



Integrating Traditional Chinese Medicine Theory with Diagnostic Assessment in Language Learning

Hanwei Tan

Defense Language Institute Foreign Language Center, USA

Abstract

Diagnostic Assessment directed learning is well accepted, discussed, and applied in many foreign or second language-teaching settings. It provides instructors with ‘lab tests’ for individualized teaching and guidance for effective learning.

This study presents Taoist-based Traditional Chinese Medicine theory (TCM) for diagnostic assessment (DA) of learning. It borrows TCM thinking, which seeks solutions for the recovery of the entire body’s health. Just as van der Greef, a professor of analytical bioscience points out, Chinese medicine provides diagnoses through patient symptom descriptions and appearance, and then it seeks to address the overall systemic problem. The integration of this thinking with diagnostic assessment, teaching, and learning efficiency, as observed in practice, has both boosted and achieved long-term effectiveness. This is due to the approach to the learner’s learning style, personality, and motivation in diagnostic assessments is a survey or experiment-based process, as well as a bottom-up process that is effective in the short term. When joined with TCM thinking, the same problem will be examined and reviewed from a holistic perspective. Factors that shape the learner’s learning style, personality, and motivation such as family, education, culture, and environment are all taken into consideration. Thus, a comprehensive treatment plan for the same problem is “put into action” and the expected learning results are achieved.

This study is composed of three parts:

- 1. Discuss DA-directed learning and features of survey-based DA tools such as Barsch Learning Style inventory, E & L learning style questionnaire, Cattell’s 16 Personality Factors Test, and motivation questionnaire and their applications in short and long-term classrooms.*
- 2. Discuss features of TCM thinking and its application and effectiveness in both short and long-term foreign/second language teaching and learning settings.*
- 3. From products to practice, demonstrate how Chinese medicine thinking and diagnostic analysis of learning are integrated to achieve effective teaching and learning.*

At the end of the presentation, the audience will have a clear idea of how DA-directed learning and TCM thinking affect effective learning, respectively, and how the combination of both works even better.

Keywords: *Integration, Traditional Chinese Medicine, Diagnostic Assessment, Language Learning*

Introduction

In this paper, I will cover three subtopics: The first is diagnostic assessment (DA)-directed teaching and learning. DA is a problem-solving approach based on Western science. At the Defense Language Institute (DLI), the most commonly used DA tools include the Barsch Learning Style Inventory (BLSI), the Ehrman–Leaver (E&L) Learning Style questionnaire, the Myers–Briggs Type Indicator (MBTI), the Motivated Strategies for Learning Questionnaire (MSLQ), and the Online Diagnostic Assessment (ODA). These tools are not perfect, but they have proven effective in learning problem-solving and have greatly improved teaching. The second subtopic is traditional Chinese medicine (TCM) thinking, one of the experiments conducted in Chinese basic and intermediate schools at DLI. The ideas of four TCM diagnosis methods—observe, listen, ask, feel—yin-yang balance, and overall treatment of problems are well implemented to make up DA-directed teaching and learning. TCM thinking works especially well in overcoming learning barriers when the students get stuck at a certain level. The third subtopic is called



From Products to Practice. The three case studies demonstrate how products in TCM thinking and DA can be integrated to improve learning at different venues.

Da-Directed Teaching And Learning

Let us first look at some features of DA-directed teaching and learning.

1. The BLSI. The BLSI is an effective tool to assess students' learning styles, including visual, auditory, tactile, and kinesthetic. "By knowing the preferred learning style of the students in a classroom, a teacher can better construct their teaching methods to match and thus help facilitate better learning" (Cesar Bazo).
2. The E&L Learning Style Questionnaire. Learners' cognitive styles are assessed based on "synoptic vs. ectenic" perceptions. Synoptic learning is the perception of phenomena as a whole. Ectenic learning is the perception of phenomena as composites. There are 10 categories under each of the two perceptions; for example, "global vs. concrete" or "inductive vs. deductive." These cognitive approaches help teachers perform individualized instruction.
3. The MBTI. Personality studies help teachers build environments that equally favor students of different personalities.
4. The MSLQ. The MSLQ is a self-report instrument designed to assess students' motivational orientations. It has three components: (a) value components that include intrinsic goal orientation, extrinsic goal orientation, and tasks value; (b) expectancy components, including control beliefs and self-efficacy for learning and performance; and (c) effective components of test anxiety.
5. The ODA. The ODA is an assessment tool that assesses what students have learned and their learning level. Content and linguistic questions cover six parts: the main idea, supporting ideas, vocabulary, subject area, structure, and discourse. After the test, a personal profile is automatically generated, and the learners' advantages, weaknesses, and both level- and subject-appropriate lessons can be suggested.

In practice, these five tools can help DA specialists create students' DA profiles (see Fig.1 below).

