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# Adult Teaching Methods in China and Bloom's Taxonomy

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**Keywords**
Adult teaching, Andragogy Bloom's taxonomy, Confucianism, Lower order thinking skills, Higher order thinking skills

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## Abstract

Drawing from Bloom's 1956 Taxonomy and Western theories on adult learning, the authors argue that adult teaching methods in China feature a teacher-centered, information-based and test-driven instructional format. An author-designed survey instrument called Lower-Order Thinking Skills and Higher-Order Thinking Skills (LOTSHOTS) was used to determine whether knowledge, comprehension and application drove adult teaching methods or analysis, synthesis and evaluation drove adult teaching methods in China. The results of the study showed that Chinese instructors of adults were used to teaching lower thinking skills associated with the first three levels of Bloom's Taxonomy, namely, knowledge, comprehension and application. The study proposes some possible reasons and implications of such practices, and suggests that teaching higher order thinking skills to Chinese adult students might widen their horizon in engaging more openly in learning.

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## Introduction

For centuries, scholars from outside China have speculated that education in China, including the education of adults, typically featured a teacher-centered, information-based and test-driven instructional format. Furthermore, Western scholars (i.e., from North America and Western Europe) have asserted that the traditional Chinese educational model reflected the Chinese government's organization and culture (Wang & Kreysa, 2006, p. 1).

What are some ramifications of such educational practices? It is no secret that Chinese adult students turn out to be good test takers. Their scores in Tests of English as a Foreign Language (TOEFL) and Graduate Record Exam (GRE) amaze their American professors. However, the *Chronicle of Higher Education* featured an article about suspect GRE scores in China; students were found to be sharing test questions and answers that were used in subsequent GREs (Wheeler, 2002). With the opening of China to the West, particularly in light of the 2008 Olympic Games, the urge to learn English has become a fever. Training centers assert that students to do well in TOEFL and GRE are assured of continued employment and high salaries. As a result of such a philosophy, many students strive to memorize all the results from past tests so they could do better in their given tests (Li,

2005). Undisputedly, this method has worked for many Chinese scholars and adult students who are interested in furthering their advanced studies in Western industrialized countries, especially in the United States.

While the test scores amaze American professors, Chinese adult students' lack of communication skills, especially in speaking and writing worries their professors. How come students can achieve high scores in tests, yet lack skills in speaking and writing? Simply, Chinese teachers of adults may not have given their students opportunities to practice their speaking and writing as the bulk of their teaching is devoted to fostering students memorization skills. According to Paine (1992), teaching in China is characteristically text-based, subject-oriented and teacher-centered, which is not the typical pedagogical approach in current Western adult education (Wang, 2007). Paine's 1992 research found that Chinese teachers ultimately learn to be great performers, and Chinese students learn to expend great effort in memorizing and analysis of a text chosen by their teachers. Wang (2007) revealed that memorization of texts is more highly valued in China than in any other educational or cultural setting.

In recent years, Chinese teachers have become mindful of innovative approaches in teaching adults, such as andragogy. Introduced in 1975 by Malcolm Knowles, this teaching philosophy asserts that the instructor should partner with adult learners, building on students' prior experience and promoting student self-direction. As China strives to modernize its agriculture, industry, military, science and technology, will it attempt to modernize its teaching methodology? What remains under-researched is whether adult teaching methods in China are congruent with Bloom's lower three levels of cognitive taxonomy associated with knowledge, comprehension and application, or they are congruent with Bloom's higher three levels of taxonomy associated with analysis, synthesis and evaluation, as well as Anderson and Krathwohl's additional level of creation of knowledge.

Therefore, to investigate China's practices, the following research question emerged:

What teaching methods are used in adult teaching as practiced in China?

To identify these teaching methods, the study related Chinese adult education tasks and teaching strategies to Bloom's cognitive taxonomy.

This research has two areas of potential significance: teachers of adults in China could blend their teaching methodologies with Western innovative approaches; Western teachers could adjust their teaching methods as they help Chinese adults learn in ways that might differ from the way that they experienced in China.

## Theoretical Framework

In the broadest sense, Chinese adult teaching methods and Western approaches represent two polarized points of view. Teaching in China has relied on conventional ideas and an orientation to knowledge, comprehension and application, which comprise the first three levels of Bloom's taxonomy (Chen, 1981). Chen further found that, in general, Chinese educators maintained that all education encompasses two goals: teaching books and teaching learners (as cited in Wang, 2007). To teach books, teachers of adults emphasize detailed analysis of textbooks. To teach learners, teachers expect learners to learn whatever the teachers and textbooks have to convey; the responsibility lies with the learner rather

than the teacher. Biggs' 1996 research found that Chinese adult educators prefer didactic teaching and rote learning to critical thinking. In contrast, many Westerners prefer student-centered teaching as it manifests andragogical philosophy (Jarvis, 2002; Knowles, Holton & Swanson, 1998, 2005).

