

The SIWI in America and Its Enlightenment to the Writing Instruction of Chinese DHH Students

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Abstract: Under the current situation of language delay, deaf and hard of hearing (DHH) students in China and America generally face three kinds of writing dilemmas: "do not want to write", "nothing to write" and "do not know how to write". SIWI is an approach to teaching writing to DHH students in the United States proposed by Wolbers A. Kimberly of the University of Tennessee in 2007. On the basis of cognitive process theory, sociocultural theory and second language teaching theory, SIWI has formed three instructional components (strategic instruction, interactive instruction, language instruction), as well as two instructional principles (balanced and authentic). The results of several studies with nearly 200 DHH students showed that the DHH students in the SIWI group were nearly five times better at expressing their writing in terms of both language and content than the DHH students in the control group. These findings demonstrate the effectiveness of SIWI in teaching writing to DHH students. Many related studies in China have shown that the same problems that American DHH students have in their writing also appear in the compositions of Chinese DHH students. Therefore, SIWI can provide useful thinking and reference for designing the writing instructional model of DHH students in China.

Keywords: SIWI, DHH Students, Writing Instruction, Enlightenment

1. Introduction

It is not necessary for DHH students to "speak Chinese", but they have to "write Chinese" [25]. With the development of science and technology, as well as the social diversity, many DHH people have to enter the mainstream society, changing the situation that DHH people used to work and live in their own circle. Entering the mainstream society also means more opportunities to communicate with hearing people. Writing, one of the main ways for DHH people to communicate with hearing people, affects all aspects of DHH people's lives. Faced with this practical need, many schools for the deaf have made writing instruction a top priority in school education. The *Language Curriculum Standard for Compulsory Education in deaf Schools* (2016 Edition) (hereafter, *Standard*) developed by the Ministry of Education proposes that writing ability is a comprehensive reflection of the language literacy of DHH students. The *Standard* divides writing instruction into three levels, with the ultimate goal of cultivating DHH students' interest in writing and making them understand that writing is for self-expression and communication with others.

Globally, 90% - 95% DHH students are born into hearing families [3], and because of hearing impairment, these students are unable to acquire spoken language naturally at an early age. Therefore, these DHH children are at great risk for language delay if their hearing parents do not find a mutually understandable form of family communication early on. Siegel [18] argues that the current educational system for DHH students provides learning environments that also suffer from poor communication, thus perpetuating communication problems in preschool families. Lack of communication skills implies poor literacy skills, leading to a lack of expressive and receptive language skills, which in turn creates difficulties in reading and writing [14].

Studies of American DHH students' writing skills have shown that they face significant challenges in writing. Compared to their hearing peers, their English writing is usually poorer at the grammatical level, most notably in terms of repetition of words and sentence structures, which is related to their lack of proficiency in English syntax and their low vocabulary [2]. For example, at the sentence level, DHH students tend to use sentences with simpler structures and

shorter lengths and are used to repeat the same sentence pattern with fewer variations and more incomplete and meaningless sentences [20]. In addition, DHH students often omit adverbs, conjunctions, and auxiliary verbs in their writing although the frequency of nouns and verbs used is approximately the same as that of hearing students. In addition to grammatical problems, a significant number of DHH students' compositions also have more problems at the content level, which is manifested by the fact that each sentence in the composition seems to be related to the topic, but the overall composition gives a feeling of not being able to grasp the focus, the structure is scattered, and the sentences are not coherent [22]. It may be difficult to deduce the topic of writing just by reading the essay. This is because many DHH students do not have a general plan of structure and content before writing, and usually write whatever comes to mind, which means they lack content-level writing knowledge. In recent years, scholars in the United States have designed many teaching methods to address the writing problems of DHH students. Among them, the most influential one is Strategic and Interactive Writing Instruction (SIWI).

