

## أثر النظرية المعرفية في الترجمة الفورية

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### الملخص

يدرس هذا البحث أثر النظرية المعرفية على فعالية و دقة الترجمة الفورية لدى طلاب السنة الرابعة في قسم الترجمة /التعليم المفتوح. يهدف البحث للمساهمة في تعزيز تفعيل النظرية المعرفية بكافة أنواعها في تدريس مادتي الترجمة الفورية، كما يهدف لزيادة وعي المدرسين و الطلاب بأهميتها للوصول إلى ترجمة فورية دقيقة و سريعة. من أجل ذلك قامت الباحثة بإجراء بحث تجريبي على عينة من الطلاب تم تقسيمهم إلى مجموعتين. يتضمن البحث اختبار ترجمة فورية لنص و الإجابة عن استبيان. قامت الباحثة بتفعيل كافة أنواع النظرية المعرفية للمجموعة الأولى ثم الطلب منهم ترجمة النص، أما المجموعة الثانية فتوجب عليهم ترجمة النص دون تفعيل النظرية المعرفية. كما طلبت الباحثة من المجموعة الأولى الإجابة عن أسئلة التقنية المذكورة أعلاه لمعرفة أثر النظرية المعرفية على فعالية الترجمة الفورية. أظهرت نتائج ترجمة النص أن المجموعة التي تم تفعيل النظرية المعرفية لديها قامت بترجمة النص بشكل أسرع و أدق من المجموعة التي لم تزود بالنظرية المعرفية. يستخلص البحث أنه على مدرسي مادة الترجمة الفورية تفعيل النظرية المعرفية بأنواعها ذات الصلة بالنصوص التي يجب على طلابهم ترجمتها للحصول على ترجمة فورية أقرب ما تكون إلى النص الأصلي من حيث الدقة.

الكلمات المفتاحية: الترجمة الفورية، النظرية المعرفية، تفعيل المعرفة

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## **The Role of Schemata Theory in Simultaneous Interpreting**

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### **Abstract**

This present research paper is intended to examine the effect of activating schemata on 4<sup>th</sup> year students studying simultaneous interpreting courses in the Open Learning Program, University of Aleppo, Syria. The purpose for conducting this research is to contribute to classroom practice and to raise instructors' and learners' awareness of activating schemata in simultaneous interpreting courses.

For this purpose, the researcher has conducted experimental research in which participants, divided into 2 groups had an interpreting test. KWL technique was also used on the experimental group. Data analysis has shown that schemata have a positive effect on simultaneous interpreting. This study concludes that instructors should activate schemata in their classes to help students perform fast and accurate simultaneous interpreting.

**Key Words:** Simultaneous Interpreting, Schemata Theory, Schema Activation.

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## 1.Introduction

Simultaneous interpreting is a multifaceted task which requires the use and coordination of many cognitive processes. Due to its complexities many students and trainees find simultaneous interpreting challenging and difficult. In addition, many instructors struggle to find methods to effectively teach this course. Being a successful interpreter requires a lot of training in addition to having other proper linguistic and extra-linguistic knowledge. Therefore, a considerable number of researchers have shifted their focus from teaching simultaneous interpreting like any other course, to focusing on strategies and techniques to help students and trainees master it. One of the most effective strategies is activating the different types of schemata or what is also known as background knowledge of the interpreter about the spoken discourse. Activating such techniques can help trainees and interpreters “interpret better and faster” by raising their awareness of interpreting strategies, highlighting the relationship between strategy use and interpreting tasks and by increasing interpreters` existing interpreting strategies.

Our understanding of something is the result of our background knowledge, our past experiences or to use more technical term our schemata<sup>(1)</sup>. Linguists and researchers used different terms to describe the concept of background knowledge in addition to the term of schemata like: frames<sup>(2)</sup>, scripts<sup>(3)</sup>, event chains<sup>(4)</sup>, and expectations<sup>(5)</sup>. These terms are not all identical, however, they share some essential assumptions.

