Elimination of Interpretation Obstacles under the Guidance of Gile Model

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Abstract

This study explores the major cognitive barriers encountered by interpreters when trying to smoothly and successfully fulfill an interpreting task and focuses on the Comprehension Equation and Effort Model proposed by Daniel Gile. The materials to be analyzed are selected from daily interpreting training courses. A descriptive approach is mainly adopted to analyze the interpreter's mistakes in processing the information in her mind and outputting it. The findings reveal that two main factors can be disruptive, which are misunderstanding of source language and limitation of cognition capacity, demonstrating that the cognitive factors do interfere with each other during interpreting. Based on the equations proposed by Gile, the paper analyzes what leads to weak comprehensive ability and unreasonable effort allocation. Accordingly, several coping tactics are put forward to facilitate interpreting skills and improve interpreting performance. Moreover, it is mentioned that further researches should be done to design the specific training courses to enlarge cognition capacity and better avoid information overload.

Introduction

Interpreting is a human activity involving producing a translation in the target language based on a one-time exposure to an expression in the source language. One prominent feature of interpreting is that interpreters need to tackle multiple tasks simultaneously, including listening, information processing, memorizing and expressing, and this feature demands the proper allocation of interpreters' effort. If an interpreter focuses too much on one task while overlooking others, he or she is likely to fail to fulfill a task smoothly. Furthermore, promptness is another feature of interpreting. An interpreter is supposed to express the information received on the spot as soon as the speaker stops talking. He doesn't have any chance to check the information he is confused about. An interpretation is always carried out under great pressure because the information processing time between importing and exporting is very short. Promptness poses a challenge for interpreters to achieve an excellent comprehension.

Although interpreting activities enjoy a long history, people haven't paid much attention to it as an independent discipline. Not many interpreters are qualified enough to meet the market demands, and there's a shortage of excellent interpreters to do essential tasks. Under such circumstances, the cultivation of skillful interpreters and the promotion of an interpreter's capability have become a difficulty confronting us. Therefore, this paper tries to explore the coping tactics to the constraints of comprehension and effort limitations, and contribute to the breakthrough of interpreting capabilities.

Theoretical framework

This paper takes the Gile Model as the theoretical basis of the following analysis and discussion. Gile believes that comprehension is an essential skill in interpreting process. In his monograph *Basic Concepts and Models for Interpreter and Translator Training*, he put forward the famous comprehension equation, which goes as follows: $C = KL + ELK + A$. To make it more concrete, comprehension = knowledge of language + extra-linguistic knowledge + analysis. This equation proposes

that basic knowledge and analyzing capability should be acquired during the training process to ensure a good understanding on the spot. In this equation, the equal sign doesn't symbolize the total of the other three parts. Instead, it means that comprehension can only be acquired through the interaction of another three factors. The plus sign doesn't mean the simple addition of linguistic knowledge, extra-linguistic knowledge and analysis. It emphasizes the interplay and mutual effect of three factors (Zou, 2005: 82).

Another great contribution of Gile is his proposal of Effort Model to help interpreters "understand the difficulties in interpreting and select appropriate strategies and tactics" (Gile, 1992: 191). According to Gile, "the development of the models originate in two ideas: one is interpretation requires some sort of mental energy that is only available in limited supply; the other is that interpretation takes up almost all of this mental energy and sometimes requires more than is available, at which times interpretation deteriorates" (Gile, 1995: 161). He also put forward equations to illustrate his Effort Model in interpreting, with a simultaneous interpreting model in the 1970s and consecutive effort model in the 1990s. Since this paper merely focuses on effort allocation and comprehension obstacles in the interpreting process, we just take the consecutive effort model. In consecutive interpretation, the Effort Model is divided into two phases.