Many related studies in China have shown that the same problems that American DHH students have in their writing also appear in the compositions of Chinese DHH students. For example, the composition of Chinese DHH students has a more homogeneous sentence pattern [19] and often has missing components, improper collocations and missing associated words [4]. However, research on how to improve DHH students' writing ability is not common in China. The existing teaching methods are mainly the traditional writing teaching methods and mostly briefly mentioned in related articles, including cultivating DHH students' interest in writing, accumulating writing materials, focusing on practice opportunities and paying attention to evaluation feedback [5]. These methods, as clichés in the writing classroom, are necessary but do not focus on the needs of DHH students, since they do not combine the characteristics of writing with the special needs of DHH students well, telling teachers how to teach and students how to write from a practical point of view. Until now, many teachers in special schools still do not know how to teach writing classes well. Many DHH students often show that they do not want to write, do not have words to write, and do not know how to write [6]. Because of the similarity of the difficulties that DHH students in China and the United States encounter in writing, the SIWI teaching method in the United States enlightened the teaching of writing to DHH students in China.

2. Theoretical Basis, Components, and the Promotion of SIWI

2.1. Theoretical Basis

SIWI is an approach to teaching writing to DHH students in the United States proposed by Wolbers A. Kimberly of the University of Tennessee in 2007. Initially, SIWI was used only in writing classrooms for DHH students at the secondary

level. It was first used in teaching writing to DHH students at the elementary level in 2012 [24]. SIWI is primarily guided by the cognitive process theory of writing, sociocultural theory, and second language teaching theory.

2.1.1. Cognitive Process Theory of Writing

The cognitive process theory of writing suggests that there is a complete cognitive process in the writer's brain when performing writing activities, which includes three components: Planning, Translating, and Reviewing [10]. These three components constitute a complete cognitive process for writing and are commonly used by advanced writers when writing. Based on cognitive process theory of writing, Englert, Raphael, & Anderson [9] proposed the Cognitive Strategy Instruction in Writing (CSIW), which is an instructional writing program that is often used with struggling writers, especially students with learning disabilities. CSIW is composed by five subprocesses: Planning, Organizing, Writing, Editing, and Revising (POWER, [9]). *Planning* emphasizes that writers need to think about the audience he or she is facing, the purpose of writing, and to activate existing information in long term memory. *Organizing* requires the author to categorize and order his or her ideas in a logical sequence and to think about the textual structure to be used to express the ideas. *Writing* involves the writer presenting and expanding the ideas in his or her head on paper in a way that is interesting to the reader. *Editing* involves self and peer revision. In this session, the writer considers whether his or her own and others' writing clearly explains the topic from the reader's perspective, whether it accomplishes the writing goals, and suggests changes to problematic sections. *Revising* is where the writer reflects on his or her own and others' suggestions for revisions and determines what to revise.

2.1.2. Sociocultural Theory

Vygotsky's sociocultural theory illustrates the socio-historical occurrence of higher psychological functions in humans. He argued that higher mental functions are the essential characteristic that distinguishes humans from animals. One of the ways in which children acquire such functions is through the linguistic-symbolic system, that is, social communication. In order to communicate and convey ideas to each other, children must learn to generalize the ideas to be conveyed, because ideas cannot be carried directly from one mind to another [11]. Speech initially arises as a means of communication between children and those around them. Over time the external speech is transformed into internal speech, which becomes the child's own basic method of thinking. The thinking method in turn leads to the development of higher mental functions, which is the process of learning. Therefore, it can be said that learning is a cyclical and cooperative process between people. Schools can adopt an interactive or cooperative approach when teaching so that students' external speech can be internalized into internal thinking.

2.1.3. Theory of Second Language Teaching and Learning

Robinson [16] distinguishes between two ways of acquiring language, language acquisition and language learning. The former refers to language knowledge acquired unconsciously

and is implicit. The latter is explicit knowledge about some regularities in the language system acquired through conscious effort. The former is usually the way in which the first language is acquired, usually without going through systematic schooling, while the latter is usually considered as the way in which the second language is learned, requiring systematic school instruction.

Luckner, Slike & Johnson [12] identified five major problems faced by DHH students, and delayed language development is one of the most common and major ones. The vast majority of DHH students born to hearing families neither acquire sign language naturally nor acquire their family's native language before they start school at age 6 or 7 [13]. Thus, although DHH students are born and raised in the linguistic context same as hearing students, they do not acquire spoken language naturally and need systematic instruction in school [1]. From this perspective, learning writing (either English or Chinese) for DHH students is closer to the learning of a second language than to the learning of their native language. Therefore, DHH students' writing has a great need for language instruction. Teachers should naturally design writing instruction with developing DHH students' language skills as an important consideration [20].