BLSI	Visual 40, Kinesthetic32, Tactile 20, Auditory 10
MBTI	ISFJ/INFJ
MSLQ	Intrinsic Goal Orientation 5.5 Extrinsic Goal Orientation 6.75 Task Value 5.83 Control Beliefs 6.6 Self-Efficacy for Learning & Performance 5.88 Test Anxiety 6.6
ODA	Reading L2 grammar 0/3 L3 Main idea 0/6 Listening L1+ Main Idea 1/3 L2 Main idea 2/6 Supportive Ideas 2/12
E & L Cognitive Styles	



Synoptic	1	2	3	4	5	6	7	8	9	Ectenic
1. Field Sensitive								█		Field Insensitive
2. Field Independent		█								Field Dependent
3. Leveling					█					Sharpening
4. Global		█								Particular
5. Impulsive							█			Reflective
6. Synthetic								█		Analytic
7. Analogue				█						Digital
8. Concrete						█				Abstract
9. Random							█			Sequential
10. Inductive								█		Deductive

Fig.1

This profile (Fig. 1) allows instructors to implement individualized instruction and tailor teaching accordingly. For example, as a primarily visual learner, the student's ODA results show she is weak in grammar and main ideas. In the MSLQ, her Extrinsic Goal Orientation score of 6.75 out of 7 is high, which indicates that, to her, "engaging in a learning task is the means to an end." Her personality type is INFJ, that is, introverted (she is energized by quiet time alone), intuitive (she sees patterns and possibilities), feeling (she prioritizes people and emotions), and judging (she prefers structure and order).

In addition, in the E&L cognitive style chart, we see how she learns. Item 1, Field Sensitive vs. Field Insensitive, shows she is a learner who does not learn by "osmosis." As a deductive learner, when learning grammar, for example, she prefers to learn grammar rules first before applying the rules to example sentences. Based on this information, the DA specialist made a complicated and time-consuming tailored teaching schedule, and recommended an individualized learning plan to the student. The plan worked for a short time, but it did not achieve the results as planned. As the course progressed, she struggled even more.

Tcm Thinking

TCM thinking has two parts:

1. Four diagnosis methods, including (a) observation (of the mind and the complexion); (b) auscultation (listening) and olfaction (smelling); (c) inquiry; and (d) pulse feeling and palpation.
2. Yin and yang balance. The yin–yang theory holds that all phenomena consist of two opposite aspects, yin and yang. It also holds that the basic causative factor of disease is an imbalance between yin and yang. TCM doctors treat the human body as a universe wherein yin and yang are balanced by nature. Therefore, treatment must readjust yin and yang to their basic state of relative balance. This results in more holistic treatment, which makes TCM different from Western medicine, which only treats symptoms.

In practice, the instructors used the four diagnoses to look for factors that cause learning imbalances, such as the learners' native language proficiency level, education, family, and cultural background—in addition to the factors listed in DA profiles. The wider the discrepancies among these factors, the more imbalances will occur and the more difficulty students will have in learning. Any factors that cause imbalances in language learning will be treated the same way that "diseases" are treated in TCM.

From Products to Practice: Integrating TCM with DA

Case 1

Based on the student's DA profile (Fig. 1) and after the four TCM diagnosis methods were applied and studied, the instructors decided to focus on her motivation. Because her MSLQ scores in extrinsic goal



orientation and test anxiety were both high, she was encouraged to work on her motivation and test anxiety. There was an imbalance between her initial goal and the currently assigned task. The instructors wanted to seek balance in her learning, so they worked to balance her value components by promoting her intrinsic goal orientation to make her participation in the course an end-all. They enrolled her in the Learning Beyond Curriculum program, in which she had a chance to get involved in many Chinese cultural elements like animation, kung fu, and Go, to name a few. As a result, her love for Chinese language grew, and the barriers she had to studying fell away. In the end, she passed with high scores.

From this case, we can conclude the teaching team did not have to specifically target her DA features. It was not a miracle. When the right pulse was caught and overall treatment was applied, the balance was

Auditory Learner	DA	TCM
Diagnosis	Prefer material to which they can listen.	Observation: Puzzled and confused when he saw Chinese characters that if read out by someone else, he knew them immediately. Listen: Ask him to read after a sound file with his eyes on the characters and read aloud again without listening to the sound file.

achieved, and the “diseases” were cured.

Case 2

In Fig. 2, we see an example of TCM treatment integrated with an individual DA element—an auditory learner. Auditory learners usually do well in the first semester but slow down as more Chinese characters are involved. The typical symptom is they become less proficient in reading. Usually, DA-directed learning would suggest some learning strategies (see Fig. 2). For this student, however, these strategies were short-lived. As a result, his reading and listening skills got worse. The advantage he had as an auditory learner no longer helped him.