Phase 1: $CI = L + N + M + C$

Consecutive interpretation = Listening and analysis + Note-taking + Short-term Memory + Coordination

Phase 2: $CI = Rem + Read + P$

Consecutive interpretation = Remembering + Note-reading + Production

Listening is the first and foremost step in interpreting, which involves the receiving of source information. But listening here refers to an active importing process. In other words, the interpreter should process all the information he gets and transforms it into sensible meaning, which is what we call perception. Listening to just words or sound is not enough because that doesn't make any sense in interpretation. Note-taking is an auxiliary tool for remembering information. Sometimes the speech segment is so long that it exceeds the interpreter's working memory capacity, so writing down the keywords and logical relation will be helpful. Short-term memory means the temporary storage of information for further adjustment. Coordination is the process that functions when these activities go on simultaneously and interfere with each other.

In phase 2, the latter part of the processing course is emphasized. The information captured and stored by short-term memory should be kept in mind for 2 or 3 minutes because there is always an interval between getting information and outputting information. The interpreter should recognize or identify the information in his note in the forms of different kinds of symbols. Then, the interpreter should be able to organize all the information in his mind in a logical way and express them accordingly in the target language.

Gile emphasized the idea of processing capability. He proposed that the following condition must be met for the consecutive interpretation to proceed smoothly: $LR + NR + MR < TA$ (Gile, 1995: 180). That means that the total requirement of listening and analysis, note-taking and remembering should not exceed the total capacity available for processing information.

From a cognitive perspective, Gile explained the operation process in detail. From the equation, we can easily conclude that notes and memory are two key factors that connect listening, which is the import of information and production, which is the output of analyzed information like a bridge, so effort allocation in note-taking and memory is the key issue to be addressed.

Literature review

Interpreting has long been regarded as a discipline closely related to practice and a skill increasingly needed for facilitating interlanguage communication. The study of interpretation is far from mature. It began to be studied only decades ago to meet the demand for globalization and international interaction. Nowadays, most domestic and international researches are proposed by university scholars and students majoring in interpretation. However, few of them assume the interpreting activities as human behavior involving psychological cognition and focus on its principles and mechanisms. In order to facilitate the development of interpretation as an independent disciple rather than a simple skill, more efforts are in urgent need.

Current researches of interpreting capability can be roughly divided into three categories in accordance with their research focuses, namely, studies concerning the assessment of interpretation quality, interpreting skill study and study of interpreting from a cognitive perspective.

Studies concerning interpretation qualities mainly attempted to set an objective standard for evaluating the interpreting performance. Nowadays, the evaluating standard of interpreting quality is very obscure. It is judged individually, and a subjective standard is adopted to evaluate the quality of interpretation. In *The Assessment of Interpreters' Ability and Interpreting*

Capability——an Exploration of the Assessment Model of Interpretation, the author examined four typical interpreting tests popular in China and found that their evaluating standard was not concrete enough to give specific guidance to participants. He concluded that the current assessment system was constructed based on subjective judgement and lacked objective standards for evaluation. The test's purpose was not stated clearly, so the test material was not to the point. Based on these findings, the author proposed that both intellectual and non-intellectual factors should be taken into consideration to design an interpreting test. *An Empirical of Interpreting Quality with Interpretive Theory and Teaching Strategies* is a paper written by an MTI teacher. The teacher found that interpretation teaching mainly focused on exercises rather than quality. He put forward three hypotheses and tried to justify them through an empirical study with his students. Such a paper based on interpreting results help to identify effective teaching strategies.

Studies on interpreting skills take up the largest part in this field, with almost two-thirds of relative studies focusing on one or some interpreting skills in the procedure. In *A Practice Report on interpretation on China-Africa Exchange Programs under Gile's Interpretation Comprehension Equation*, the author emphasized the understanding of source language, which was the first step in interpretation and found linguistic factors including African accent and professional words, extra-linguistic factors including specific knowledge and cultural factors constituted main barriers for successful interpretation by analyzing her own interpreting experience in China-Africa interactions. *Interpreting Process Analyzed Based on the Multidirectional Reformulation Activities of New Learners* is written by a Japanese scholar aiming at giving a comprehensive account of the interpreting process. The main findings of this paper suggested the reformulation varied according to specific language pairs, which might shed light on the salient links between languages combination and interpreting tactics. In terms of the study of note-taking, which is an essential procedure while performing an interpreting task, *Validity of Note-taking for New Consecutive Interpreting Learners: An Empirical Study of University Interpretation Courses* can be taken as an example. In order to investigate the validity of note-taking in interpretation, the author examined the students' consecutive interpreting with and without note, finding that there was no sound evidence to prove the usefulness of note-taking and called for more studies in this direction.