2.2. Components of SIWI

The SIWI approach in the United States is characterized not by a scripted curriculum but by an instructional framework consisting of three instructional components (strategic instruction, interactive instruction, language instruction) and two instructional principles (balanced and authentic) (see <https://siwi.utk.edu/about/>). SIWI can be used to teach writing to DHH students of different language backgrounds and language levels.

2.2.1. Strategic Instruction

Based on CSIW, Wolbers [20] identified the writing process as six subprocesses: planning, organizing, scripting, translating, editing, and revising (POSTER). *Translating* simply means converting American Sign Language (ASL) to English [20]. Later, Wolbers, et al. [23] adapted the six components of the writing process and proposed the five components of the writing process: Got ideas?, Organize, Attend to language, Look again, and Share process (GOALS).

The subprocess of *Got ideas?* emphasizes reader awareness and the purpose of the writing, which are two key points to ensure the authenticity of the writing. Different purposes and different readers determine the choice of the content and the strategy of the writing, which also shapes the author's expression. *Organizing* is devoted to arranging the conceived content according to a certain logic and line structure, forming the beginning, body and ending parts of the composition. *Attending to language* focuses on the translation between ASL and English, as well as on vocabulary and grammar issues in English. It also involves checking the composition for proper choice of nouns, correct verb forms, proper use of conjunctions, and consistency in tenses. *Looking again* focuses on the content level of the essay, such as whether the

structure is complete, whether the content is full, etc. In addition, spelling and punctuation issues are also addressed in this session. *Sharing* is to share the final draft of the essay to the readers who have been pre-defined in the session of *Got ideas?* and wait for their feedback.

SIWI views GOALS as a cognitive strategy for DHH students' writing and also forms a framework for teaching writing accordingly. The five subprocesses are both a teaching process for teachers and a writing process for students. Those five steps are reversible, cyclical, rather than linear. Both teachers and DHH students can return to the first step to expand their ideas when they reach the second step, or return to the first or third step to add to their writing after completing the fourth step. The process is constantly moving forward (adding new content) and backward (revising old content). After constant training, the process becomes internalized as a strategy that emerges automatically when needed.

SIWI has developed a variety of cue cards, or visual scaffolds for strategic instruction. For example, GOALS cue cards are used to represent the entire writing process, and "hamburger" shapes are introduced to represent the structure of a narrative writing. SIWI uses these visual scaffolds to make abstract concepts concrete and to help DHH students accept, understand, and remember writing knowledge.

2.2.2. Interactive Instruction

SIWI proposes interactive instruction on the basis of sociocultural theory, which fully reflects the open and creative characteristics of writing activities. Since DHH students have limited input and output of spoken language, less effective family or social communication in their daily life, and less life experience, they often have "nothing to say" when facing writing topics.

The interactive instruction takes the form of co-construction of texts in which all students and teachers conceptualize, organize, write, and revise about the same writing topic. DHH students can speak/sign or listen/watch (ASL) in the classroom to tell others what they think and get ideas from their peers. It can help DHH students expand their writing ideas, organize the content of the text, and then form complete sentences and paragraphs. The process of co-constructing texts is ultimately a process of exchanging ideas. DHH students can see several or even dozens of contents under one writing topic, and modify or enrich their own contents by observing their peers' contents. In this format, everyone can "externalize" his or her own way of thinking and clearly "see" the process of others' ideas. In the process of mutual discussion and consensus seeking, the DHH students' thinking and language expression are trained and improved in a subtle way.

Writing instruction should focus on the communicative role of language in real life [15]. The interactive instruction of SIWI creates an authentic and meaningful dialogic environment for DHH students in which each DHH student assumes responsibility. Students need to communicate constantly in order to collaborate on a learning task [17]. In co-constructed writing, DHH students are problem solvers.

Each DHH student contributes to the completion of the writing task, learning new knowledge, training writing thinking, and improving expression skills in the process.

It is worth noting that co-construction of texts, that is, collaborative writing under the guidance of the teacher, is only a classroom model at the beginning of writing instruction for DHH students. As DHH students' writing skills improve, the classroom model will gradually transition to group writing, paired writing, and even independent writing [7]. In this sense, the classroom development model of writing instruction of SIWI is a gradual transition from guided to independent.

