used, with both being signed at the same location (in front of the mouth) and with the same movement (open and close fingers repeatedly), as shown in (1c) and (1d).

[1] Glosses for lexical items are given in English in capital letters by the convention in sign linguistics.



a. Bent-baby-O b. Extended-N c. CHICKEN d. DUCK

Figure 1. Handshape contrast

2.2.2 Location

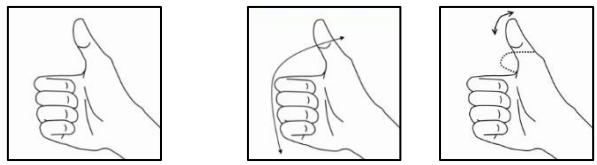
'Forehead' and 'chin' are two contrastive locations. PLEASE and YES form a minimal pair that contrast only in location. They both use handshape B (2a) with the palm parallel to the centerline of the body. In PLEASE, the index finger is in contact with the forehead (2b), while in YES, the index finger is in contact with the chin (2c).

a. Handshape B b. PLEASE c. YES

Figure 2. Location contrast

2.2.3 Movement

'Turning the wrist left and right' and 'bending the thumb' are two contrastive movements and MALE and THANK are contrastive in these two movements. They both use handshape Open-A (3a). In MALE, the wrist is turning left and right (3b), while in THANK the thumb is bending repeatedly (3c).



a. Handshape Open-A b. MALE c. THANK

Figure 3. Movement contrast

2.2.4 Hand orientation

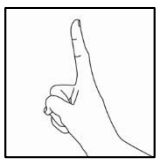
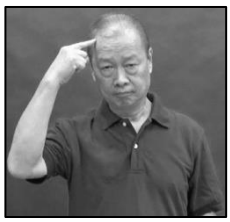
'Fingertips of both hands facing the outside to the body' and 'fingertips of both hands pointing toward each other' are two contrastive hand orientations. NOW and CALM-DOWN are a minimal pair in hand orientation. They both use the handshape Open-B (4a). In NOW, the fingertips are facing outward (4b), while in CALM-DOWN, they point towards each other (4c).

a. Handshape Open-B b. NOW c. CALM-DOWN

Figure 4. Hand orientation contrast

2.2.5 Non-manual features

'No facial expression' and 'with facial expression' are two contrastive in non-manual features. HEAD and UNDERSTAND are a minimal pair in facial expressions. They both use the handshape 1 (5a) and at the same location 'temple'. The only difference is that in HEAD, there is no facial expression (5b), while in UNDERSTAND, the mouth is rounded and the body tilts backward (5c).

a. Handshape 1 b. HEAD c. UNDERSTAND

Figure 5. Non-manual feature contrast

3. The construction of TSL Online Dictionary

3.1 Selection of lexical items

The first step of compiling a dictionary is to decide which lexical items to be listed. For the first edition (Tsay et al. 2008), we started with the 1000 most frequently used words provided by the National Language Council of the Ministry of Education（教育部國語委員會）. We then adopted the words from Smith and Ting's (1979, 1984) pioneer works Shou Neng Sheng Qiao *手能生橋* [Your hands can become a bridge] which contain about 2000 words. These two volumes were the first dictionaries of natural signs in Taiwan Sign Language. Although the Ministry of Education published two volumes of *Changyong Cihui Shouyu Huace* 常用詞匯手語畫冊第一輯 (2000a)、第二輯 (2000b)，the signs in these two volumes were not considered because the Deaf community seemed to criticize them as being artificially created signed Chinese words, not natural signs of TSL.

Vocabulary used in *Shouyu Fanyi Peixun Jiaocai* 手語翻譯培訓教材 [Materials for Training Sign Language Interpreters], were also included (Taipei City Government 2002). Another source of the lexical items came from our own fieldwork for the TSL reference grammar and other research projects of the TSL research group. The current 3rd edition of the TSL Online Dictionary (Chinese version released in 2015, English version in 2017) contains about 3500 lexical items and their dialectal and/or free variations.