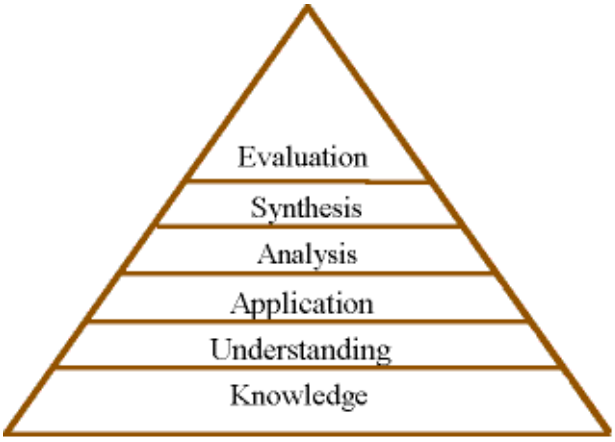
More recently research in the West found that scholars (Cranton, 1994; King, 2005; Mezirow, 1991, 2000) have been advocating the use of the theory of transformative learning in adult education. The key in transformative learning asserts that learners' critical reflection and critical reflection are closely related, which aligns with Bloom's higher levels of his taxonomy. It should be noted that for the remainder of this study, the term "American" will usually be used instead of "Western" because adult education practices can vary significantly across even Western cultures.

## Review of the Literature

To examine the theory and underlying factors of Chinese adult teaching practices, the literature related to Bloom's 1956 Taxonomy, andragogy (Knowles, 1975), and Chinese teaching were reviewed.

### Bloom's Cognitive Taxonomy

One of the prevailing mental constructs of thinking and learning processes used in United States education was developed by Benjamin Bloom and his associates starting in 1948. They identified three domains: cognitive, affective, and kinesthetic, and published their first handbook, focusing on the cognitive domain, in 1956.




Bloom's 1956 cognitive taxonomy contains six levels, the bottom three levels being considered lower levels that promote lower thinking skills, namely knowledge, comprehension and application. Generally, Chinese teaching has focused on these levels. The top three levels of Bloom's taxonomy – analysis, synthesis, evaluation - promote higher order thinking skills. Most American teachers of adults have been advised to teach higher order thinking skills; memorization skills are normally downgraded in America (Wang, 2007).

Gagne's (1985) and his colleagues' (Gagne et al., 2005) modified Bloom's 1956 taxonomy; their classification scheme assigned the six types of learning different names: verbal

information, concrete concepts, rule using, problem solving and cognitive strategy with verbal information being the least complex on the hierarchy and cognitive strategy being the most complex.

Anderson and Krathwohl's 2001 revisions of Bloom's 1956 taxonomy further accentuate higher order thinking as well as generative, original knowledge. Synthesis has been combined with analysis, and creating has assumed the top level of the pyramid. Furthermore, the knowledge dimension has been subdivided into four facets of knowledge: factual, conceptual, procedural, and metacognitive. Each facet has indicators at each level. The two-dimensional has become a three-dimensional pyramid. The following table provides a set of indicator verbs to describe associated knowledge.

**Instructional Design**: The Taxonomy Table (Fisher, 2007)

| **KNOWLEDGE DOMAIN** | *Remember* | *Understand* | *Apply* | *Analyze* | *Evaluate* | *Create* |
|---|---|---|---|---|---|---|
| Factual Knowledge | List | Summarize | Classify | Order | Rank | Combine |
| Conceptual Knowledge | Describe | Interpret | Experiment | Explain | Assess | Plan |
| Procedural Knowledge | Tabulate | Predict | Calculate | Differentiate | Conclude | Compose |
| Metacognitive Knowledge | Appropriate Use | Execute | Construct | Achieve | Action | Actualize |

**Andragogy**

As children have gained a separate identity from adults, pedagogy has developed methodologies targeted to that population. In response, Malcolm Knowles (1975) popularized the term "andragogy" to refer to those pedagogical practices that focused on adult learners. Knowles (1975) asserted that adults have a developed self-concept and are responsible for their own learning, so the relationship between learner and instructor resembles a partnership rather than a parent-child relationship. To that end, Knowles (1975) identified the following instructional design factors:

- *self-direction*, such that the learning environment enables adults to choose what and how to learn
- *experience* that adult learners can draw upon in their own lives
- *motivation* that builds on adults' personal and professional needs
- *readiness* that recognizes the power of just-in-time learning
- *need to know*, so that instructors should give the rationale for the content to be learned
- *timing* that recognizes adults' need to fit learning within their busy schedule
- *practicality* that facilitates close transfer of learning

- *socialization* that meets adults' social needs.