In recent years, the cognitive study of interpretation began to draw more and more attention from scholars. Scholar Xing Jiawei tried to explore the relationship between cognitive capability and interpreting ability from several aspects. He pointed out that cognition studies lay a foundation for interpreting study, and interpreting skills could be facilitated by emphasizing the function of human cognition. Accordingly, he put forward several suggestions for improving interpreting training efficiency. In *Self-Efficacy and Prediction of Note-taking Inclination among Undergraduate Translation Students*, he discussed the influence of an individual's self-perceived ability in performing the assigned tasks, during which the psychological factors were highly emphasized. The obtained results revealed a significantly positive relationship between self-efficacy and their note-taking inclination. Some postgraduates also tried to analyze the effort allocation difficulty or comprehension barriers under the Gile Model framework, which reflected its instructive significance in solving specific problems.

All the relative researches, whether they are outcome-oriented, which means they focus on the assessment of interpreting results, or they are process-oriented, which means they regard interpreting as a dynamic process and discuss more on all kinds of skills and the process of it, are carried out aiming at facilitating the efficacy of interpreting training practice to promote interpreting ability. Yet, to solve these problems, it is a must to explore and try to understand the mechanism of the interpreting process and explain interpreter's behaviors scientifically. Studies on interpreting capability from a cognitive perspective, either at home or abroad, are not mature enough. A cross-disciplinary study involving concepts of these two fields will enable us to understand better the underlying psychological and cognitive principles of interpreting and conducting research more scientifically and objectively, thus finding more efficient approaches to improve interpreters' professional competence.

Cases Analysis and Discussion

The examples cited in this chapter are from the interpreting materials in college training courses. This paper tries to analyze the causes of some difficulties encountered and some errors made, and explore the cognitive process in doing these interpreting tasks. The interpreter gets some background information of these topics, but is not informative enough to know the details. During the interpreting process, it is found that comprehension difficulties and effort distribution

are two main obstacles. According to Gile, a correct comprehension of the source text can be achieved only through combining efforts of knowledge of the language, extra-linguistic knowledge and appropriate analysis. A lack of any of them would cause great trouble.

Example 1

The major culprits in terms of environmental damage and health are red and processed meats.

因为通过少吃肉不仅可以保护环境， 还可以促进健康。

In this example, the mistake is made mainly due to a lack of linguistic knowledge and extra-linguistic knowledge. The word "culprits" is neglected because the interpreter is not familiar with the pronunciation and meaning of culprits. Usually, "culprits" means a person or thing responsible for causing a problem, and here it implies that eating red and processed meats causes environmental damage and health problem. When trying to importing the information, the interpreter can't logic it out due to the block of an unfamiliar word. Another problem in the interpretation is the missing of the descriptive components before the word "meat". The interpreter is not used to link environment problems with eating red and processed meat, so it may take more time to understand it. Since time is limited in interpreting, the interpreter failed to know the proper meaning of it. It can easily be seen that accumulation of linguistic and extra-linguistic knowledge is essential to improve efficiency and reduce mistakes.

Example 2

Due to the urbanization, they have spanned across municipal boundaries. Therefore, measures are taken to allow high value-added business operations to locate within the city.

因为城市化的发展，多伦多的城市边际逐渐扩大，这也吸引了很多具有高附加值的产业到多伦多地区建厂生产。

In this example, "they" refers to the various industries in Toronto, which is previously mentioned, rather than urban margin. Because of the misunderstanding of pronoun here, which is a common linguistic difficulty, the meaning of the whole sentence is conveyed in the wrong way. It should be that in order to tackle this problem, the local government of Toronto took some measures to optimize the layout of industries instead of letting it developing arbitrarily, and moved various industries to boundary areas. A shortage of grammatical knowledge causes the logical mistake here. The meaning of interpreted version is totally different from that in the source text, and it leads to a severe problem.

