



RECENT CHANGES OF DEAF EDUCATION POLICIES AND PRACTICES IN TAIWAN: THE ROAD TO SIGN BILINGUALISM

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Recent Changes in deaf education in Taiwan –Policies

1. Inclusion Trend

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- 1. Inclusion in deaf education is more and more popular in Taiwan. Deaf students are less and less in 3 deaf schools.
- 2. There are issues of loneliness and communication when students are in regular classrooms. Support services for them are not ample.
- 3. At college level, more and more deaf students go to colleges to study, but the support services are not enough. Hearing professors feel pressure to instruct deaf students.

Recent Changes in deaf education in Taiwan –Policies 2. SL emphasis

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- 2. Ministry of Education officials announced last year that sign language would be a required course for special- education major undergraduate students. (On 2013/6/15, deaf college students had a meeting with leader of the Ministry of Education and they requested that sign language should be a required course for future special education teachers; and the government should establish a comprehensive sign language license and pre-service training system.)

Policies in deaf Education--Sign Language Interpreter service in hearing classrooms

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- The new Special Education Law Amendment was passed on Jan.8 2013.
- In the future, the students' needs must be satisfied and assistants must be provided.
- The direct help for deaf students is sign language interpreter service.
- Deaf student Huang: "When I have the sign language interpreter's help, I could learn better.
- Now I will introduce a case report in **HsinChu**.

Practices: 1. SL Interpreter service in hearing schools in HsinChu City

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- In HsinChu city, sign language interpreter fee was paid by the social division of the city government.
- Parents must pay part of SL interpretation fee.
- It was found that after few years' SL interpretation, deaf students could adjust to hearing classroom life pretty well. Some hearing peers also can use little signs to communicate with their deaf peers (usually only one deaf student and 1 SL interpreter).

Practices: 1.SL Interpreter service in hearing schools in HsinChu City

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- 1. There are only two deaf students received sign language interpreter services in hearing schools. One is still studying in a primary school. The other one is going to 7th grade now. Here is a case report .
- 2. Placement: Regular hearing classroom;
- Receiving pull-out resource room teaching for Chinese and Math courses; the teacher knows little signs
- 1st & 2nd grades, 3 hours of sign language instruction. If the funding is not enough, the parents must pay the fee (NT \$500 per hour).

Elementary School Period 2

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- 3rd and 4th grades: Adding society and science subjects for SL interpretation, same SL interpreter.
- 5th and 6th grades: Adding computer course for SL interpretation; different SL interpreters entered the hearing classroom to provide service.

Junior High School Period

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- Placement: Full inclusion, 7th grader
- SL service: For Chinese, Math, and Science, it's fully paid; and for English and Society, parents must either pay the fee or provide volunteer interpretation for her son.
- 13 hours of SL interpretation fee was supported by the government.

Recent Changes: Practices: 2. Bilingual programs started to begin in Taiwan

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- 2005-2007 Dr. Huang's study in Kaohsiung
- Later on, the sign bilingual programs have been spread to Taipei, ChungLi, Taichung, Tainan

Dr. Huang's Research Method

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- Setting: A day care center for people with disabilities, affiliated with a Presbyterian Church in Kaohsiung
- There are 5 children with deaf or hard of hearing in the class
- Study Period: Dec. 2005~June 2007; 18 months
- Strategies of teaching : **Role playing, explanation, Discussion, Q&A, Practice telling a story**, and combined with parents-children watching the **Bilingual picture-books story DVD** .

Kaohsiung (Southern Part of Taiwan): Sign bilingual reading program by Dr. Y. Huang

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Dr. Huang's Teaching ,
Role Playing

Deaf Teacher's teaching, using TSL
to explain the picture story



Results

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Story comprehension (Oral & Sign)