His instructor started to adopt the yin–yang theory to balance his learning. First, he observed the student counted too much on picking up things through hearing. Then, by looking at the negative side of his advantage, the instructor found the student had great potential in reading if he was guided to listen, read, and write at the same time. See details in Fig. 2.



Treatment	Read an assignment Read aloud all underlined material. Underline main points Try to form a study group with classmates	Balance Reading and Listening: 1. Read after the speaker to get familiar with the pronunciation, tones, and sound. 2. Do dictation and write down the characters heard. 3. Paraphrase and write down the main ideas in Chinese characters.
-----------	---	---

Fig.2

Case 3

Students who get stuck at a level often encounter barriers that are hard to overcome. TCM thinking and DA-directed learning integration are practiced here in a different approach.

The instructor had students read two different translations of an ancient *Tao Te Ching* text (Fig. 3).

The brave soldier is not violent; The good fighter does not lose his temper; The great conqueror does not fight (on small issues); The good user of men places himself below others. - This is the virtue of not-contending, Is called the capacity to use men, Is reaching to the height of being Mated to Heaven, to what was of old. -- Trans. (Lin Yutang)	Warriors who excel do not parade; Commanders who excel do not anger; Victors who excel don't lightly engage; Skilled managers of men are humble: This defines the power of no-conflict, The way to manage men's strength, The union with heaven, the acme of old. --Trans. (Roberts)
--	---

Fig. 3

The students were asked to compare the translations to find similarities and differences before general comprehension was discussed. Here is what happened in the class.

Student A saw similar things in the two translations. He pointed out the similarities in both translations, such as “not lose temper = not anger”; “not fight = don’t lightly engage (in war or battle)”; “Place himself below others = being humble”; “not-contending is like no-conflict;” and so forth.

Student B saw differences. She said Ross Roberts’s version is more clear, in that “warriors do not parade” is more clear than “the brave soldiers . . . not violent.” Soldiers fight, and soldiers “being not violent” doesn’t make sense. Student B applied logic to her understanding, which brought her closer to the original Chinese text.

Here we see the balance is reached through the two different learning styles: leveling and sharpening. Next, the instructor, presented the following text:

善为士者，不武。善战者，不怒。善胜敌者，不与。善用人者，为之下。是谓不争之德，是谓用人之力，是谓配天，古之极。

He then explained the text by pointing out some key concepts, such as the character “士,” which means “warrior” rather than “soldier” in the context. After that, the instructor introduced the modern translation. As a result, the students found they now fully comprehended the meaning.

After studying the modern Chinese version and the English translation and hearing other students, student C spoke out. She shared the story of her son, who learned martial arts. When a boy at school challenged him, he kicked over his head to scare him away. She said that is her understanding of “Warriors who excel do not parade” and “Victors who excel don’t lightly engage.”



We can see that a top-down approach is applied to achieve the effect of an overall treatment. The discussion thus takes different types of learners beyond their preferences to a more holistic understanding.

Summary

TCM thinking is a much easier and more reflective tool than DA instruments. However, that does not necessarily mean it is better than DA tools. Integrating the two will make teaching assessments more accurate and learning more effective.

References

- [1] Leaver, Betty Lou, Madeline Ehrman, Boris Shekhtman (2011) *Achieving Success in Second Language Acquisition*. Cambridge University Press.
- [2] Betty Leaver Cognitive styles in the service of language learning 2003 System
- [3] C. Chapelle *et al.* (1992) "Field independence/dependence in second language acquisition research" *Language Learning* Vol. 42; Iss. 1
- [4] Cao C and Brown B (2019) Understanding chinese medicine and western medicine to reach the maximum treatment benefit. *J Transl Sci* 6: DOI: 10.15761/JTS.1000334
- [5] Bazo, C. (n.d.). *My Learning Styles Webpage*. learning styles. <https://learningstylescesarbazo.weebly.com/barsch-learning-style-inventory.html>
- [6] Cheng, Raymond, (2021) "TCM Basics". Traditional Chinese Medicine pages by Raymond Cheng, <http://www.tcmbasics.com/>
- [7] Lin , Y. (1948). *The Wisdom of Lao Tsi*. Modern Library 1948.
- [8] Pintrich, Paul R.; And Other.(1991)"A Manual for the Use of the Motivated Strategies for Learning Questionnaire (MSLQ)".76p <https://files.eric.ed.gov/fulltext/ED338122.pdf>
Ann Arbor
- [9] Roberts, M.(2001). *Laozi Dao De Jing:The Book of the Way*. University of California Press.
- [10] van der Greef J (2010) Systems biology-based diagnostic principles as pillars of the bridge between Chinese and Western medicine. *Planta medical* 76: 2036-2047.