Example 3

Traditional heavy manufacturing operations are relocated in the surrounding areas, where the realty taxes are lower, and there is plenty of available land for greenfield development.

传统的加工制造业都转移到了多伦多周边地区，所以多伦多有广阔的土地用来发展绿色产业。

The latter compound sentence is arranged to illustrate a reason rather than a result. It demonstrates the situation of surrounding areas rather than the central part of the city. Although the interpreter knew something about urbanization before doing this task, she still failed to learn about the detailed situation in Toronto. In common sense, since traditional industries are relocated in the surrounding areas, their original locations may be occupied by the green industry, and the government should strongly support it, but in this sentence, the greenfield is kept as supporting facility to minimize the pollution caused by heavy industry, so it is located together with them in the outer area of the city. Such information can hardly be obtained in such a short time, but if the interpreter has made some preparation and learned about the basic situation of Toronto, she can probably avoid the mistake. From the example above, we can conclude that ample knowledge of the topic is essential for avoiding comprehensive mistakes.

Apart from comprehension, effort allocation is equally important when doing multiple tasks at the same time. When interpreting, the interpreter should first listen to the original text while processing information in mind. At the same time, he should try to memorize the information after decoding, store it in mind for several minutes, and write down the keywords in the notebook in case that the information will be forgotten. This process involves the cooperation of listening, thinking, memorizing and writing, which should be completed within a very short period. And sometimes, these meatal actions interfere with each other, so how to coordinate them is another problem.

Example 4

After all, I'm one of the green guys: I grew up with hippie parents in a log cabin. I started a site called Tree hugger— I care about this stuff.

其实我算是一个绿色环保的人，因为我是在小木屋里被嬉皮士父母带大的。... 我也很关心这些问题。

Here, one segment of the sentence is left in interpretation because of the intensive arrangement of information. In other words, the information load surpasses possessing capability. Before the missing part, there are two challengeable points: hippie parents and a log cabin, which are not expected to appear here

and are not familiar to the interpreter. So once hearing these expressions, a great effort should be distributed to figure them out, leaving very little capacity space to receive new information. As a consequence, the following sentence is missed. Fortunately, it doesn't relate too closely to the latter part, so it doesn't impede the whole structure's integrity. But these problems can be avoided through better effort allocation.

Example 5

And I thought about it, and I came up with one. I've been doing it for the last year, and it's great. It's called weekday veg. The name says it all: Nothing with a face Monday through Friday.

所以我想到了了第三种解决办法。那就是周内素食，就是周一到周五。

An appropriate allocation of effort is extremely difficult when the speaker talks in a very fast speed. In the sentence, the speaker is talking about how he comes up with the idea to become a weekday vegetarian. He uses several short sentences to make it more natural and smoother. In that case, the interpreter doesn't need to spend a lot of time to figure out the complicated structure of long sentences as usual, but how to remember all the details and transform them into another language is a big challenge. It is often the case that when then speaker speaks very fast, the interpreter gets nervous and tries to write down more in his or her notes. But it should be noticed that the more effort you spend on taking notes, the less you spend on memorizing. When listening to this part, the interpreter managed to write down the keywords but overlooked the complementary information, which is equally important.

Example 6

为推进人类和平与发展的崇高事业做出了重大贡献。

The Olympics has made a great contribution to human society.

There is no listening or understanding obstacle in this sentence since it is uttered in Chinese, but the interpreter failed to interpret it faithfully. That's because too much effort was allocated to take notes, and the short-term memory was deteriorated accordingly. Not too many words can be recorded in the note, so once the information is forgotten, the interpreter tends to generalize it to keep pace with other information. This is a common mistake in C-E interpretion, and it reflects the interference between note-taking and memory. It reminds us that more efforts should be allocated to memorizing the text rather than taking notes, and notes is just a supplementary means that can't be relied too much on.

Example 7

在历届奥运会上，各国运动员秉承更快、更高、更强的宗旨，顽强拼搏，追求卓越，创造了一个又一个佳绩。

The athletes compete with each other and pursue better scores, and they all get very good results through their participation.