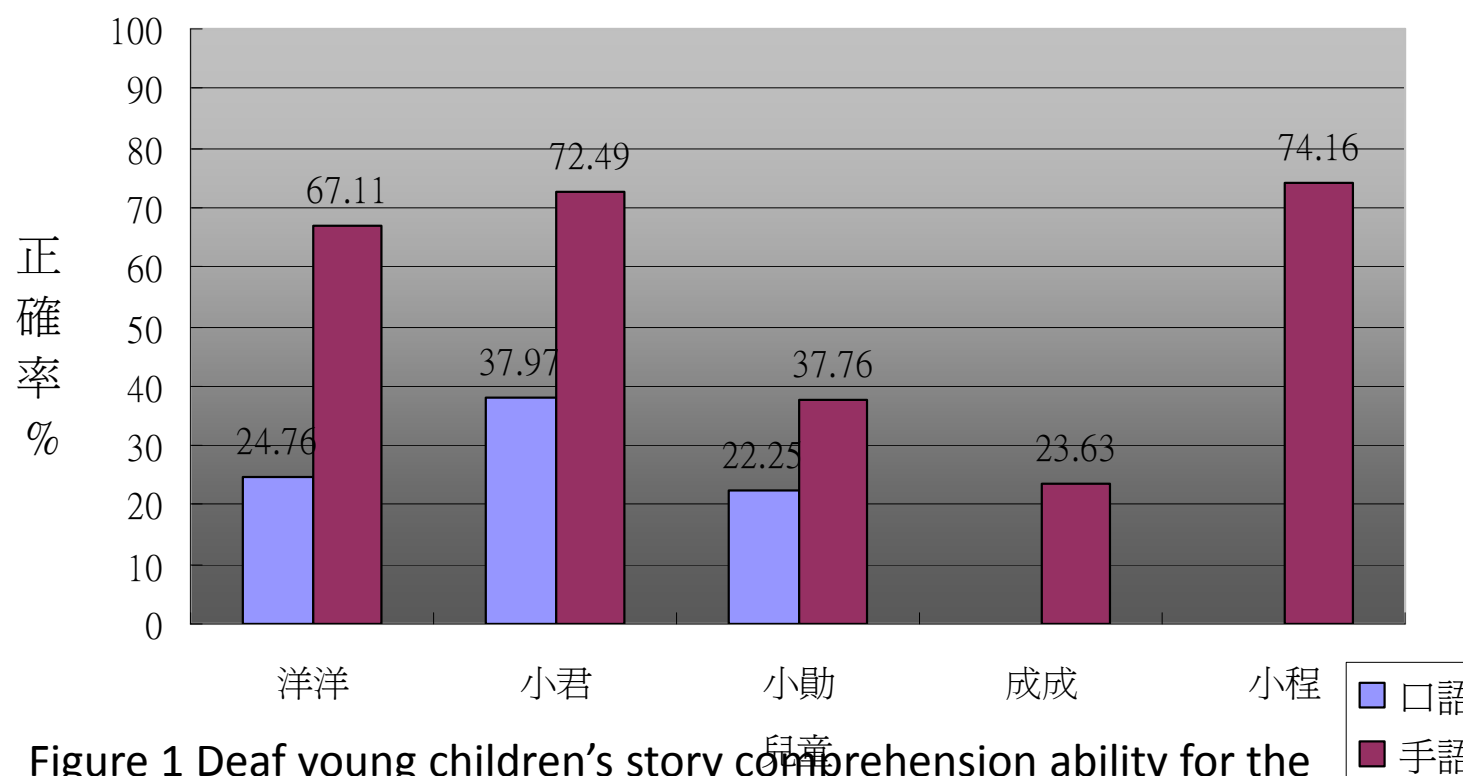


Figure 1 Deaf young children's story comprehension ability for the 16 picture books

Taipei by Dr. Hsiu-wen Chang

Team

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Dr. H. Chang

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- Their work: Teach parents and deaf toddlers with limited hearing capacity (e.g., children with auditory neuropathology spectrum disorder or cochlear nerve deficiency) once a week
- Team: speech-language pathologist (leader), deaf teacher (KuPa), a TSL interpreter (Dr. Chen)
- Program investigator: Dr. Hsiu-wen Chang
- They want to thank Prof. Tang and her team from Hong Kong, who gave a lecture talk in Taipei on Sept. 30 2013. Dr. Chang decided to start a related bilingual program.

Subjects

ANSD = Auditory Neuropathy Spectrum Disorder (聽神經病變)