For each lexical item, the information about its synonymy and polysemy in Chinese translation is also provided. For example, for the sign ADD *jia* 加, synonyms such as *zengjia* 增加 and *tianjia* 添加, are listed. If a sign has polysemy, the related glosses are also listed under the same sign. For example, the sign for SMOKE can mean either the smoke in the air or a cigarette. Therefore, both '1 SMOKE' and '2 CIGARETTE' are listed under SMOKE.

3.2 Dialectal variation and free variation

Some TSL signs have dialectal variations. N and S stand for the northern and southern dialects of TSL, respectively. For example, the sign ABLE has two variants, ABLE_N and ABLE_S.

Some TSL signs have free variations which do not show dialectal distinctions. For example, PERSON has two free variants, PERSON_A and PERSON_B. Variants are listed according to their frequencies, with A variant being the most frequent.

3.3 Videos

The videos were demonstrated by Mr. Yushan GU, a former president of the Deaf Association of the Republic of China.

Video recordings were taken by digital cameras in the Sign Language Studio of the Institute of Linguistics of National Chung Cheng University, Taiwan. The background was a black screen, and the demonstrator was asked to wear a red shirt for better color contrast. The videos from the digital camera were then converted to the format of Moving Picture Experts Group 4 (mp4).

3.4 Chinese and English glosses and descriptions of the signs

TSL Online Dictionary has both Chinese and English versions. The dictionary is bilingual in the sense that all lexical items (signs) and the description of the signs have both Chinese and English

translations. The following figures show the display of the word *lai* 來 COME in Chinese and English versions, respectively.

Figure 6. TSL Online Dictionary (Chinese version)

Figure 7. TSL Online Dictionary (English version)

3.5 Phonological annotations

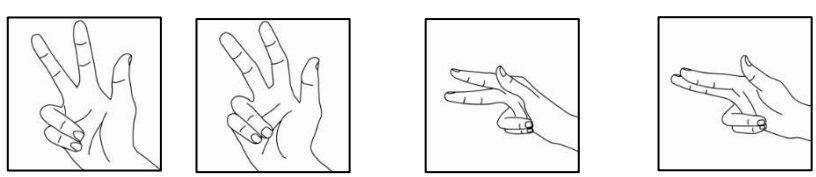
All lexical items were annotated with phonological features. Currently, only handshape and location have been coded. But these two features combined can already provide very high distinctiveness among the signs.

3.5.1 Handshape annotation

The handshape of each sign is coded based on the handshape inventory (see Appendix I for the complete list). In addition to coding handshape by the handshape inventory, two more pieces of information were also coded: number of extended fingers and handshape variation.

For example, the sign for BRIDGE uses handshape 3 (8a), which has three extended fingers. So this sign is annotated with 3 for 'number of fingers'.

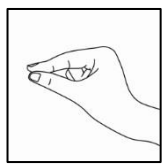
Although handshapes are supposed to be categorical, they could also show gradient variations, mainly in extended vs. bent knuckles of the finger. For example, handshape 3 has three variants as shown in Figure 8b-8d. These variations are also coded.



a. Handshape 3 b. Handshape 3_a c. Handshape 3_b d. Handshape 3_d

Figure 8. Handshape 3 and its variants

If the two hands have different handshapes, both hands are coded. For example, BIRD is signed by pinching up the thumb and the index finger repeatedly in front of the mouth, with the other hand moving up and down repeatedly (9a). In this case, either the handshape 5 or handshape Bent Baby-O can be used for searching (9b, 9c).

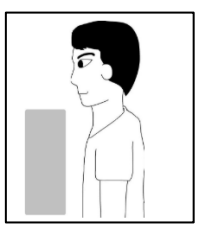


a. BIRD b. Handshape 5 c. Handshape Bent-Baby-O

Figure 9. BIRD and handshape 5, Bent-Baby-O

3.5.2 Location annotation

Thirty locations have been identified in TSL. They cover the head, face, hands, arms, and the trunk of the body. For example, the front of the body, as shown in Figure 10a below, is a very commonly used location in TSL. The head, as shown in Figure 10b below, is another commonly used location. (See Appendix II for the list of locations in TSL.)



a. In-front-of-body b. Head

Figure 10. Locations: In-front-of-body and Head

3.6 The database – the lexical bank

The main body of the dictionary is the database, i.e., the lexical bank. All the above information and materials are organized into a lexical bank for further use in the computer system of the online dictionary.