Andragogy is one indicator of education's growing sensitivity to developmental issues throughout the entire span of life. Erik Erikson (1980), for instance, identified key tasks at each stage of life. Young adults need to deal with love, adulthood need to focus on care, and old age needs to deal with age. Based on research on men's interaction between their inner life and external events, Levinson (1978) refined Erikson's 1980 stages, and asserted that each stage, or "season," includes both upheaval and change as well as resolution.

Nevertheless, andragogy does not necessarily cross cultural boundaries. In her synthesis of studies on culture and andragogy, Ziegahn (2001) identified a number of cultural dimensions that can impact adult learning:

- *Individualism versus collectivism.* In the United States workplace, individual initiative is rewarded, whereas that uniqueness might be discouraged in other cultures. Independent learning could be negatively construed.

- *Egalitarianism versus hierarchy.* Democratic societies tend to support equal opportunities, while collectivist cultures might respect hierarchy and set classes more.

- *Change versus tradition.* The United States encourages progress and a future-oriented perspective, while other cultures may value tradition and the status quo.

Adult education must acknowledge that culture shapes individuals' behaviors and attitudes, and that teaching itself reflects and fosters certain cultural beliefs.

When andragogy is mapped into Bloom's 1956 cognitive taxonomy, the higher levels of learning often come into play. For instance, because adults draw upon their prior experience when learning, they are exhibiting analytical and evaluative behaviors. Because adults want practical information that they can use immediately, they are apt to focus on application and creation. Even cultural factors can be integrated into Bloom's taxonomy relative to andragogy as adult learners differentiate teaching and learning in light of their cultural norms.

**Chinese Adult Teaching**

The mode of Chinese adult teaching methods can be traced back twenty-five centuries. The spirit of Confucianism was a major force in unifying China, and helped mould the mentality and temperament of the Chinese people (Chai & Chai, 1965). By placing greater emphasis on the lower levels of Bloom's taxonomy, Confucius shaped the thinking of Chinese teachers: "I transmit but I do not create; I have faith in, and a passion for, ancient studies" "I am not born with possession of knowledge, but, being fond of antiquity, I assiduously pursue it" "…to be able to acquire new knowledge while reviewing the old qualifies one as an instructor" (as cited in Chai & Chai, 1965, pp. 43-45). Explicit in the sayings by Confucius is the fact that Confucius emphasized the following:

- To teach students or books, teachers are transmitters of knowledge instead of learning facilitators as preferred by American teaching approaches.

- To pursue knowledge, teachers must have faith in ancient studies without evaluating or challenging fixed ancient thought.

- To obtain new knowledge, teachers need to review the old, and this review method emphasizes one's rote learning.

No doubt Confucianism has inspired generations of Chinese teachers. Teachers are fond of his view on mastery of knowledge. One of Confucius's cardinal principles was to let teachers be teachers and let students be students.

As Confucius saw growing disorder in his time (Cotterell, 1994), he concluded that teachers of adults, similarly to all other rulers in society, had to help maintain the *status quo* of society. Confucius's thinking has been to the liking of generations of rulers in China, including the current government in China. Prior to the establishment of the People's Republic of China in 1949, especially in the 1920s and 1930s in China, the party and government issued a series of decrees to restore the system of modern and formal education under the slogan "the mastery of knowledge" (Cheng & Manning, 2003).

After the Chinese communists came to power in 1949, the Chinese teachers began to follow Mao's teachings. Mao started to discard Confucianism, and, instead, claimed that true knowledge comes only from practice and that productive activity is the fundamental source for learning (Cheng & Manning, 2003). One of his cardinal policies was "walking on two legs" (i.e., uniting theory with practice) (Kaplan, Sobin, & Andors, 1979). What this educational policy meant was that there must be direct interaction of educational institutions with productive labor and the establishment of self-supported schools by factories and commune units. Students were encouraged to work with production tasks at hand. Towards this end, most schools in China, including universities, were closed.

Mao's educational policy lasted until the Cultural Revolution was put to an end in 1976 by other Chinese communists. Educators in the nation realized that emphasizing application without mastering knowledge first would not do any justice to students. Therefore, schools of all sorts were restored. College entrance examinations were introduced beginning in 1977 (Kaplan, Sobin, & Andors, 1979, p. 226).

As observed by international scholars (Cortazzi & Jin, 1996; Boyle, 2000), Chinese teachers clung to their traditional pedagogical outlook, tending to emphasize knowledge, content, teacher-centered classrooms, and exam results. As noted by Boyle (2000), Chinese teachers tend to stick to the textbook, which is often the same one throughout practically the whole country (p. 153). Some Chinese scholars have noted almost the same regarding teaching in China. According to Wang (2007), teaching in China is focused exclusively on transmitting orthodox subject knowledge; concepts such as flexibility, problem solving, critical thinking and independent learning are not recognized. In addition, Wang (2007) noted that Chinese teaching strictly prescribes acceptable teaching philosophies, teacher roles and roles of students. This hierarchical structure reinforces China's pedagogical approach to adult education (Wang, 2007). Because of this hierarchical structure in teaching, Chinese students are not allowed to challenge their teachers, and teachers are considered absolute authority figures in knowledge. Under such conditions, it may be hard to release the energy of students because they are expected to learn under a fixed pedagogical mode where analysis, synthesis, evaluation and creation are not encouraged.