2.2.3. Language Instruction

The third major component of SIWI, language instruction, is designed to meet the unique language needs of DHH students. One of the primary goals of SIWI is to develop the expressive language skills of DHH students [7]. SIWI classifies DHH students into three levels according to their language proficiency. Students in the bottom tier are those who are neither proficient in ASL nor able to express themselves in English. Students in the middle tier being those who can use ASL but not in English. Students in the top tier are those who can express themselves in English. For DHH students in the bottom tier, teachers can let them better articulate what they want to express through drawing and acting. For DHH students in the middle tier, teachers encourage these students to express the content in ASL, and then compare English and ASL through language zone to help DHH students express the content in English. For students in the top tier, teachers only need to help them expand the content of English expressions by refining words and choosing sentences to help DHH students use more accurate, authentic, and rich words and sentences to express their thoughts. As instruction proceeds, the DHH students' language expression level gradually develops from the bottom to the top. Language instruction not only facilitates the accuracy and richness of DHH students' language expressions, but also has a positive effect on their writing content and composition coherence [22].

During the co-construction, when a DHH student's expression is ambiguous or not well understood, the teacher organizes a class discussion about what the DHH student is trying to say. At this point, a blackboard can be divided into two areas, one of which is used to place the DHH student's expressions and the other to present the correct English expressions. SIWI refers to these as language zones. Through the language zones, each DHH student can clearly understand the contrast between the intended meaning and the correct English expression in an explicit way. This contrast between languages can effectively help DHH students develop the meta-linguistic knowledge of both ASL and English, identify similarities and differences between the two languages, and lay the linguistic foundation for subsequent language translation [21].

A key feature of SIWI is that it is centered on DHH students and based on their contributions. When co-constructing texts, whether DHH students express themselves in correct English,

ASL, or a mixture of both, their ideas are acknowledged and recorded in the writing text for later discussion. This way of writing can greatly stimulate DHH students' interest in writing and produce texts that have special meaning to them. In the writing process, if the DHH students express their ideas in English or English-like ways, then they can include the ideas in the essay. The teacher then has to "step in" and guide the DHH students to express their ideas accurately in English through different ways. Thus, the final text of the co-constructed writing was produced through a collaborative process in which the DHH students provided ideas and the teacher guided the language [8].

2.2.4. Two Instructional Principles

SIWI incorporates two instructional principles. One of which is balance, which emphasizes the importance of teaching a balance between linguistic and content aspects of writing. In other words, teachers should focus not only on the DHH students' use of grammar and vocabulary, but also on the richness and coherence of students' essays, without favoring one over the other [24]. The second is authenticity, which refers to the emphasis on presupposing authentic readers and the purpose of writing by placing writing activities in authentic contexts as a way to increase DHH students' motivation and classroom participation in writing [2]. Both of these instructional principles are embedded in the above three instructional components.

2.3. The Promotion of SIWI

SIWI was first applied to the writing classrooms of DHH students in grades 6-8 in 2007 in the United States. The results of several studies on 90 DHH students over a period of 5 years showed that the DHH students who received SIWI training showed significant improvement in their writing compared to the control group. The results of several studies with nearly 200 DHH students showed that the DHH students in the experimental group were nearly five times better at expressing their writing in terms of both language and content than the DHH students in the control group. These findings demonstrate the value of SIWI in teaching writing to DHH students.

In order to effectively promote SIWI, the SIWI team holds one-week teacher training workshop within the U.S. each summer and fall to introduce the theoretical content of SIWI to teachers of DHH students from across the U.S. They guide teaching practices, and provide participating teachers with a rich variety of visual scaffolds and ongoing instructional guidance with a view to helping them better utilize SIWI to improve the writing skills of their DHH students.

3. Implications of SIWI for the Instruction of Chinese DHH Writers

Theoretical and empirical research on writing instruction for DHH students in China is weak. The SIWI method in the United States evaluates the DHH students' essays with more

attention to the process of completing the writing on their own and the gains and development of the students' writing, in addition to the quality of the essays. The success of SIWI could enlighten the research and practice on writing instruction for DHH students in China.