There are many fields of knowledge which need schemata theory and its applications like reading comprehension, listening comprehension, translation and interpreting. Interpreting which is considered as a part of translation is defined as rendering a spoken text into the target language at the same time as the spoken text in the source language is being delivered. Interpreting is believed to be a highly complex cognitive process because language perception, comprehension, translation and production all take place in parallel.

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<sup>1</sup> Rumelhart DE, Schemata, the Building Blocks of Cognition, 200.

<sup>2</sup> Fillmore CJ, The Need for a Frame Semantics within Linguistics, 421.

<sup>3</sup> Schnak & Abelson, Scripts, Plans, Goals and Understanding, 323.

<sup>4</sup> Warren, Nicolas & Trabasso, Event Chains and Inferences in Understanding Narratives, 231.

<sup>5</sup> Tannen D, The Effect of Expectation on Conversations, 203.

Gerver (1976) and Moser (1978) conducted early research which led to the development of several models of interpreting performance. Empirical studies reviewed and described by Goldman-Eisler (1972), Gerver (1976), Barik (1973, 1975), Chernov (1979), and Lambert (1984) focus on the different aspects of input and output, such as the overlap between comprehension and production, the length of ear-voice span, which is known as processing time and the effect of source text delivery rates and hesitation pauses.

## **2. Purpose of the study**

The researcher hopes that the findings of the study contribute to the field of teaching simultaneous interpreting in the Syrian universities. This study investigates the implications of providing interpreters with different types of schema and how this theory can help interpreters achieve fast and reliable interpreting.

## **3. Significance of the study**

This research paper is significant for instructors and trainees of simultaneous interpreting. It guides them how to prepare their texts in a way that enhances their trainee's listening comprehension through helping them build the different types of schemata which are beneficial to their understanding which leads to the best interpreting. The research also presents useful procedures and activities which are implications of schemata theory on instructing simultaneous interpreting.

## **4. Methodology and Data**

This is an empirical research which studies the indispensable role of schema theory and its types on the efficiency of simultaneous interpreting. The research method applied in this study is that of the experimental method. According to<sup>(1)</sup>

"an experiment is a scientific investigation in which the researcher manipulates one or more independent variables, controls any other relevant variables, and observes the effect of the manipulations on the dependent variable(s)" (p. 265).

It uses the qualitative and quantitative method. Two instruments were used. These are a pre-listening test for the experimental and control groups (40 students). An intervention study of schema- activation training will be conducted. It provides different types of schema to one group (the experimental group), but not to the other one ( the control group). Another technique which will be used is KWL technique which

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<sup>1</sup> Ary, Jacobs and Sorensen, Introduction to Research in Education, 213.

was first developed by Ogle in (1986) and it is a very useful one to activate schema in interpreter`s minds.

Ary, Jacobs and Sorensen (2010) believe that the experimental method, in its simplest form, has three main characteristics: (1) manipulate the independent variable, (2) hold constantly all other variables that affect the dependent variable, and (3) observe the effect of the manipulation of the independent variable on the dependent variable.

The aim of experimental research is to study the effects of specified treatment given to participants in experimental groups. Those groups might be developed specifically to conduct an experiment, or they might exist naturally i.e. groups which exist prior to an experiment.

In this study, the researcher has utilized already existing groups. Participants are randomly chosen. Participants are exposed to intentional treatment, which is considered as the independent variable. In this research, schemata-based listening comprehension is the treatment participants are exposed to. These schemata have been given to the experimental group. Accordingly, schemata are considered the independent variable of the study.

## 5. Results and discussion

### 5.1 Quantitative Analysis of the Results of the Interpreting Test

At first, the researcher tried to activate participants` schemata about the topic of the text by asking them “ What is bipolar disorder?”. Participants started giving suggestions. A discussion was held among the researcher and the participants, at the end of which, the researcher defined the concept of schemata and its types. Then, the researcher introduced types of schemata in relation to the text and provided a list of glossary. Huang <sup>(1)</sup>and <sup>(2)</sup> consider the importance of explaining and teaching key words because it helps to improve comprehension.