The problem in this sentence is manifested in the second phase of interpreting in accordance with Gile's effort model. Although the interpreter managed to listen and memorize all the information in the original text, she didn't know how to express it efficiently and concisely within a limited time. After doing some analysis and adjustment, this sentence can be translated into "At successive Olympic Games over the years, athletes from across the world, committed to the motto of "higher, faster and stronger," have made their utmost efforts in quest of sporting excellence and set one record after another." But during interpretation, the interpreter has to listen to the following parts and try to remember them as much as possible, so it is impossible to have enough time to search for appropriate expression. Therefore, the best way to solve this problem is to get used to relative expressions in preparation.

Findings

After analyzing the examples under the guidance of the Comprehension Equation and Effort Model proposed by Gile, the author finds that there are mainly two factors that have a great influence on interpreting performance, which are failure to understand the source text and limitation of cognition capacity. Failure of understanding is caused by language competence, storage of relative knowledge and analyzing ability.

Language competence refers to identifying and analyzing source language and transforming it into the target language, which mainly involves the first and the last step in interpreting—listening and production. In order to interpret in a precise way, the interpreter should possess a good knowledge of both languages in terms of their lexicon, syntax, pronunciation and so on. Interpretation is usually carried out in real situations, and the speaker may have a strong accent. As a qualified interpreter, one must be able to adapt to different voices, intonations, talking speed and expressing habits. To understand the source language means getting to know the sense and meaning rather than every word. To know the meaning of each word the speaker says is the basic demand, which requires a large vocabulary. Then, abbreviations and popular

new words and expressions with characteristics should also pay attention to. Furthermore, the interpreter should be able to analyze the logic between each part of the sentence through conjunctions in English and underlying meaning in Chinese.

Storage of relative knowledge is also essential to interpret. A good interpreter should "know something of everything and know everything of something". Without the support of background knowledge, an interpreter can hardly understand the exact meaning of certain expressions. For example, credit means a particularly good quality in daily life, but it carries the meaning of the money on your bank account in finance. A word may carry different meanings in different situations, so when preparing for an interpretation task, the terminology, thematic knowledge, and the context should all be included.

What's more, the interpreter should pay attention to cultural differences as well. As is aware to us all, interpretation is not simply the transformation of language, it also relates to the interaction of two cultures. To some extent, the interpreter should act as a bridge connecting two cultures to avoid cultural conflicts and misunderstanding, especially when the two parts have learned nothing about the other culture.

The third factor influencing understanding is analyzing ability. Once the information is inputted into one's mind, it doesn't come out directly. The analyzing process is critical in getting the sense of language. There are two ways to do an analysis—an up-down approach and a bottom-up approach. The up-down approach means that the interpreter has already known the topic of the speech, and he can deduce some words or ideas that can be included in the speech. A prediction of relative information can efficiently reduce the pressure of the interpreter when fulfilling the tasks. Still, the interpreter should listen carefully if his previous deduction may interfere and cause incorrect judgement. The bottom-up approach refers to how the interpreter concludes the overall meaning by summing up the ideas of each sentence or even phrases. During this process, the interpreter should be well aware of the consistency of each part. If the meaning of one part is contradictory to other parts, then there might be some logical mistakes.

Last but not least, the limitation of cognition capacity is also a key factor to consider. The cognition capacity of a person is limited, so a person can't deal with too many tasks simultaneously. When performing a specific task, the distribution of effort also influences the effect of outcomes. If too much effort is allocated to take notes, then the interpreter may fail to get the meaning from listening. Therefore, it is suggested that interpreters focus more on the most urgent and important parts. When the effort needed surpasses the cognition load, memorizing should be given top priority.