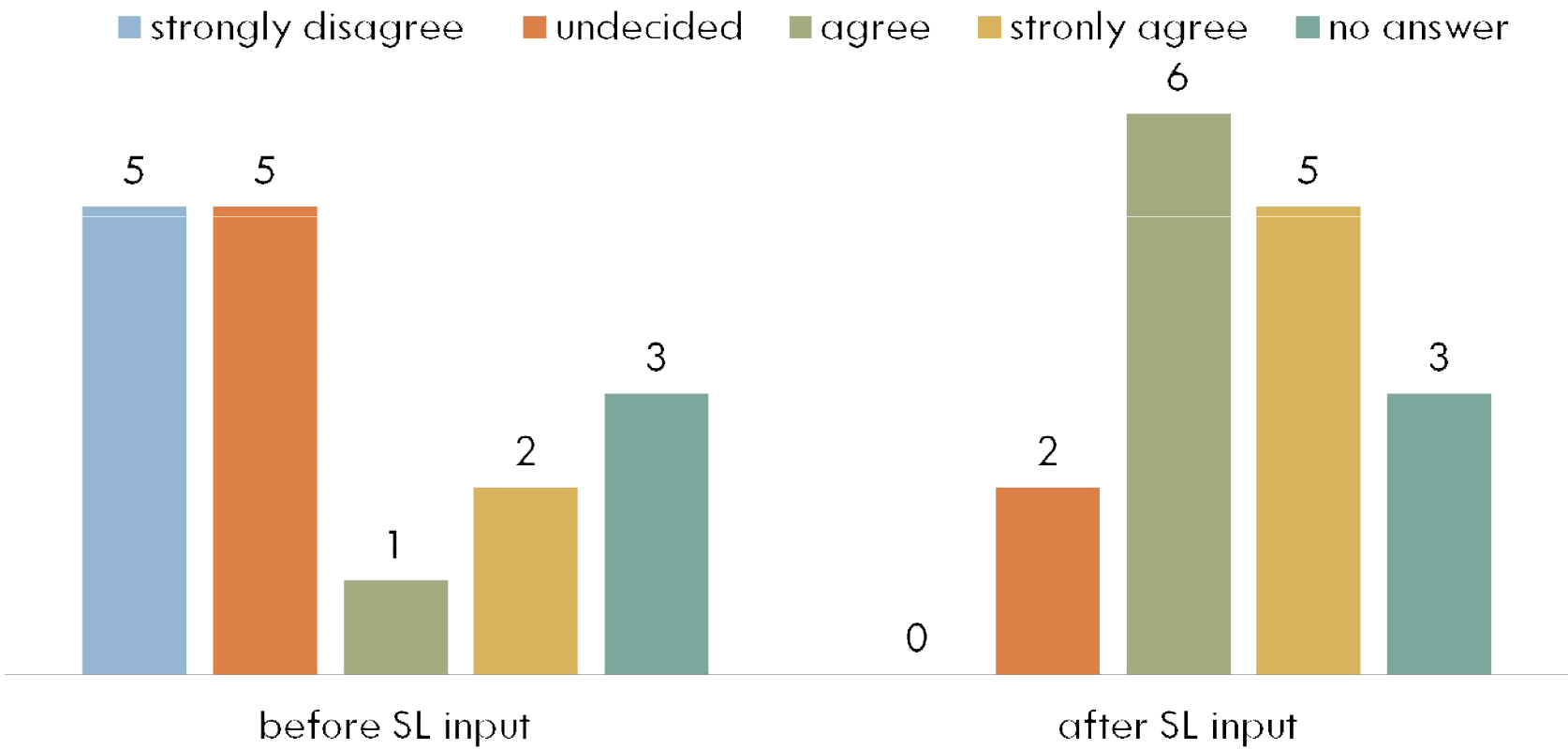
CND = Cochlear Nerve Deficiency (聽神經發育不良)

MCDI-T = Mandarin-Chinese Communicative Development Inventory (Taiwan)

(華語嬰幼兒溝通發展量表-台灣版)

聽損兒	尤○○	劉○○	陳○○	潘○○	吳○○
年齡	2:10	3:01	4:10	3:11	2:11
助聽輔具	Hearing Aid	Hearing Aid	CI	Hearing Aid	CI
病史	ANSD	ANSD	CND	ANSD	Autism
MCDI-T (詞彙理解與 表達)	< 8 m.	15 m.	21 m.	< 8 m.	< 8 m.

Graduate students' feedbacks from a survey : “I understand the possibility of infusing sign language into speech therapy”



Chung Li (location: Northern part of Taiwan):
a sign bilingual program for junior high school deaf students (self-contained class for deaf students)



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【 Broaden Deaf Students' international views 】



Deaf students watched international news first; then a Deaf teacher explained it by TSL. Right: Learning Activity Sheet

奈及利亞恐怖組織集體綁架女學生

搶匪公布錄影畫面，
宣稱要把這些女學生賣掉。





世界各國都非常震驚，
也嚴厲譴責這起恐怖攻擊事件。




各國專家正在努力想辦法解救人質。

3 我：有：哪：些：自：由：？



A. 人：人：有：信：仰：自：由：

<p>我：信：伊：斯：蘭：教； 你：信：基：督：教； 我：尊：重：你；</p> <div style="display: flex; justify-content: space-around; align-items: center;">   <input style="width: 30px; height: 30px;" type="checkbox"/> </div>	<p>我：信：伊：斯：蘭：教； 你：不：可：以：信：佛：教； 你：要：跟：我：一：樣： 信：伊：斯：蘭：教；</p> <div style="display: flex; justify-content: space-around; align-items: center;">   <input style="width: 30px; height: 30px;" type="checkbox"/> </div>
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B. 人：人：有：讀：書：自：由：