Such teaching philosophies are manifested in approaches to examinations. For example, as early as in the Tang Dynasty, China began to offer a sophisticated imperial civil-service examination system whereby candidates for government office were selected on the basis of their performance in a battery of government-conducted examinations (Kaplan, Sobin, & Andors, 1979). Throughout the dynasties in China, the mastery of Confucian classics was an

important subject area for exams. Independent thought and inquiry were not widely encouraged (Kaplan, Sobin, & Andors, 1979). No one else can emphasize the importance of exams more in the Chinese educational system than teachers, which may be why Chinese students often prefer the exam-oriented approach of their Chinese teachers and are enthusiastic about courses which, by American standards, would be dull and geared simply towards achieving high scores on exams (Wang, 1999; Boyle, 2000).

In contrast, teaching critical thinking is popular in the West (i.e., North America and Western Europe). Critical thinking is a higher-order thinking skill that consists mainly of evaluating arguments, and it is a purposeful, self-regulatory judgment resulting in interpretation, analysis, evaluation, and inference, as well as explanations of the evidential, conceptual, methodological, or contextual considerations upon which the judgment is based (Astleitner, 2002). There is no evidence that such an approach in teaching is being used in China. There was no mention of such an approach in teaching in one of the most authoritative report titled *China's Education in 2003 from Growth to Reform* (Yang, 2005). In a hierarchical society like in China (Lee, 2004), one may wonder whether teaching Bloom's higher levels of taxonomy would thrive.

## Methodology

No one is to underestimate the value of survey research simply because it can be used to generalize from a sample to a population so that inferences can be made about some characteristic, attitude or behavior of this population (Babbie, 1990). Creswell (2003) concurs with this school of thought and indicated further that a survey design provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population. Some general themes and patterns were needed to determine whether Chinese adult education teachers taught the lower thinking skills or higher order thinking skills in light of Bloom's taxonomy. Therefore, for the purpose of this study, a survey design was considered an appropriate method for gathering data

### Sample

In the summer of 2007, a survey of 389 participants at departments of continuing education at different universities in the city of Beijing, Shanghai and Guangzhou were randomly polled (researchers distributed the questionnaire to those adult learners who happened to have classes on campus; those who opted not to participate in this survey were not asked to do so), and 359 (92%) participants completed and returned the survey to the researchers. According to Wang and Kreysa (2006), there are 15.8 million non-traditional learners and 4.2 million traditional learners in China and the national population is approximately 1.3 billion (China Internet Information Center, n,d,). The adult student population in these three universities is about 6000. Departments of continuing education at different universities in China were established in the early 1980s to model after similar departments in Western countries. Courses offered in these universities cover engineering, agriculture, forestry, teaching training, humanities, natural sciences, finance and economics, political science and law (Wang & Kreysa, 2006). Recently, vocational education and English were added to the list (Lee, 2004). Many teachers in these departments are adjunct professors whose full time jobs are with other universities. Although they have formed their own teaching preferences in their own universities, here at the departments of continuing education they have to follow their institutions' instructional norms. In other words, these adjunct professors are required to teach adult learners using approaches prescribed by these departments of continuing education. Usually, these adjunct professors are required

to lecture heavily to adult learners. Adult students are expected to be good listeners and note takers. Exams are administered extensively throughout the semesters.

**Instrumentation**

Benjamin Bloom's classic categorization of cognitive learning (Bloom, et al., 1956) was subdivided into six types of learning: knowledge, comprehension, application, analysis, synthesis, and evaluation. This categorization is considered hierarchical, with knowledge being the least complex type of objective on the hierarchy and evaluation being the most complex. The bottom three levels: knowledge, comprehension, and application, are sometimes referred to as lower-order learning skills, and the top three as higher-order learning skills. Performance of the lower-level skills of the hierarchy is usually prerequisite for performance at the higher levels. However, instructors in general seem to prefer either the cluster of lower level skills or the cluster of higher-level skills. Furthermore, American instructors and Chinese instructors do not seem to agree about which types of learning lead to students' transformation and emancipation (Cranton, 1994; King, 2005; Mezirow, 1991, 2000). A survey instrument was designed to dichotomize instructors' teaching in relation to students' learning outcomes in order to give researchers a quantitative tool to analyze teaching and learning in different cultures.