Conclusion

Interpretation is such a complicated activity that weaknesses of any process while performing the task may lead to failure. Since we have figured out two factors that hinder the improvement of interpreting skills under the guidance of Gile model, it is necessary to explore effective ways to facilitate interpreting competence accordingly. First of all, comprehension capability and expressing fluency can be improved through intensive training of language and accumulation of encyclopedia knowledge. To be a qualified interpreter, one should first become a brilliant bilingual master. It is commonly assumed that the interpreter's native language will never cause any trouble, but some misunderstandings do occur due to the confusion caused by the native language. So systematic learning of both languages is necessary. Then, although one's cognition capacity is limited, it is not fixed. In other words, cognition capacity can be enlarged by scientific training to avoid information overload. Regular memory training can be helpful. In terms of the specific way to provide such kind of training, more efforts should be devoted.

Furthermore, interpreting competence can be facilitated by optimizing effort allocation. Listening, note-taking and memorizing are three major factors that interfere with each other during interpreting. It is suggested that listening should come first because, without information inputted through listening, there is nothing to write down. Then memorizing should come second, and note-taking should be taken as an auxiliary tool to help to memorize more information. The more proficient one is in note-taking, the more effort can be distributed to other processing activities. All in all, the improvement of interpreting skills calls for comprehensive and long-term effort under the guidance of scientific approaches. By splitting the interpreting process into small units, the Gile model enlightens us that the coordination of all the procedures contributes to a good interpreting performance, so only by improving skills of each procedure and coordinating each part can better interpreting results be attained.

References

[1] Agnieszka, S. & Kazysztof, K. (2016). Cognitive Load in Intralingual and interlingual respeaking——A Preliminary Study. *Studies in Contemporary Linguistics, 52*, 209-233.

[2] Carmen, T. & Raymond, N. E. (2007). Identifying Areas of Competence Needed by Educational Interpreters. *Linguistics and Language Behavior Abstracts*, *83*, 179-190.

[3] Chao, D. (2014). An Empirical Study of Interpreting Quality with Interpretive Theory and Teaching Strategies. *Theory and Practice in Language Studies, 4,* 2466-2471.

[4] Gile, D. (1995). Basic Concepts and Models for Interpreter and Translator Training. Amsterdam & Philadelphia: John Benjamins Publishing Company.

[5] Guadalupe, V. & Claudis, A. (2003). Interpreters, Interpreting, and the Study of Bilingualism. *Annual Review of Applied Linguistics*, *23*, 58-78.

[6] Habibollah, M., Moslem, F. & Maryam, P. (2015). Self-efficacy and Prediction of Note-taking Inclination among Undergraduate Translation Students. *Theory and Practice in Language Studies, 5,* 2366-2372.

[7] Hiroko Yamada. (2018). Interpreting Process Analyzed Based on the Multidirectional Reformulation Activities of New Learners. *Theory and Practice in Language Studies, 8*, 267-277.

[8] Hiroko Yamada. (2018). Validity of Note-taking for New Consecutive Interpreting Learners: An Empirical Study of University Interpretation Courses. *Theory and Practice in Language Studies, 8*, 1387-1396.

[9] Jiawei Xing. (2010). Research on the Relationship between Cognitive Ability and Interpreting Ability. *Journal of Shenyang Normal University*, 86-88.

[10] Ruyuan Feng. (2014). The Enlightenment of Gill's Comprehension Equation to the Improvement of interpreter's Ability——An Interpretation Report of IBM CSC Yinchuan Project in 2013. Master's Thesis of Yinchuan University.

[11] Shanshan Zou. (2015). The Enlightenment of Gill's Comprehension Equation to Interpreters. *Journal of Zhengzhou Aeronautical Industry Management College*, 86-88.

[12] Xiaohong Li. (2015). Understanding Barriers in Consecutive Interpreting from Gill's Effort Model and Comprehension equations. Master's Thesis of Fujian Normal University.

[13] Xiongwei Li. (2014). A Study on the Problems and Countermeasures of English Majors' Interpreting Ability. *Journal of Jishou University*, 176-179.

[14] Xue Li. (2017). A Report on Interpretation of Sino-African Communication Project from the Perspective of Gill's Comprehension Equation. Master's Thesis of China Foreign Affairs University.

[15] Yuezhen Cheng. (2010). On the Composition of Business English Interpreting Competence from the perspective of Gill's Interpreting Model. *Journal of North China Electric Power University*, 110-114.