The coding in the lexical bank includes the following items.

Sign ID: All lexical items (signs) are numbered and each sign has its number as an ID.

Chinese gloss: Chinese translation of the sign

English gloss: English translation of the sign

Dialectal variation: For signs that have dialectal variations, N (north) or S (south) is added, e.g., ABLE_N and ABLE_S.

Free variation: For signs that have free variation, they are noted by adding English alphabet, e.g., ADDRESS_A, ADDRESS_B, ADDRESS_C and ADDRESS_D.

Sign location: It refers to the location where the signing takes place with respect to the body.

Number of fingers: Handshapes are categorized by the number of extended fingers.

Handshape: Each sign is labeled with its handshape, with additional information about handshape variation when applicable.

Polysemy: Distinct meanings of one sign are listed, when applicable.

Synonym: Synonyms in Chinese or English gloss are listed.

Number of strokes: Number of strokes of the initial character in Chinese gloss

Initial of the English gloss: The initial alphabetic of the English gloss

Description of the sign: Description in Chinese and English of the movement of each sign

Video file: The filename of each video corresponding to a sign

A sample of the lexical bank is shown below.

	A	B	C	D	E	F	G	H	I	J	K	L	M	AE	AF
1	id	poly	order	name	eng_name	location1	lo1_handshape	lo1_hs1	lo1_handshape_nu	lo1_hs2	location2	lo2_handsh	lo2_hs1	stroke	description
62	45	0	0	下午_A	AFTERNOON	101_forehead	twoFinger	212_棕a						3	一手食指和中
63	46	1	1	又_A	AGAIN_A	401_in_front_	twoFinger	210_二						2	一手食指和中
64	46	2	2	再_A	AGAIN_A	401_in_front_	twoFinger	210_二						6	一手食指和中
65	47	2	2	再_B	AGAIN_B	401_in_front_	fiveFinger	501_五						6	雙手五指伸直
66	47	1	1	還有	MORE	401_in_front_	fiveFinger	501_五						17	雙手五指伸直
67	48	1	1	同意_B	AGREE_B	102_temple	oneFinger	101_一a			401_in_fron	fiveFinger	509_拳	6	想+肯。
68	48	2	2	贊成_B	AGREE_B	102_temple	oneFinger	101_一a			401_in_fron	fiveFinger	509_拳	19	想+肯。
69	49	1	1	同意_A	AGREE_A	102_temple	oneFinger	101_一a			401_in_fron	twoFinger	209_雞	6	想+一樣。
70	49	2	2	贊成_A	AGREE_A	102_temple	oneFinger	101_一a			401_in_fron	twoFinger	209_雞	19	想+一樣。
71	50	2	2	耕田	TILL LAND	401_in_front_	fiveFinger	506_同a	oneFinger	101_一				10	一手五指彎曲
72	50	1	1	農	AGRICULTU	401_in_front_	fiveFinger	506_同a	oneFinger	101_一				13	一手五指彎曲
73	52	0	0	空軍	AIR FORCE	401_in_front_	threeFinger	316_飛機			303_chest	fiveFinger	509_拳	8	飛機+軍。
74	53	0	0	飛機	AIRPLANE	401_in_front_	threeFinger	316_飛機						9	一手食指和無
75	54	0	0	機場	AIRPORT	401_in_front_	threeFinger	316_飛機			401_in_fron	fiveFinger	506_同	16	飛機+處。
76	55	0	0	阿里山	MOUNTAIN	602_palm	fiveFinger	508_萬						8	一手在另一手
77	56	0	2	全	ALL	401_in_front_	fiveFinger	501_五						6	雙手五指伸直
78	56	1	1	完全	ALL	401_in_front_	fiveFinger	501_五						7	雙手五指伸直
79	56	3	4	所有	ALL	401_in_front_	fiveFinger	501_五						8	雙手五指伸直
80	56	2	3	都	ALL	401_in_front_	fiveFinger	501_五						11	雙手五指伸直

