

A Study of Instructional Psychology on Grammar-Translation Method from Chinese I-Ching

Guey, Ching-Chung

Department of Applied English, I-Shou University, Taiwan

Tel: 886-7-3869571

E-mail: gueyching2002@gmail.com

Abstract. This paper provides a different perspective on Instructional Psychology from Chinese I-Ching, using the Grammar-Translation Method (GTM) as an example, seeking to answer 3 questions regarding GTM. This paper starts with the analysis of grammar translation method in terms of six variables involved in instructional settings: teacher, student, objective, assessment, material, and methodology. In each of the variable there are two contrastive components that can be specified as yin and yang in the framework of Chinese I-Ching. From the framework of I-Ching, GTM features its six yaos as “Heaven” gua, where all the six yaos are “yin,” (**teacher:** teacher centered-yin, **methodology:** behavioral-yin, **assessment:** product-yin, **objective:** information-yin), **material:** rote memory-yin, and **student:** passive-yin). This model proposes feasible measures on the bases of the dynamics involved in the hexagram to help learners’ reach optimal learning outcomes. As I-Ching was originally developed as a qualitative description, analysis, and prediction of daily events, quantitative surveys with reference to accuracy of predictions from I-Ching requires more empirical studies.

Keywords: Grammar Translation Method, EFL instruction, I-Ching, Ba-Gua, yao, yin, yang, hexagram

Introduction

Teaching English grammar is an essential part in a variety of EFL teaching approaches, not just in Grammar-Translation Method, abbreviated as GTM [1], but also in Communicative Language Teaching (CLT) which focuses mainly on communication. This paper seeks to explore GTM, which was originally developed for CALP (Cognitive Academic Language Proficiency) [2] to help EFL learners master English grammar through induction, deduction, logical inference, imitation and drills. To better describe the approach, we classify the variables involved in GTM instruction settings into 6 components: teacher, methodology, assessment, objective, material, and student. Within each of the component, we further subdivide it into 2 categories. That is, teacher (student-centered vs. teacher centered), methodology (behavioral .vs. constructivist), assessment (process vs. product), objective (knowledge vs. aesthetic), material (rote learning format vs. discovery oriented format), and student (active vs. passive). Since there are two contrastive attributes in each of the 6 components, we therefore borrow the concepts from Chinese I-Ching, along with Ba Gua [3], in which yin and yang (two contrastive entities) and hexagram (the combination of yin and yang from the 6 components, with each one yao), hoping to analyze the dynamic of the 6 yaos (a total of 64 hexagrams) in GTM, thus facilitating prediction and application of GTM to its advantages. This paper further probes the underlying interactive relationships among six variables, by answering the following questions:

Question 1: what is the relationship between **teacher** and **objective** in GTM?

Question 2: what is the relationship between **material** and **methodology** in GTM?

Question 3: what is the relationship between **assessment** and **student** in GTM?

GTM

Firstly, **teacher** in GTM is directive, with full authority in taking charge of learners' activities, whereas **students**

simply follow teacher's instruction and do the given translation exercises or sentence patterns as well as drills. Secondly, the **methodologies** used in GTM mainly include teacher's lectures, introduction, explanation, analysis, and step by step rote learning of drills and exercises, whereas **material** in GTM adopts sentence patterns, translation drills, blank filling exercises, translation of articles, comprehensions of reading, synonyms or antonyms matching, application of grammar to sentence and discourse writing. GTM is originally developed on the basis of functional psychology, in which formal discipline is stressed. It was held, by the theory, that learners' mental capacity can be enhanced through training of language grammar, as in the learning of Latin that one's inductive and deductive ability can be promoted through learning it. In this regard, the **objective** of GTM is to help learners become more capable of reading English literature; developing learners' mental capacity, whereas **assessment** in GTM mainly includes translation tests, and grammar tests, accordingly. Through the translation skills, grammatical rules and matching the words, the grammar-translation method would be established. The strength of GTM lies in its training of cognitive capacity for CALP through exercises on patterns and drills, thus more likely promoting learners' autonomy. On the other hand, the weakness of GTM manifests its low level of learner interest since GTM does not focus on listening and speaking (e.g., student-teacher interaction and communication is neglected). The integration of the 6 components as well as the pros and cons of GTM can be summarized as the chart below:

I-Ching

The I-Ching, "Yì Jīng", Classic of Changes or Book of Changes, is one of the oldest Chinese classic texts. The book is a symbolic system adopted to identify underlying orders in random events. From research, I-Ching is specialized in the system that does not adhere to the law of conservation, as reflected in most hard sciences such as physics or chemistry (Huang, 2000). It is especially powerful to interpret the

development of an event with qualitative changes, as found in most human interactions, on the basis of the law of equilibrium. Each of the material (event) and the counter-material (event) worlds consists of three sub-structures, which can be demonstrated through the structure of the compound of two Guas. The Upper (External) Gua (three yaos) stands for the structure of the counter-event, whereas the Lower (Internal) Gua (also three yaos) stands for the structure of ‘Event’. This can be illustrated through a hexagram (six yaos) below:

Upper yao	(☰ ☷) to denote counter-dominant element	(e.g., teacher)
The 5th yao	(☰☷☷) to denote counter-complementary element	(e.g., methodology)
The 4th yao	(☰ ☷) to denote counter- interactive element	(e.g., assessment)
The 3rd yao	(☰☷☷) to denote interactive element	(e.g., objective)
The 2nd yao	(☰ ☷) to denote complementary element	(e.g., material)
The 1st yao	(☰☷☷) to denote dominant element	(e.g., student)

Analysis of Yin and Yang in GTM

Note that the Ba Gua is composed of upper Gua and lower Gua, with each three yaos, each yao either yin (broken line: ☯) or yang (solid line: ☰). Among the 6 variables (teacher, methodology, assessment, objective, material, and student), there are 3 pairs (teacher-student, methodology-material, and assessment-objective), and teacher, methodology, and assessment in upper gua, whereas objective, material, and student in lower gua, as mentioned in Table 1.

First on **teacher** component, GTM features teacher-centered instruction, so it is legitimate to denote such a component as “yin ☷☷☷ ;” second, on **methodology** component, GTM features behavioral-orientated instruction (teacher gives student lots of step-by-step exercise and activities, with each grammar rules introduced or inferred by the teacher), it is legitimate to denote such a component as “yin ☰☷☷ ; third on **assessment**, GTM features product-oriented assessment (translation tests, grammar tests, and writing tests are given to assess learners’

product performance), so it is legitimate to denote such a component as “yin ☯” next on **objective** component, GTM features knowledge or information acquisition (i.e., capable of reading English literature; develop learners’ mental capacity, which are of knowledge or of understanding by nature), so it is legitimate to denote such a component as “yin ☯ ☯” then on **material** component, GTM features rote learning design (sentence patterns, translation drills, blank filling exercises, which require students to do as much practice as possible) so it is legitimate to denote such a component as “yin ☯ ☯” lastly on **student** component, GTM features learners’ passive role as listeners, imitate what teacher does, follow orders, what to learn and how to learn it is up to teacher’s command, so it is legitimate to denote such a component as “yin ☯ ☯.” In general, we have all the six yaos “yin ☯ ☯” in GTM. The outlook of such a combination can be illustrated through the table below:

Table 2. Features of instructional conditions through 6 yaos in GTM

Nature Factors	Yang (☰☰)	Yin (☷☷)
Teacher		teacher-centered
Methodology		<i>behavioral-oriented</i>
Assessment		product-oriented
Objectives		<i>knowledge</i>
Material		rote learning-design
Student		<i>passive</i>

Dynamics of interactive laws in I-Ching

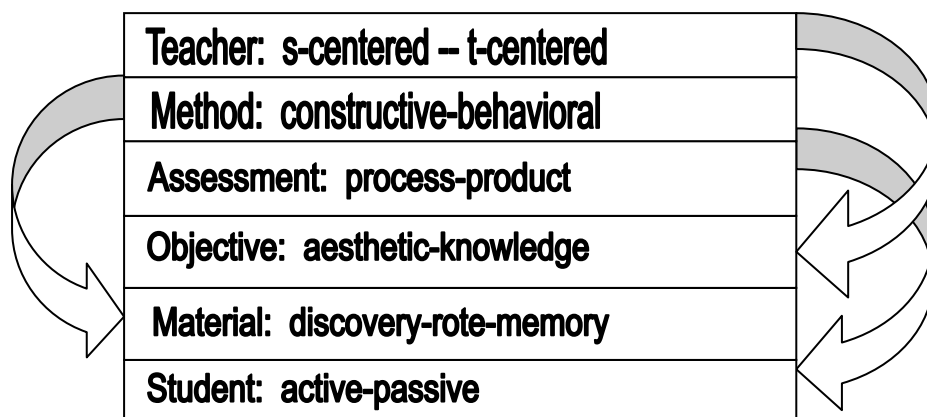
In any given hexagram, there is an interactive relationship between different yaos in both upper and lower guas and those within. (Giang, 2005, P.61) There is an interactive relationship that determines gain (proactive vs. retroactive) or loss (proactive vs. retroactive) after interaction between guas. To specify, the 6th, 5th,