To that end, the researchers created a survey instrument entitled Lower-Order Thinking Skills and Higher-Order Thinking Skills (LOTSHOTS) to determine whether Chinese teachers of adults taught lower order thinking skills or higher order thinking skills in a given situation. The instrument was divided into six factors, which were the basic elements to indicate an instructor's general support or disapproval of a particular teaching mode. In creating the survey instrument, observable and measurable action verbs derived from Gagne's work (1985, 2005) were assigned to the six types of learning. High scores in each area represent support for the concept implied in the factor name (shown by action verbs). Low scores indicate support of other concepts. For example, a high score on the sixth factor indicates an instructor's emphasis on higher-order learning skills; a low score represents support of lower-order learning skills.

A group of five teachers of adults in a university in the United States, who were not included in the sample, were used in a pilot study to validate the instrument. Data gathered from the validation study were not included in the study but were used to determine whether revisions to the instrument were needed. The validation study was also used to test the clarity and comprehensibility of the questionnaire items. Validation study results indicated revisions to the instrument were not needed since the online instructors in the validation study understood the questions in the survey instrument. In sum, the questions used could be considered content valid. Further, the alpha reliability coefficient for the instrument was .92 (N of cases = 359, N of items = 36).

**Data Analysis**

For the survey instrument, the following values are assigned: Always = 5, Almost Always = 4, Often = 3, Seldom = 2, Almost Never = 1, and Never = 0. Missing Items: Omitted items are assigned a neutral value of 2.5.

SPSS 14.0 for Windows was used to analyze the data collected for this study. Analysis was conducted for each factor in the research question. For descriptive statistics, mean scores and standard deviations were reported for the participants' responses.

## Findings

Tables 1-6 (n=359; N=389) summarize the mean scores for these teachers of adults on each of the six levels of Bloom's taxonomy. Each of the tables contains several items from the survey that determine and describe whether these instructors' teaching methods were driven by lower order thinking skills (associated with knowledge, comprehension and application) or by higher order thinking skills (associated with analysis, synthesis and evaluation). It should be noted that the revised taxonomy level of creation was not addressed.

**Table 1.** The First Level of Bloom's Taxonomy: Knowledge; Teaching Lower Order Thinking Skills

| | M | SD |
|---|---|---|
| 1. I allow students to define concepts in my class. | 3.05 | 0.91 |
| 7. I allow students to memorize concepts in my class. | 3.11 | 0.88 |
| 13. I allow students to repeat concepts in my class. | 3.15 | 0.89 |
| 19. I allow students to name concepts in my class. | 3.14 | 0.77 |
| 25. I allow students to recall concepts in my class. | 3.35 | 0.77 |
| 31. I allow students to label concepts in my class. | 2.77 | 0.82 |

Table 1 summarizes the responses for survey items pertaining to the first level of Bloom's taxonomy: knowledge. The high scores suggest that these instructors favored teaching knowledge to their students. When teaching, they tended to allow their students to "define, memorize, repeat, name, recall or label" concepts.

**Table 2.** The Second Level of Bloom's Taxonomy: Comprehension; Teaching Lower Order Thinking Skills

| | M | SD |
|---|---|---|
| 2. I encourage students to describe concrete concepts in my class. | 3.22 | 0.78 |
| 8. I encourage students to discuss concrete concepts in my class. | 3.01 | 0.99 |
| 14. I encourage students to explain concrete concepts in my class. | 3.24 | 0.78 |
| 20. I encourage students to identify concrete concepts in my class. | 2.99 | 1.23 |
| 26. I encourage students to recognize concrete concepts in my class. | 3.44 | 0.89 |
| 32. I encourage students to locate concrete concepts in my class. | 3.14 | 0.79 |

Table 2 summarizes responses to the survey items pertaining to Bloom's taxonomy: comprehension. The high scores on the six variables indicate that these instructors supported comprehension learning activities. When teaching, these instructors helped students "describe, discuss, explain, identify, recognize and locate" concrete concepts in their classes.

**Table 3.** The Third Level of Bloom's Taxonomy: Application; Teaching Lower Order Thinking Skills

| | M | SD |
|---|---|---|
| 3. I help students apply rules and principles in my class. | 3.62 | 0.91 |
| 9. I help students demonstrate rules and principles in my class. | 3.19 | 0.68 |
| 15. I help students translate rules and principles in my class. | 3.06 | 0.85 |
| 21. I help students manipulate rules and principles in my class. | 3.57 | 0.98 |
| 27. I help students practice rules and principles in my class. | 3.48 | 0.76 |
| 33. I help students illustrate rules and principles in my class. | 3.59 | 0.84 |

Table 3 summarizes responses to the survey items pertaining to Bloom's taxonomy: application. The high scores reveal that these instructors helped students "apply, demonstrate, translate, practice and illustrate" rules and principles in their classes.