Through the use of these pre-listening techniques, the researcher can check whether schemata can, first, aid in interpreting; and second, compensate for low proficiency learners. Schemata activation aims at facilitating interpreting.

*Table1: The experimental and control groups: Means of the Interpreting test*

Group Statistics				
Group	Number	Mean	Std. Deviation	Std. Error Mean
Experimental group	20	12.90	1.825	.420
Control group	20	6.35	3.220	.721

The table shows that the mean of the control group is 6.35 and

<sup>1</sup> cited in Ghafarpour H, How to Present Cultural Schemata to Get the Best Results of Instruction: Assessing Two-Pre reading Tools.

<sup>2</sup> Miharak, Effects of Pre-reading Strategies on EFL/ESL Reading Comprehension, 52-73.

the mean of the experimental group is 12.90. Apparently, the mean of the experimental group is higher than the mean of the control group.

The experimental group consists of four males and sixteen females. After activating participants schemata and providing them with content, formal and linguistic schema, the results come as the following. Concerning content schema:

2 males (10% of participants) correctly interpreted the following scientific terminologies after content schema activation : dementia praecox, delusions, hallucinations, bipolar disorder, psychiatrists.

1 male (5% of participants) correctly interpreted the following scientific terminologies after schema activation : thought disorder, constellation of symptoms, psychiatrists.

1 male (5% of participants ) correctly interpreted the following scientific terminologies after schema activation: dementia praecox, psychiatrists, hallucinations.

9 females (45% of participants) females correctly interpreted the following scientific terminologies after content schema activation: delusions, hallucinations, psychiatrists, constellation of symptoms, thought disorder, bipolar disorder

3 females (15% of participants) correctly interpreted the following scientific terminologies after content schema activation: delusions, hallucinations, psychiatrists, constellation of symptoms, manic-depressive insanity.

2 females (10% of participants) correctly interpreted the following scientific terminologies after content schema activation: delusions, hallucinations, psychiatrists.

2 females (10% of participants) could not interpret any scientific terminology correctly.

These percentages show that content schema improved the ability of 90% of participants, with only 10% not experiencing any improvement. The number of words correctly interpreted is significantly higher than the control group.

Concerning linguistic schema, 40% of participants used the passive tense to interpret the first sentence in the text, which means that linguistic schema helped participants to use correct tenses.

The control group consists of nine males and eleven females. They have interpreted the text without schemata activation. The results come as the following: concerning content schema:

3 males (15% of participants) correctly interpreted the following scientific terminologies: hallucinations, thought disorder, delusions

2 males (10% of participants) correctly interpreted the following scientific terminologies: hallucinations, psychiatrists

4 males (20% of participants) could not interpret any terminology.

2 (10% of participants) females correctly interpreted the following scientific terminologies: hallucinations, thought disorder, delusions, psychiatrists.

6 (30% of participants) females correctly interpreted the following scientific terminologies: hallucinations, psychiatrists.

3 (15% of participants) females could not interpret any terminology.

This means that 15% of participants in the control group were unable to interpret any terminology, while 85% could interpret some of them. The control group could correctly interpret significantly less.

On the other hand, all participants in the control group misinterpret the tense in some sentences especially the first sentence. This means that the lack of linguistic schema affects the accuracy of their interpretations.

## 5.2 Quantitative and Qualitative Analysis of the Results of KWL Technique

Participants have to fill in the columns and answer the three main questions. After giving a short introduction about the topic of the text, they answer the first column which is entitled “What I know”. In fact, their answers vary a lot and, in my opinion, this is due to differences in the background knowledge of participants. Their answers vary from a scientific text to a medical one to a cultural text. Moreover, some answers are irrelevant and reflect a superficial level of understanding. Consequently, the majority answer that it is a scientific text.

In terms of quantitative analysis, the researcher presents the results of the first column in the following table.