and the 4th yaos in the upper gua correspond with the 3rd, 2nd, and 1st yaos, respectively. If each yao is in its proper position (or proper yin or yang; that is, 1st, 3rd, and 5th yaos for yang, and 2nd, 4th, and upper yaos for yin), then such interaction will result in gains. On the other hand, if each yao is in its wrong position (or improper yin or yang), then such interaction will result in loss (Giang, 2004, P.63). A proper valence for each yao in the hexagram is, in the upper Gua, ☰), and in the lower Gua, ☷, and this hexagram implying 'mission accomplished.' Interactive equilibrium law is reflected in pairs:

the upper yao (☰ ☰) vs. the 3rd yao (☷☷☷).
 the 5th yao (☷☷☷) vs. the 2nd yao (☰ ☰), and
 the 4th yao (☰ ☰) vs. the 1st yao (☷☷☷),

As can be seen, each pair is complementary, and is thus dynamic. The attributes of the hexagram ☰ ☷, for example, are, in the upper Gua, teacher-centered, constructivist methodology, and product-oriented assessment, whereas in the lower Gua, aesthetic-level objectives, rote-memory design materials, and active student. From the complementary equilibrium law, there is a proactive advantage on 1st yao (☷☷☷, active student) in the 4th yao (☰ ☰) vs. the 1st yao (☷☷☷), since they are both of proper valence; that is, active student (1st yao) is reinforced by product-oriented assessment (the 4th yao), so is a proactive found in the pair the 5th yao (☷☷☷) vs. the 2nd yao (☰ ☰), where the 2nd yao (rote-memory design material) is supported by the 5th yao (constructivist methodology), since they are both of proper valence, and so is the proactive found in the pair of the upper yao (☰ ☰) vs. the 3rd yao (☷☷☷), where the aesthetic level objective (3rd yao) is supported by the student-centered teacher (upper yao). The interactive effects between yaos in Upper and Lower Guas can be categorized as Chart 1 below (Guey, 2012):

Chart 1. Interactive law in the Double Gua



(a) the upper yao vs. the 3rd yao:

() vs. () → proactive disadvantage, the 3rd yao is weakened

e.g., the aesthetic (objective) is weakened by the student centered (teacher)

() vs. () → retroactive advantage, the upper yao is reinforced

e.g., the student centered (teacher) is reinforced by the knowledge (objective)

() vs. () → proactive advantage, the 3rd yao is reinforced

e.g., the aesthetic (objective) is reinforced by the teacher-centered (teacher)

() vs. () → retroactive disadvantage, the upper yao is weakened

e.g., the teacher-centered (teacher) is weakened by the knowledge (objective)

(b) the 5th yao vs. the 2nd yao:

() vs. () → retroactive disadvantage, the 5th yao is weakened

e.g., the constructivist (method) is weakened by the discovery mode (material)

() vs. () → proactive advantage, the 2nd yao is reinforced

e.g., rote-memory mode (material) is reinforced by constructivist (method)

() vs. () → retroactive advantage, the 5th yao is reinforced

e.g., the behavioral (method) is reinforced by the discovery mode (material)

() vs. () → proactive disadvantage, the 2nd yao is weakened

e.g., the rote-memory material is weakened by the behavioral more material

(c) the 4th yao vs. the 1st yao:

(☯) vs. (☯) → proactive disadvantage, the 1st yao is weakened

e.g., the active (student) is weakened by process (assessment)

(☯) vs. (☯) → retroactive advantage, the 4th yao is reinforced

e.g., the process (assessment) is reinforced by active (student)

(☯) vs. (☯) → proactive advantage, the 1st yao is reinforced

e.g., the active (student) is reinforced by product (assessment)

(☯) vs. (☯) → retroactive disadvantage, the 4th yao is weakened

e.g., the product (assessment) is weakened by passive (student)

Thus the status of GTM (with the double gua ☷☷) from the perspective of interactive law is:

(a) the upper yao vs. the 3rd yao:

(☯) vs. (☯) → retroactive disadvantage, the upper yao is weakened

e.g., the teacher-centered (teacher) is weakened by the knowledge (objective)

(b) the 5th yao vs. the 2nd yao:

(☯) vs. (☯) → proactive disadvantage, the 2nd yao is weakened

e.g., the rote-memory material is weakened by the behavioral methodology

(c) the 4th yao vs. the 1st yao:

(☯) vs. (☯) → retroactive disadvantage, the 4th yao is weakened

e.g., the product (assessment) is weakened by passive (student)

Answers to the 3 questions

Through the introduction of the three dynamic laws (reciprocal, interactive, and complementary) as well as the classification of the variables involved in GTM into the hexagram of ☷☷ (Earth-Earth), we are thus able to answer the 7 questions initiated in the very beginning of this paper.