**Table 4**. The Fourth Level of Bloom's Taxonomy: Analysis; Teaching Higher Order Thinking Skills

| | M | SD |
|---|---|---|
| 4 I let students distinguish rules and principles in my class. | 2.33 | 1.02 |
| 10. I let students differentiate rules and principles in my class. | 2.45 | 1.16 |
| 16. I let students compare rules and principles in my class. | 2.15 | 0.84 |
| 22. I let students contrast rules and principles in my class. | 2.61 | 1.14 |
| 28. I let students critique rules and principles in my class. | 2.89 | 0.77 |
| 34. I let students examine rules and principles in my class. | 2.17 | 0.87 |

Table 4 summarizes responses to the survey items pertaining to Bloom's taxonomy: analysis. These results suggest that these instructors did not let students "distinguish, differentiate, compare, contrast, critique or examine" rules and principles in their classes. In other words, higher order thinking skills were not often taught in their classes, although critical tasks appear to have occurred regularly.

**Table 5**. The Fifth Level of Bloom's Taxonomy: Synthesis; Teaching Higher Order Thinking Skills

| | M | SD |
|---|---|---|
| 5. I plan activities that will encourage students to plan problem solving in my class. | 2.05 | 0.88 |
| 11. I plan activities that will encourage students to propose problem solving in my class. | 2.17 | 0.68 |
| 17. I plan activities that will encourage students to design problem solving in my class. | 2.44 | 0.76 |
| 23. I plan activities that will encourage students to arrange problem solving in my class. | 2.57 | 1.02 |
| 29. I plan activities that will encourage students to organize problem solving in my class. | 1.68 | 1.02 |
| 35. I plan activities that will encourage students to modify problem solving in my class. | 2.97 | 0.79 |

Table 5 summarizes responses to the survey items pertaining to Bloom's taxonomy: synthesis. The low scores in the six variables indicate that these instructors seldom gave their their students opportunities to "plan, propose, design, arrange, organize or modify" problem solving in their classes. Higher order thinking skills were not generally taught in their classes, although students seem to have had opportunities to modify problem solving.

**Table 6**. The Sixth Level of Bloom's Taxonomy: Evaluation; Teaching Higher Order Thinking Skills

| | M | SD |
|---|---|---|
| 6. I create conditions within which students evaluate their cognitive strategy. | 1.66 | 0.77 |
| 12. I create conditions within which students rate their cognitive strategy. | 1.68 | 0.66 |
| 18. I create conditions within which students judge their cognitive strategy. | 2.15 | 0.78 |
| 24. I create conditions within which students justify their cognitive strategy. | 2.59 | 1.03 |
| 30. I create conditions within which students summarize their cognitive strategy. | 3.01 | 0.87 |
| 36. I create conditions within which students appraise their cognitive strategy. | 2.87 | 0.64 |

Table 6 summarizes responses to the survey items pertaining to Bloom's taxonomy: evaluation. The range of scores indicate that these instructors created conditions within which their students could sometimes practice some level six thinking skills: specifically "summarize" and "appraise" their cognitive strategy. On the other hand, students seldom "evaluated" or "rated" their cognitive strategy (which seems somewhat inconsistent).

## Discussion

The purpose of this study was to determine whether adult teaching methods in China were driven by lower order thinking skills relative to the first three levels of Bloom's taxonomy characterized by knowledge, comprehension and application. The findings showed that Chinese teachers of adults were not accustomed to teaching higher order thinking skills associated with the next three higher levels of Bloom's original taxonomy as characterized by analysis, synthesis and evaluation. As shown in the findings from this quantitative analysis, Chinese teachers of adults almost unanimously taught lower order thinking skills, which are deeply rooted in Confucian culture (Biggs, 1996). Biggs' (1996) research found that Chinese teachers believe that creativity stems from one's mastery of knowledge. Without mastery of knowledge first, no one can proceed to creativity, which is designated as the highest cognitive level in Anderson and Krathwohl's 2001 revised taxonomy. This finding helps explain why most of Chinese teaching emphasizes the first three levels of Bloom's taxonomy.

Biggs (1996) further argued that in the Chinese tradition, teachers are regarded by their students as an unchallengeable authority. On their own part, teachers rely on lecture and focus on the best results in externally set exams. For centuries, teachers of adults in China have not deviated very much from this traditional instructional approach, which is seen as reflecting its governmental organization (Biggs, 1996). Emphasis on the mastery of knowledge goes back twenty-five centuries when one of the first educational philosophers, Confucius, put his faith in knowledge and in the status quo. Under Mao, more emphasis was placed on "application," which is still the lower level of Bloom's taxonomy. In the post-Mao era, however, teaching of Bloom's first three levels was re-emphasized and this study further confirmed this overall educational method in China.