**Table2: The Results of the First Column “What I know” in percentages**

First column					
Scientific text	Cultural	Medical	Mental disorder	Hallucinations	Irrelevant
45%	5%	20%	5%	15%	10%

It is clear from the table that the majority of answers relate the text to the scientific domain with 45%. Only 20% of participants answer that it is a scientific, while 15% say it is about hallucinations and 5% say is a cultural and a mental disorder respectively. Surprisingly, 10% write irrelevant answers.

In the second column which is entitled “What I Want to know”,

participants write what they need to know in order to interpret the text. In this stage, the researcher wants to know what type of schemata participants rely on and need to perform any interpreting task. The majority answer that the need to know the meaning of certain terminology to interpret the text, which indicates, in my opinion, the importance of activating content schema in particular as well as the need to provide learners and trainees with a glossary of terminologies. What is interesting is that some participants answer that they want to listen to the text more than once, which reflects, in my opinion, the need to develop the listening comprehension skill of students and trainees since it is the first stage in SI.

The following table presents the results of the second column in percentages.

**Table 3: The Results of the Second Column “What I Need to Know” in Percentages**

Second column		
know the meaning of scientific terminologies	need to listen to the text more than once	they need to know about the cure
70%	20%	5%

As the table shows 70% of participants answer that they need to know the meaning of scientific terminologies. 20% of participants need to listen to the text more than once while 5% answer that they need to know about the cure.

In this stage, the researcher starts activating the schemata of participants by providing them with information related to formal, linguistic and content schema. She provides a glossary of some medical terminologies and difficult words and explains them in English and Arabic.

After interpreting the text, participants are asked to answer the question of the third column which is “What type of schema helped you in interpreting”

The majority of answers show that content schema play a pivotal role in aiding them interpreting the text, which proves the urgent need to activate schemata in SI courses. Some participants say that a mixture of content and linguistic schema is helpful, while others say that only linguistic schema is useful. However, some participants say that none of schemata types help them in interpreting the text.

The following table shows the results of the last question “what type of schema helped you interpreting the text” in percentages.



**Table 4: The Results of the Third Column in Percentages**

Third column				
linguistic schema helped	formal schema helped	content schema helped	none of the types of schemata helped	A mix of content and linguistic schema
5%	5%	65%	10%	15%

The table reflects the importance of activating the various types of schemata, especially, content schema in SI. 65% of participants believe that content schema helped them interpreting the text. 15% say that both content and linguistic schema were helpful. 5% of participants regard activating linguistic schema essential for performing the task, while 5% believe it is formal schema. However, 10% of participants say the none of the types helped them interpreting the text.

## 6. Discussion of the results

The researcher has found out that the results of the research correlate with the previous body of research conducted in relation to this research topic. In this study, the researcher has provided the experimental group with schemata to check whether or not schemata will help them to interpret the text more accurately and efficiently than the control group. The results show that when the experimental group of participants have been provided with schemata, their mean marks are higher than the control group.

This wider comprehension of the text which leads to a better SI of it . it also leads participants to express the vital role of activating schemata in KWL technique. Results show that 70% of participants demand a glossary of terminologies to be able to interpret the text which proves that activating schemata in general and content schema in particular have a positive effect in SI.

Results show that 95% of participants say that schemata helps them in SI. 65% believe that content schema helps them, 15% say a mix of content and linguistic schemata is important, while 5% give the credit to linguistic and formal schema respectively.

## 7. Conclusions

Results show that in the interpreting test, results of the experimental group are better than the results of the control group. This means that activating schemata proves to have positive effects on the SI of participants. Participants who are exposed to schemata related to the interpreting test will do better than participants who are not exposed to schemata related to the interpreting test.

Concerning the KWL technique, results show that participants need a glossary to interpret the text. They agree that activating schemata, especially content schema, aid them in interpreting the text. This means that schemata activation has a role to play which is to help students and trainees of interpreting comprehend texts that contain unfamiliar or difficult terminologies which are higher than their attainment level.

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