<p>我：是：男：生，我：可：以：讀：書； 妳：是：女：生，你：也：可：以：讀：書； 男：女：平：等！</p> <div style="display: flex; justify-content: center; align-items: center;">  <input style="width: 30px; height: 30px;" type="checkbox"/> </div>	<p>只：有：男：生：可：以：讀：書； 女：生：不：能：讀：書； 女：生：長：大：要：嫁：人；</p> <div style="display: flex; justify-content: center; align-items: center;">   <input style="width: 30px; height: 30px;" type="checkbox"/> </div>
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C. 人：人：有：人：身：自：由：

<p>我：尊：重：你：的：身：體； 我：不：會：傷：害：你； 你：也：要：尊：重：我； 不：能：傷：害：我；</p> <div style="display: flex; justify-content: center; align-items: center;">  <input style="width: 30px; height: 30px;" type="checkbox"/> </div>	<p>綁：架：別：人； 人：口：販：賣；</p> <div style="display: flex; justify-content: center; align-items: center;">  <input style="width: 30px; height: 30px;" type="checkbox"/> </div>
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Inviting successful Deaf leaders to speak for **【 Exploring career choices 】**

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For example, they invited 2009 Deaflympics leader Mr. J. Chen (Deaf), to share his career story with the deaf students.

Inviting successful Deaf leaders to teach or to speak

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A deaf teacher and a hearing teacher teach together

Inviting successful Deaf leaders to speak

Hearing Teachers' Perspectives

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- Deaf students could express themselves much better than before and thus when they communicated with families and classmates, the frequency of conflicts was decreased.
- In addition, deaf students were inspired by these extraordinary deaf adults. They no longer considered themselves as inferior to hearing students; furthermore, after mastering TSL, deaf students' academics improved in speaking, reading, and writing.

Taichung (Middle part of Taiwan)

by Dr. Liu & Liu **Bilingual Reading Teaching**

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Bilingual reading teaching for deaf children in Taichung, Taiwan

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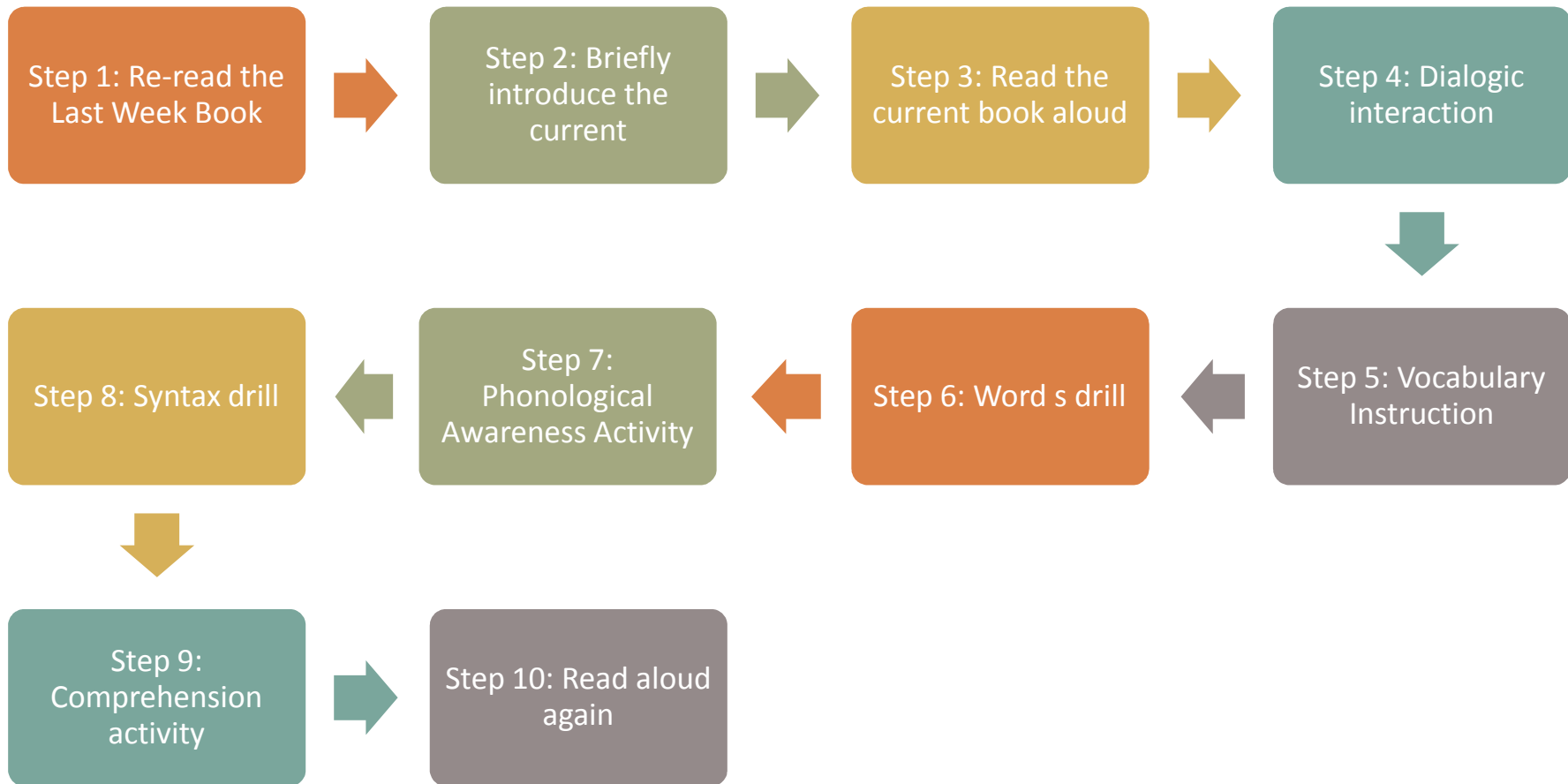
- 2013/2 – 2013/6
 - Place: Taichung School for the Deaf
 - Teaching Style: One-to-one
 - Deaf students : 3 (elementary school level)
 - Teacher : a Deaf teacher
 - Time : 8weeks, 4 days per week, 30 minutes each session