Currently, the Ministry of Education's main role includes administration of university entrance exams and supervision over curriculum and structure of university programs. In addition, the preparation of standard textbooks including teaching methods for use throughout the country is overseen by the Ministry of Education (Kaplan, Sobin, & Andors, 1979). It is not surprising to Westerners (i.e., North America and Europe) that the content of any teachings, including teaching methodologies, are prescribed by higher authorities. Under China's government, this standardization of educational practice is more accentuated. When teaching any materials, teachers of adults are not supposed to go beyond their course objectives. If higher authorities want teachers to teach lower order thinking skills, instructors cannot teach higher order thinking skills as revealed in Bloom's taxonomy. To teach Bloom's higher order thinking skills would equal challenging higher authorities in China. Evidence to support the above observation exists in Wang and Bott's 2003-2004 research in that higher authorities (adult educators) preferred teaching lower order thinking skills which were characterized by pedagogical teaching instead of andragogical teaching. To challenge higher authorities would jeopardize teachers' employment in any institution (Boyle, 2000).

This study also confirms Wang and Bott's 2003-2004 research, which asserted that the American form of andragogy (student-centered teaching of adults) -- characterized by using learning contracts to structure coursework, negotiating the syllabus at the first class meeting, asking students to compile personal learning journals, and relying on open-ended discussion methods -- might meet resistance from both Chinese adult educators and students since compliance with authority is so highly valued in the Chinese culture. As early as 1995, Brookfield (2004, 2006) observed that the American democratic approach to teaching adults (andragogy) could be seen as evidence of teachers' laziness or lack of commitment by students from a different social and cultural background such as China. Chinese teachers' preference of teaching Bloom's lower order thinking skills has to do with their philosophy in education that views instructors as absolute authority over learners (Wang & Bott, 2003-2004). Concurrently, their educational philosophy reflects a belief that the Chinese government has absolute authority over teachers. Although Chinese universities do not have the similar tenure system that has been in existence in the United States, teachers in China are considered government positions. In a way, teachers' employment in any institutions rests in the hands of government officials. This mindset itself embodies lower thinking levels of Bloom's taxonomy. As such, Chinese comments such as American teacher laziness or the need for rote learning as a prerequisite for creativity might be interpreted as defensive rationales to combat conflicting educational theories that might seem to threaten the authoritarian stasis.

## Implications for Further Research and Practice

Although the literature review, other studies and this study confirmed that adult teaching methods in China were driven by lower order thinking skills, some American scholars, along with some Chinese scholars and researchers, may still be skeptical about the overall result of this kind of research. Questions may arise when people realize that some of the first rate scholars/professors working for universities and research institutions in Western industrialized nations were educated and trained by Chinese universities, not by Western universities. This may challenge the validity and reliability of this research and other research regarding teaching methods in China in light of Bloom's taxonomy. On the other hand, such practice might actually underscore the validity of the research.

The study had several limitations. The data were generated from self-reported practice, which needs validation via direct observation, student surveys, and analysis of syllabi and lesson plans. The study was also limited in that the sampling consisted of Chinese teachers of adults from three areas of China, and that the sample participants were surveyed in their native country. A similar sample population (i.e., Chinese-born teachers of adults) affiliated with United States educational institutions might respond significantly differently. Three additional questions could provide data that might reveal important intervening factors:

- "To what extent do you feel comfortable about deviating from prescribed content and instructional methodology?"
- Under what circumstances – or for what reason – might you want to deviate from prescribed content and instructional methodology?"
- "What are the consequences to you professionally if you deviate from prescribed content and instructional methodology?"

These questions address the issue of authority within education, and also reflect attitudes about Bloom's higher thinking skills of critical evaluation and creativity.

Although Chinese teachers of adults in general enjoy Confucianism and teaching lower order thinking skills, this does not mean that Chinese students have to engage in learning lower order thinking skills. In other words, students can absolutely go beyond teachers' teaching objectives by engaging in learning higher order thinking skills in any classroom setting. The question becomes: what are the ramifications of such behavior in class? If students take the initiative in learning higher order thinking skills, they are not shaped by their teacher's mode of teaching that uses lower order thinking skills. Students, especially adult students, can become self-directed in learning after they become experienced with a subject matter. Can learning of higher order thinking skills result from self-directed learning? Or are these higher order thinking skills learned in informal educational settings such as home and in the workplace? Does formal schooling serve strictly as a foundation for beginning learning, with the intent that advanced thinking is experienced in other environments? While these questions are outside the scope of this study, they reflect important and sometimes conflicting social and cultural realities of China.

This research is only one sided in the sense it focused only on teaching methods of teachers of adults. Further research should focus on learning methods on the part of adult students themselves. How much do teaching methods affect student learning outcomes? How is adult education viewed by those adult students, and what part of their lives are prescribed by formal education?