Figure 11. A sample of the Lexical Bank of TSL Online Dictionary

4. A practical guide to using the dictionary

4.1 Operating environment

Several people have helped with the programming of the three editions of the TSL Online Dictionary, including Chia-Hsiung Liu supervised by Prof. Tzyh-Chiang Chen of the Department of Electrical Engineering of the National Chung Cheng University for the first edition, Qiong-Yi Yu for the second edition, and Mao-yuan Tseng for the third edition. TSL Online Dictionary is compatible with most of the search engines, such as Google Chrome, Firefox, and Safari. Multimedia software－Quick Time is recommended for playing the videos. Browsers mentioned above all have built-in multimedia to play the videos. The format of the videos is Moving Picture Experts Group 4 (mp4).

4.2 Search by keywords

The dictionary can be looked up by the target words or keywords. For the Chinese version of the dictionary, the number of strokes of the target word can also be used to search the target word as in

most of Chinese dictionaries. For the English version of the dictionary, lexical items can also be looked up by the alphabetic order of the initial of the target word.

4.3 Search by phonological features

Two phonological features have been coded, i.e., handshape and location. Therefore, lexical items can be searched by handshape and location. This is especially useful when the user of the dictionary does not recognize a sign. This is parallel to looking up the meaning of a word by its pronunciation (e.g., 注音符號 or Pinyin).

For example, the sign shown in Figure 12 can be searched by its handshape (extended four fingers, Figure 13) and its location (forehead, Figure 14).

Figure 12. Target sign

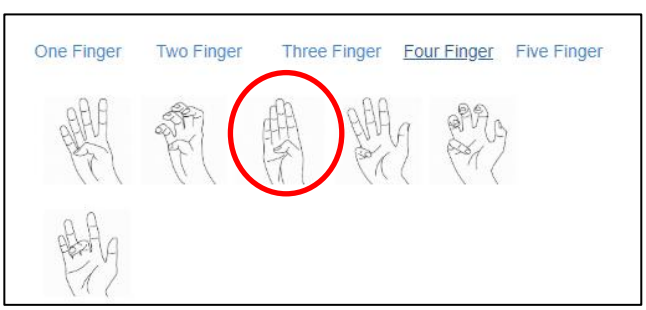


Figure 13. Search by handshape

Figure 14. Search by location

The results of the search will show all possible signs with the same handshape (extended four fingers) and the same location (forehead). According to the results displayed, there are three signs in total that match the above searching parameters, namely, BE FULLY OCCUPIED_A, BE FULLY OCCUPIED_B and PLEASE, as shown in Figure 15.

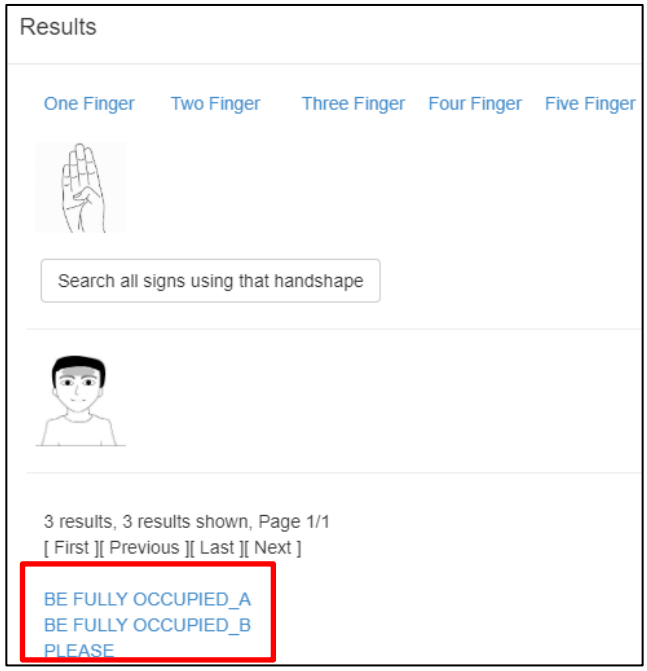
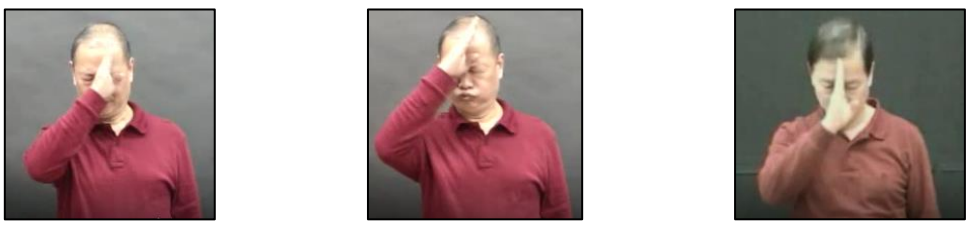