 - Reading Recovery Model
- 2013/8 – 2014/6
 - Place: A hearing primary school 1st grade classroom in Taichung
 - Teaching style: Inclusion class
 - Students: 23 hearing and 2 deaf students
 - Teacher: a Deaf teacher (main), and a hearing teacher/interpreter
 - Time: 14 weeks for SL learning in 2013 fall semester; started sign bilingual reading teaching since spring semester 2014; 3 days per week, 30 minutes per session

The ten steps of reading teaching method

(Reading Recovery Model)

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Hearing Teachers' Perspectives

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Tainan (Southern part of Taiwan):

Dr. M. Hsing

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- Dr. Hsing followed Hong Kong's sign bilingual co-enrollment model in the kindergarten level from 2011 till now.
- There are more than one settings of this program: Kindergarten level, Elementary School level, Saturday bilingual reading program
- Students served total in 3 years:
 - ▣ Deaf students: N=20
 - ▣ Hearing students (kindergarten level): N=54

Tainan Program	Deaf students	Hearing students
2011-2012	Kindergarten, Deaf School N=3 (K 2 &3) (sign bilingual partial inclusion)	Kindergarten N=27 (K2)
2012-2013	1. Kindergarten, Deaf School N=3 (K3) (sign bilingual partial inclusion) 2. P1, Deaf School (sign bilingual, for Reading subject)	Kindergarten N=27 (K3)
2013-2014	1. Kindergarten (N=4), Deaf School 2. 2. P2, Deaf School (sign bilingual, for Chinese subject, N=3) 3. p5, a self-contained classroom for deaf students (n=3) in Tainan (a deaf teacher co-teach with a hearing teacher)	Kindergarten K2 students (N=27 for experimental group; N=26 for control group); New class

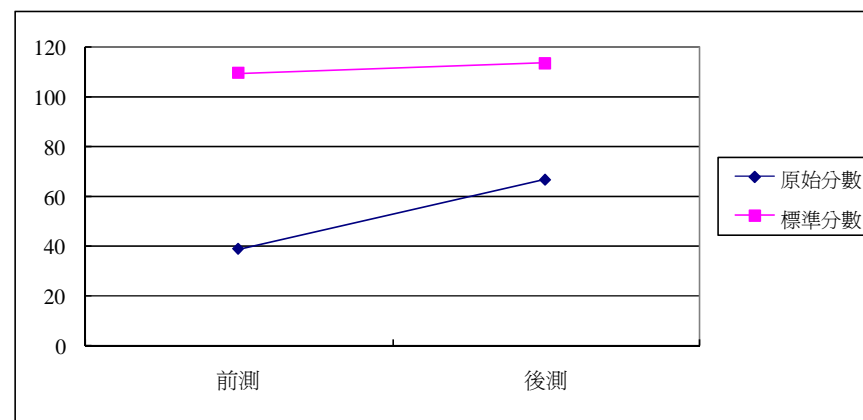
Hearing children's progress in 2 years

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Descriptive statistics

	N	Original score		Standard score	
		M	SD	M	SD
1 st semester	29	38.79	13.54	109.97	11.75
2 nd semester	28	48.54	13.70	114.21	9.86
3 rd semester	28	58.39	14.07	116.21	10.61
4 th semester	27	66.70	16.77	113.78	11.07