Question 1: What is the relationship between **teacher** and **objective** in GTM?

→ From the interactive law, GTM features **teacher** (☯) vs. **objective** (☯), thus retroactive disadvantage, the upper yao (teacher) is weakened; the teacher-centered (**teacher**) is weakened by the knowledge (**objective**), suggesting that when GTM's objective of language learning is focused on knowledge acquisition, then the strength of teacher

(teacher-centered) will be weakened; that is knowledge based learning may lower the importance of teacher.

Question 2: what is the relationship between **material** and **methodology** in GTM?

→ GTM features its 5th yao (methodology-behavioral) vs. the 2nd yao (material-rote memory oriented), (☯ ☯) vs. (☯ ☯), thus causing proactive disadvantage, the 2nd yao is weakened; the power of teaching material organized step by step (rote memory) tends to be diminished by behavioral mode of methodology.

Question 3: what is the relationship between **assessment** and **student** in GTM?

→ By interactive law, GTM features its 4th yao (product assessment - ☯ ☯) vs. 1st yao (passive student - ☯ ☯), thus leading to retroactive disadvantage, the 4th yao (product assessment) is weakened; when students are passive, the function of product assessment will be diminished.

Conclusion:

This paper starts with the introduction of GTM on six variables involved in instructional settings, and in each of the variable there are two contrastive components that can be specified as yin and yang in the framework of Chinese I-Ching. The of hexagram, as based on I-Ching, as well as its three dynamic laws offer good angles or tools for analyses of the underlying interrelationships among the yin and yang nature of each yao (variable), With such a tool, researchers thus may make predictions of learning outcome of different instructional approaches. However, such an approach is not without problems. First, with reference to the six variables involved in the instruction (teacher, student, methodology, material, assessment, and objective) as well its contrastive attributes in each variable, there is a lack of clearly defined criteria for classification, thus causing problems of validity as well as reliability of such kind of survey.

Second, it is theoretically challenging that I-Ching, as well as its subordinate concepts such as Ba Gua, Double Gua, because these concepts are philosophical

by nature, though having been applied by Chinese people for thousands of years, the validity and reliability of which can best demonstrated in Chinese medicine. As to its application in other fields of discipline, such as language instruction, more empirical validation is required.

Next, can the predictions about possible instructional outcomes according to the present approach reliable and valid? It is believed that, success or failure of instruction can be examined by the dynamic relationships underlying attributes (yaos) of each variable in given instruction approach, but I-ching, as well as its relevant concepts were originally created for qualitative interpretation, rather than quantitative computation, and thus the critical issue is: how can these abstract concepts be operationally defined to make predictions valid and reliable. Like many other abstract concepts such as motivation, aspiration, temperament, etc., interpreting and predicting learning outcome through double gua analyses can be seemingly arbitrary because almost every variable involved in the approach is too abstract to be operationally defined. It takes further hard work to 1) create questionnaires or inventories which are specific enough to reflect the abstract concepts in question, 2) re-interpret the implication of each gua (a total of 64 guas) on the basis of the situations at the present time, which requires collaboration of experts in Chinese I-Ching, and 3) the focus of investigation on language instruction can start form correlation studies, rather than experimental ones, to filter out the key variables and then further explore them through experimental studies. Specifically, future interested researchers may consider doing a survey in which the emotional states, or attitudes toward certain aspects of instruction are the focus.

Notes:

- [1] The grammar-translation method is a method of teaching foreign languages derived from the classical (sometimes called traditional) method of teaching Greek and Latin. In grammar-translation classes, students learn grammatical rules and then apply those rules by translating sentences between the target language and their native language. Advanced students may be required to translate whole texts word-for-word. The method has two main goals: to enable students to read and translate literature written in the target language, and to further students' general intellectual development.
- [2] Cognitive academic language proficiency (CALP) is a language-related term which refers to formal academic learning, as opposed to BICS. In schools today, the terms BICS and CALP are most frequently used to discuss the language proficiency levels of students who are in the process of acquiring a new language.
- [3] Ba gua, a fundamental philosophical concept in ancient China. Factors such as Time, People, Environment, Property and Events are also expressed through the 64 Hexagrams, and the integration between these components is the essence of Xuan Kong Da Gua. Understanding how these Hexagrams interact with one another allows the practitioner to harness the Qi of time and space, as well as predict events and outcomes.

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