Figure 15. Results of the search

By linking to the videos of these three signs, one can find the target word. Although all three signs use the same handshape B and same location Forehead, there is a difference between BE FULLY OCCUPIED and PLEASE. In both BE FULLY OCCUPIED_A and BE FULLY OCCUPIED_B, there is a movement from right to left (16a, b). However, in PLEASE there is no such movement. Therefore, PLEASE is the final result of the search (16c).



a. BE FULLY OCCUPIED_A b. BE FULLY OCCUPIED_B c. PLEASE

Figure 16. Possible signs with the same handshape and location

5. Expansion of the TSL Online Dictionary

We are currently adding new signs and sample sentences to the dictionary. Sentences are especially important for analyzing the linguistic structure of TSL. We start with the most characteristic of TSL, i.e., verb types. There are three main types of verbs in TSL, i.e., plain verbs, agreement verbs, and spatial verbs (戴浩一&蔡素娟, 2009; Tai and Tsay, 2015a, b; Tai and Tsay, 2017).

The following is an example of an agreement verb HELP with its northern dialect variation. When the sign appears in citation form, it is signed with the right hand moving outward in front of the body as shown in Figure 17. However, when the sign appears in the sentence "Help me carry some stuff", the movement of the right hand becomes inward as agreeing with the recipient "me", as shown in Figure 18.

Figure 17. Example of a sentence

Figure 18. Sentence illustration: “Help me carry some stuff.”

6. Closing remarks

The construction of TSL Online Dictionary started about 17 years ago with very limited resources and manpower. It has been a mission and a commitment of the Sign Language Research Group at the National Chung Cheng University, Taiwan. We will continue to expand the TSL Online Dictionary to fulfill various academic purposes.

Another development of the TSL Online Dictionary is to make it more accessible with modern technology. Therefore, the Taiwan Sign Language Online Dictionary App (2015) was developed with the help from the Advanced Network Technology Lab led by Prof. Ren-hung Hwang at the National Chung Cheng University, Taiwan. The TSL Online Dictionary App can be looked up by target words, keywords, or phonological features (handshape and location). The App operating interface is shown in Figure 19.

Figure 19. The operating interface of TSL Online Dictionary App

The TSL Online Dictionary serves both pedagogical and academic purposes. For teachers in deaf education or the general public, this dictionary is a tool for teaching or learning TSL. For researchers who are interested in the linguistic structure of TSL, the dictionary provides data for analysis in phonology, morphology, semantics, and syntax. With its being bilingual, the dictionary also provides bases for cross sign language comparison for international scholars.