Progress plot (red: standard score;
blue: original score)



Hearing students' performance at PPVT, paired *t* test (2yrs)

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	N	M	SD	Pre-post difference	<i>t</i> value	Sig.
Pretest	27	38.81	13.99	27.89	13.287	0.000**
Posttest	27	66.70	16.77			
Pretest Standard	27	109.70	12.11	4.07	2.066	0.049*
Posttest Standard	27	113.78	11.07			

* $p < .05$, ** $p < .05$

3rd year program (2013/10~2014/06)

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- The 1st and 2nd year : Hearing subjects were the same (2011/10~2013/06).
- The 3rd year program was a more inclusive program; we added 2 tries of full-week-long inclusion sign bilingual experiments in a hearing kindergarten.

The 3rd year sign bilingual inclusion experiment

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Hearing students (n=27)

- Age: 4 years old
- 1 hearing teacher and 1 deaf teacher co-teach
- Each Wed. morning, they received SL learning from a Deaf teacher for 30 minutes.
- Two afternoons they have 4 deaf peers.
- In the 2nd semester, 2 tries of full inclusion week learning were conducted.

Deaf students (n=4)

- Age: 5 years old (n=3, Case A, B,C), and 4 years old (n=1, Case D)
- Case A: ANSD聽神經病變, severe HI; cannot speak and listen well; need visual and sign channel to communicate
- Case B,C,&D: oral; B-Cleft problem唇額裂; C: CI holder
- Each Wed. morning, they received SL from a Deaf teacher (KuPa).
- They went to inclusive hearing classroom 2 afternoons a week, plus sign bilingual reading after school for 30 minutes.

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Please watch a video clip

1st full-inclusion-week (in 2014 March) and 2nd full-inclusion-week (in 2014 May) for the Sign bilingual inclusion experiment in Tainan, Taiwan

Tainan: a local Deaf School

Elementary School level, **Sign bilingual program**

- **Setting: elementary 2nd grade, P2**
- **Subject: Reading (2013, fall semester), Chinese (2014 spring semester)**
- **N=3 ; No inclusion**
- **2nd semester: Four days a week, 50-100 minutes each day**
- **Model: One hearing teacher (GSL) and one deaf teacher (TSL) co-teach**
- **It is the 2nd year of sign bilingual program.**

Teaching Methods

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- A hearing teacher (using speech and sign) and a deaf teacher (using TSL) cooperated in teaching for 2 years.
- 3 deaf students (now 2nd grades) at a local deaf school. One deaf student received my sign bilingual partial inclusion project for 1 year in kindergarten level. (1 deaf student: use CI, 2 students: use hearing aids)
- The home room teacher videotaped the vocabulary, phrases, and lesson contents by sign language, and hearing parents need to watch it with their deaf children.

Result: The local Deaf School, A P2 homeroom teachers' Perspectives

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- Deaf students are more confident when they speak and sign; they feel frustrated if they use speech only to communicate with others.
- It's noted that the sign bilingual model did not impede my deaf students' speech; instead, their speech improved, tested by our school speech pathologist's evaluation on the Mandarin Articulation Test (pretest vs posttest).
- it is important for us to discuss lesson plans with the deaf teacher beforehand (for teacher collaboration).

Result from Interview: A parent's feedback

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- “I found that my deaf son (a CI holder, P2 now) used signing to **help him to memorize the lesson**. He can **speak longer sentences now** (note: MLU is longer).
- He did not understand the lesson before. But after this experiment, he **can understand the lesson more now**.
- I think sign language could be a bridge for my deaf son.
- **His speech is even better now**. I can understand what he is talking about (speech improve).
- He **could use signing to communicate with his Deaf peer now.**”
- She noticed that the Deaf teacher's sign language is more fluent than the hearing teacher.