Writing instruction for DHH students in China can be taught in an interactive classroom using SIWI strategies with due consideration of the students' language proficiency. The teacher or one student introduces the writing topic of the day in Chinese Sign Language (CSL) or spoken language. The pre-determined reader should be determined according to the topic, which can be the student's parents or friends, the school principal or other community members. The purpose of writing can be to make the pre-determined reader understand or believe in the written topic, etc. After that, all students work together to conceptualize and organize the writing content based on the topic, during which the students ask (using CSL or Chinese) the topic narrator some specific details ("who, what, where, why, how", etc.) to collect writing materials according to their specific writing needs. The teacher divides the blackboard into two sections to record the CSL expressions and the Chinese expressions of the students' discussion. Later, teachers are expected to guide the students to translate CSL into Chinese to form the first draft of the article. After that, the teacher leads the students to reread the article and encourages them to suggest changes and dig into the reasons behind them, such as asking questions about where to change, why and how to change. By doing this, students are encouraged to actively think, express and share their opinions, bring the possibility of free collision of ideas. Finally, the teacher or the students share the co-constructed essay with a pre-determined reader and wait for the reader's feedback.

We demonstrate the teaching process with an example of narrative writing (GOALS).

The teacher assigns the writing topic of the day: Yesterday we went to Chaoyang Park for a spring excursion. Everyone writes down the process of the spring excursion in detail, so that their parents can understand our activity in this spring excursion.

(1) Got ideas? (G)

Predetermined reader: Our parents

Writing purpose: To let our parents know about our spring trip

Gathering materials: Who? Where? When? What is it about?

(2) Organization (O)

Introduction: Telling the reader who did what, when and where.

Main part: Event 1 (time, place, people, events)

Event 2 (time, place, people, events)

Event 3 (time, place, people, events)

.....

Conclusion: Summarize the whole event and express your feelings.

(3) Attend to language (A)

The teacher uses the language zones to guide the DHH students to translate CSL into Chinese, and translate

spoken Chinese into written Chinese, with attention to vocabulary and grammar.

(4) Looking again (L)

Teachers and students reread the essay together to check whether the structure of the composition is complete, whether the content is rich, whether the expression is imaginative, and to correct punctuation marks and misspelled words.

(5) Share (S)

Transcribe or print the revised essay on a new sheet of paper, making sure it looks clean and tidy. All DHH students will have one copy and share the essay with their parents when they go home and get evaluation feedback from parents.

The SIWI-based writing classroom teaching model for DHH students no longer regards the transfer of knowledge as a one-way act from the teacher to the students, but as a kind of mutual and equal dialogue process between teachers and students. They inspire and supplement each other in the joint construction, creating a generative classroom. First of all, DHH students are the subjects of writing, and teachers are the organizers and guides of writing activities. Teachers construct a real daily context for students in advance. In the writing context, the purpose, object and content of writing could not be separated from the real social life. The real context could fully mobilize the life experience of DHH students and help them get out of the dilemma of "no words to write", which greatly stimulates students' interest in writing. Secondly, students can "tell" stories in CSL and write stories in Chinese. In the process of translation between the two languages, DHH students learn the grammatical rules of each language, and increase their meta-linguistic knowledge of Chinese and CSL. Finally, through co-constructing the text, DHH students can "see" the thinking process of others, understand how to better plan and organize the content of the text, master how to better translate CSL into Chinese, and write standard Chinese sentences. Over time, these "better" skills will be internalized by the students. As they become more familiar with writing strategies and language knowledge, DHH students can gradually move from collaborative writing to independent writing.

4. Conclusion

SIWI, which is primarily guided by the cognitive process theory of writing, sociocultural theory, and second language teaching theory, is an effective writing instructional model for DHH students in the United States. SIWI includes three instructional components (strategic instruction, interactive instruction, language instruction), as well as two instructional principles (balanced and authentic). Many related studies in China have shown that the same problems that American DHH students have in their writing also appear in the compositions of Chinese DHH students. Because of the similarity of the difficulties that DHH students in China and the United States encounter in writing, the SIWI model in the United States provides useful thinking and reference for designing the instructional model of writing class for DHH

students in China. The current study is a preliminary investigation of the potential of using the SIWI in the writing class of Chinese DHH students. Future research are suggested to scrutinize the influence of SIWI on the writing performance of Chinese DHH students.

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