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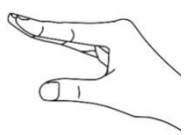
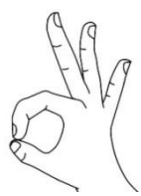
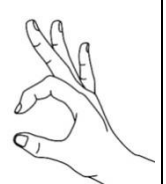
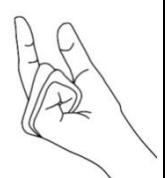
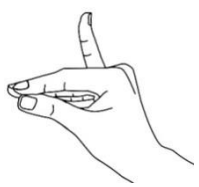
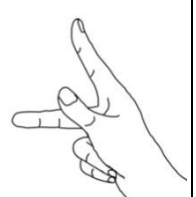
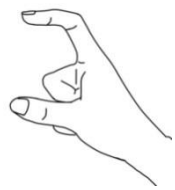
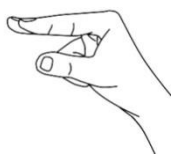
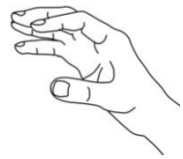
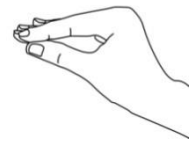
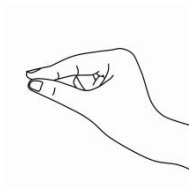
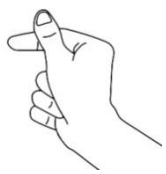
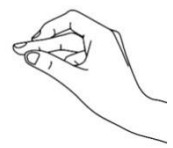
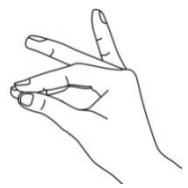
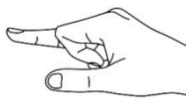
Appendix I. Handshape Inventory in TSL

Handshape names adopt the American Sign Language handshape names in English alphabet and numeral digits with necessary adjustments. In parentheses are the handshapes names in Chinese characters used in the previous studies on TSL. Romanization in Mandarin Pinyin is provided along with the character names (adopted from Tai & Tsay 2015a, b; Tai & Tsay 2017).

Open A (男 nan)	Flexed A (副 fu)	B (胡 hu)	Open B (手 shou)	Bent B (九 jiu)
C (方 fang)	 Bent C (紳 shen)	 F (錢 qian)	 Open F (WC)	 G (像 xiang)
I (女 nyu)	 Flat I (千 qian)	Curved I (蟲 chong)	 K (欠 qian)	Open K (布袋戲 budaixi)

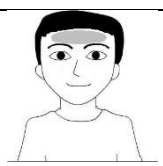
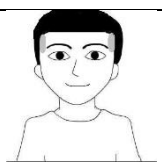
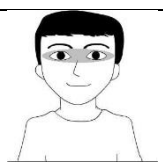
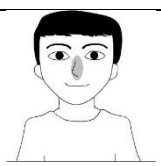
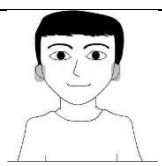
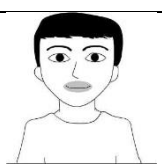
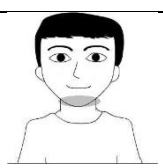
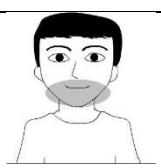
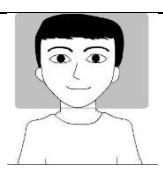
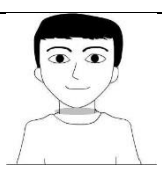
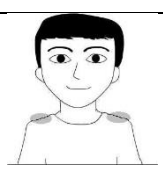
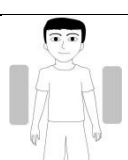
L (六 liu)	 Bent L (句 ju)	Curved L (爺 ye)	Curved-baby L (難 nan)	Flexed L (很 hen)
 Extended N (鴨 ya)	O (零 ling)	 Open O (果 guo)	 Flat O (萬 wan)	Baby O (呂 lyu)
 Bent-baby O (雞 ji)	R (筆 bi)	S (拳 quan)	U (棕 zong)	V (二 er)
Curved V (二十 ershi)	W (三 san)	Curved W (三十 sanshi)	Unspread W (童 tong)	X (十 shi)
Y	L-I	X-I	1-I	Flat 1-I