Tainan: A **Self-contained class** for 5th grade HI students at a elementary school in Tainan: Sign bilingual teaching experiment

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Deaf teacher & Deaf students:

The Deaf teacher used TSL to communicate with 2 deaf students (one with CI, and one with hearing aids)

A Hearing teacher & a Deaf teacher were demonstrating role play (control emotions)

The hearing teacher's perspectives

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- Background: The deaf twins and their hearing mom learned some TSL signs taught by a deaf teacher for 2 years (for Dr. Hsing's study). They then received oral training in a local deaf school kindergarten level and then they go to the self-contained class for HI students at a hearing school till now.
- Since the deaf teacher joined co-teaching with a hearing teacher (1 subject for one semester), deaf students have a chance to see a real Deaf teacher who can use TSL to communicate with them.
- The deaf twin would use speech and sign to communicate with hearing teachers if hearing teachers know sign language.
- Teachers hope to continue this sign bilingual instruction next semester.

Tainan: A Saturday bilingual

Reading Program (n=3)

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(2013/11~2014/6)

Three deaf children joined the Saturday bilingual reading program.

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- A deaf student told us that she likes this program. She feels so happy that all deaf peers could use sign language to communicate with one another (Before: Only she knows some SL since her grandparents are both Deaf.) Her hearing mother supported her deaf daughter to learn SL.
- A deaf girl with developmental delay, learned functional signs and she could express her physical needs after she learned them, such as go to PiPi (大、小便) . Her mom was happy.

Some result findings from 3rd year program (2013, October~2014, June)

Inclusion Hearing Parents' positive perspectives for this experiment

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- 100% **HP/HC** agree or strongly agree: “Over all, I think the sign bilingual program **is successful.**” (4-point scale of questionnaire survey)
- Most hearing children are eager to share what they have learned to their hearing parents.
- Students enjoyed sign language learning and they liked to assist deaf peers.
- Deaf children also enjoyed the inclusion experience.

Result: A Hearing mother's perspectives (for her K3 deaf child who had Cleft lip and palate problem)

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- “After this program, I found that she is more **cheerful** and **active** now. She was shy before due to her cleft problem. Now **she dares to interact and speak with her hearing peers.**
- She is also **more confident** now.’
- My deaf daughter likes to test me for some signs; if I don't know the sign for something, like “noodle” sign, she would laugh at me. She teaches her hearing sister some signs. She and her hearing sister sometimes sign to each other for sharing their secrets.
- She can talk and her hearing loss is mild, so I do not worry about her.”

The Deaf School K3 homeroom teacher's opinions on the 2014 2nd inclusion week (by Ms. Lin)

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- “My deaf students were concentrated on learning with hearing peers. They enjoyed the inclusion experience.”
- Three out of 4 deaf students **could join the class discussion**; if they know it, they will show it.
- Two ADHD deaf students **improved their visual attention**.
- **Some changes of the 2nd inclusion**—They are beneficial for the teaching effectiveness: 1. **Adding one more deaf assistant** to teach Case A by one-to-one basis, 2. Providing **more and better teacher preparation meetings and discussions** between the deaf and the hearing teacher before the 2nd inclusion week. 3. **Hiring a professional SL interpreter** for whole week long for serving as a bridge between Deaf and Hearing teachers and students.

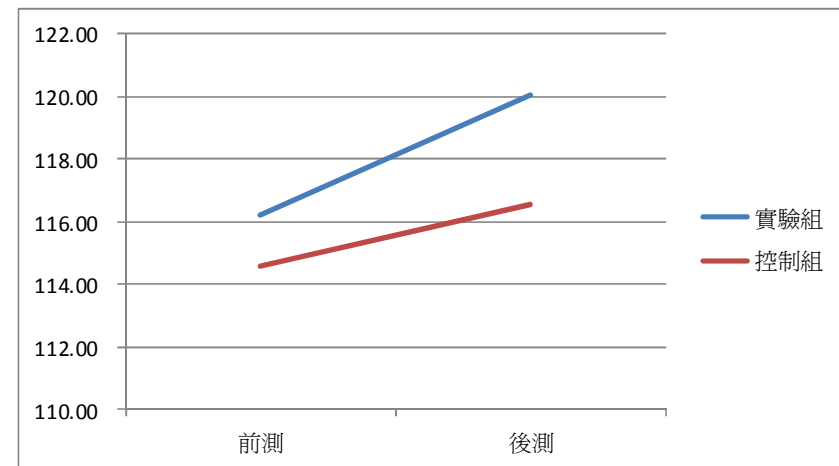
PPVT Pretest & Posttest Difference Experimental Group vs. Control Group

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Descriptive Statistics Summary

Blue: Experimental Group
Red: Control Group

Group		Pretest	Posttest	Pre-Post Test Difference
Experimental Group N=27	M	116.19	120.04	3.85
	SD	10.47	11.28	
Control Group N=25	M	114.56	116.52	1.96
	SD	10.80	14.20	



PPVT Standard Scores Pretest-Posttest ANCOVA

There is no significant difference between 2 groups.

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	SS	df	MS	F	Sig.
Pretest	2904.37	1	2904.37	27.12	0.00
Group	71.34	1	71.34	0.67	0.42
Error	5246.84	49	107.08		
Total	736614.00	52			

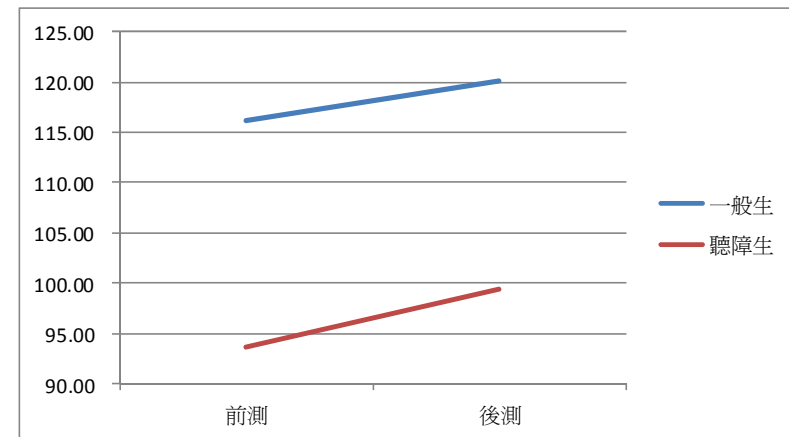
Deaf students improved more than their hearing peers (more gain)

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Descriptive statistics for HS & DS

Deaf students improved more than Hearing students

Groups		Pretest	Posttest	Pre-post Test Difference
Hearing students	M	116.19	120.04	3.85
	N=27 SD	10.47	11.28	
Deaf students	M	93.67	99.33	5.67
	N=3 SD	17.21	15.53	



PPVT Standard Scores Pretest-Posttest ANCOVA

There is no significant difference between H & D groups.

48

	SS	df	MS	F	Sig.
PPVT pretest	1505.737	1	1505.737	17.785	0.000
groups	65.132	1	65.132	0.769	0.388
Error	2285.893	27	84.663		
Total	422433.000	30			

* $p < .05$, ** $p < .05$

Deaf students (n=3) TONI *t* test

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	N	M	SD	Pro-post difference	<i>t</i>	p
pretest	3	20.667	2.517	-5.333	-1.577	.256
posttest	3	26.000	3.464			
Pretest IQ	3	106.000	6.557	-6.667	-.958	.439
Posttest IQ	3	112.667	5.860			

* $p < .05$, ** $p < .05$

Deaf students (n=3) PPVT *t* test

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	N	M	SD	Pro-post difference	<i>t</i>	p
pretest	3	33.3333	3	-8.3333	-1.697	.232
posttest	3	41.6667	3			
Pretest standard	3	93.6667	3	-5.6667	-.584	.618
Posttest standard	3	99.3333	3			

*p<.05, **p<.05

Issues we faced

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- 1. Time issue: It takes time (at least 5 years) to conduct a good sign bilingual program.
- 2. Ignorance: Government officials do not strongly support such model since it costs money.
- 3. Training parents, teachers TSL signing, and train deaf teachers become better teacher through collaboration and in-service training.
- 4. Lack of good experienced deaf teachers to offer consultations to young deaf teachers.
- 5. Lack of qualified sign language interpreters who know deaf education and early childhood education.

Suggestions

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- 1. We hope to get more support and consultations from international cooperation through technology.
- 2. We need more communications: Keep contacting with government officials and parents by establishing workshops and dialogues and getting media's attention, support and propaganda.
- 3. It is better to set at least a 5-year period proposal (like China) for a steady bilingual program evaluation.
- 4. More trainings for deaf and hearing teachers are needed; it's also true for interpreters.
- 5. Maybe there is a better sign bilingual deaf education model that is suitable for us but we don't know yet. More experiments are needed.

Conclusion

- The temporary conclusion is that sign bilingual model is beneficial for both deaf and hearing students.
- Although there are obstacles and challenges, the road to bilingualism has already been opened step by step in Taiwan.

Welcome!

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- TAIWAN DEAF EDUCATION 100 YEARS INTERNATIONAL CONFERENCE (台灣聽障教育百年國際學術研討會) (with NSC & Ministry of Education funding)
- Place: 1. Tainan School for the Deaf ; 2. National University of Tainan, Taiwan
- Time: March 20-22, 2015
- Speakers are from Europe and Asia countries.

Acknowledgement

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