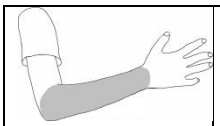
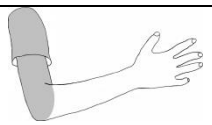
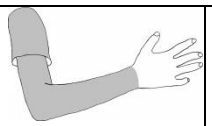
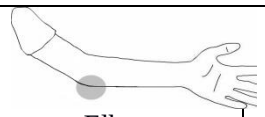
(民 min)	(守 shou)	(奶 nainai)	(語 yu)	(龍 long)
 1 (一 yi)	 3 (七 qi)	 Curved 3 (虎 hu)	 4 (四 si)	 Curved 4 (四十 sishi)
 5 (五 wu)	 Bent 5 (同 tong)	 5-Curved Pinky (八 ba)	 Curved 5-Pinky (八十 bashi)	 Piled 5 (薑 jiang)
 8 (借 jie)	 Open 8 (菜 cai)	 Crossed Thumb-Index (隻 zhi)	 Thumb-Midde-Pinky (飛機 feiji)	 Curved-Index (鵝 e)
 Curved middle (博 bo)	 Middle (兄 xiong)	 Curved-Index-Middle (高 gao)	 Ring (姐 jie)	 Ring-Pinky (百 bai)

 Bent Curved-Index-Middle (矮 ai)	Thumb-Pinky (細 xi)			

Appendix II. List of Locations in TSL

The gray area indicates where the sign location is.

 Forehead	 Temple	 Eyes	 Nose	 Ears
Cheek	 Mouth	 Chin	 Lower Face	In front of Face
 Head	 Neck	 Shoulders	Chest	Abdomen
Waist	Legs	In front of Body	Back	 Both sides of Body

 Lower Arm	 Upper Arm	 Arm	 Elbow	Fingers
Palm	Blades of Hand	Back of Hand	Hand	Wrist

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台灣手語線上辭典之建構與擴增

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相較於口語而言，手語的發展史與研究史都很短。台灣手語是台灣聾人所使用的語言。台灣手語可以明確追溯的起源是日治時期日本聾教育教師所帶來的日本手語。因此，台灣手語與日本手語有語言的親屬關係。台灣手語長期受到忽略，甚至於被誤認為只是「比手劃腳」而非真正的語言，而不知台灣手語就如所有的人類自然語言一樣，有約定俗成的詞彙，以及錯綜複雜的語法。在語言習得歷程，以及語言的表徵與語言處理等心理與腦神經語言學方面，都可與口語平行對照。

由於詞彙是一個語言的最基本成分，要瞭解一個語言一定要從詞彙開始，所以辭典的編纂是最基本的。又由於手語是視覺語言，最理想的呈現方式是影像，因此有了【台灣手語線上辭典】的建置。

【台灣手語線上辭典】所列的詞項參考【手能生橋】（史文漢、丁立芬編，中華民國聾人協會出版）、【台北市手語翻譯培訓教材】（台北市勞工局出版），以及教育部常用詞表，加上國立中正大學手語研究團隊歷年來所收集的詞彙，包括台灣手語的南北方言，以及詞彙的自由變異。2015 年公告之中文版第三版收錄約 3500 詞項及其變異。詞項仍在持續擴增中。

本辭典為中英雙語對照。中文版的搜尋方式包含「關鍵字查詢」與「筆劃查詢」。英文版的搜尋方式依關鍵詞英文字母順序查詢。第三版並新增手語音韻特徵查詢，包含「手形查詢」與「位置查詢」。每個詞項包含影片、詞項的中文翻譯/英文翻譯、中英文動作說明、該詞的手形圖與位置圖。影片可重複播放，也可選擇播放速度。同義詞、一詞多義等訊息也都一併列出。

【台灣手語線上辭典】的建立，有教學實用與學術研究的雙重目的。對於有興趣學習台灣手語的人，這是一個便利的詞彙學習平台；從事特殊教育的教師也可以利用這個網站協助教學。有興趣研究台灣手語的人，也可以利用線上辭典的詞項，進行手語的「音韻」、「構詞」與「語意」等語言學的分析。預計 2019 年第四版將提供常用詞的例句，使詞彙的語意更清楚，也可以作為句法分析的語料。由於本辭典同時有中英文版，提供英文翻譯與說明，深受國際學者肯定，對推動台灣手語與其他世界各地手語的跨手語比較極有助益。

關鍵詞：台灣手語，線上辭典，影像辭典，詞彙，方言變異，音韻標記， 語料庫