As more and more Chinese students come to Western campuses, especially North American universities, to further their study, should instructors teach them only lower order thinking skills, a mode of teaching that Chinese students are so accustomed to? Or should instructors in Western countries challenge Chinese students' preferences, teaching higher order thinking skills, as this has been the norm in the Western countries?

Based on this research and other studies relative to adult teaching methods in China, it is appropriate to suggest that flexibility be the norm in helping Chinese adult students learn. Teaching higher order thinking skills to Chinese adult students might widen their horizon in engaging more openly in learning. Further research should involve qualitative study in order to enhance this kind of quantitative analysis.

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# Understanding Mezirow's Theory of Reflectivity from Confucian Perspectives: A Model and Perspective

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## Abstract

The link between Confucian humanism and Mezirow's theory of reflectivity is explicit. While Confucian humanism emphasizes inner experience, the Mezirow's theory has increasingly developed to integrate inner reflection expressed through, transformed perspectives, decision and action. To appreciate the basis of both schools of theory, this article presents a discussion of these two originating theorists.

As an introductory thought the following quotations illustrate how Confucius' thought has long been valued and aspired to in the pursuit of reflection and wisdom. Rather than the routine or inattentive action that tends to dominate our lives in the 21st century, this widespread 2000 year-old Eastern philosophy and tradition has been synonymous with questioning the meanings and assumptions of one's surroundings and values.

"Study without thought is labor lost; thought without study is perilous."

"By nature men are nearly alike, but through experience they grow wide apart."

"Those who are born wise are the highest type of men;

those who become wise through learning come next;

those who are dull-witted and yet strive to learn come after that.

Those who are dull-witted and yet make no effort to learn are the lowest type of men"

(as cited in Chai & Chai, 1965, pp. 44-45). Confucius or Kong Fuzi (551-479 BC)

In addition to advancing our understanding of transformative learning and an integrated model of reflective thought, we hope this article will stir further international research in reflective learning and the intersections of Eastern philosophies with Western traditions and philosophies. Worldwide there are many rich traditions; if our understanding of teaching and learning can build upon our understanding with one another, we can open new doors for appreciation, insight, and inquiry.

## Introduction

There has been increasing interest in the theory of reflectivity as it is known in Europe, or transformative learning, as it is more commonly referred to the in United States in the field of adult education since Mezirow (1978) proposed it based on his research and his interpretation of Habermasian critical theory. Over the years many articles, books (Cranton, 1994; King, 2005; Mezirow, 1990, 1991, 1997; Mezirow, 2000), journals and even conferences (for example, The International Transformative Learning Conference 1998-2005 ) have examined, critiqued, and further developed this theory. These research endeavors, publications and venues have emerged mostly within the field of adult education in order to provide a forum for detailed analysis of this prevalent theory and to demonstrate how this theory has affected the course of adult learning thought (Merriam & Caffarella, 1999)

However, at the same time there is some concern that transformative learning has focused too much on a rational perspective (Dirkx, 1997), a western perspective (King, 2005), and too narrowly within the formal field of adult education alone (King, 2004). Indeed, the discussion in Canada (O'Sullivan, 1999; O'Sullivan, Morrell & O'Connor, 2002) and Europe (Jarvis, 1987) has often focused on different issues within transformative learning than in the United States.

It is with a greater sense of our global connections and community, the need and urgency for multicultural perspectives, the venue of different academic disciplines, and varied philosophical foundations in our social radical pedagogies that we present this article and model to consider the

similarities and differences among and between the Mezirow's original theory of transformative learning and the long-standing philosophy of Confucius.

In fact in Europe, adult theorists introduced Mezirow's work as "the theory of reflectivity" (Jarvis, 1987) as this was the focal point of the work in its early years that distinguished it from the contemporaries of the Behaviorists. It is from this perspective that one of us, Wang, schooled and familiar with Eastern philosophical traditions was introduced to Mezirow's work and that together we approached this dialogue- on a potentially vibrant common ground of reflectivity. Both schools of thought, Confucius' and Mezirow's reflection, emphasize the process by which adults seek inner critical reflection to foster and development. In both approaches, the process in turn leads to the possibility of creating new knowledge via critical reflection. While many potential linkages stand to be explored among these two theories, and very different perspectives and pathways are evident.

While the means of creating and fostering this critical reflection differs based on the traditions (Western practice vs. Confucius), one can see some similarities from the start. Despite its popularity, we will demonstrate what few scholars realize - that Mezirow's theory of reflectivity may be said in many ways to have originated in the seminal Confucian humanism. While humanism is discussed in relation to the theory of reflectivity, and transformative learning, the chief contributor of humanism, Confucius seems to have been forgotten by Western scholars. This is not an uncommon occurrence as it is all too uncommon to link Eastern and Western literature, thought and philosophy. As a social science, educational theory is built upon the foundation of philosophical thought and Western traditions replicates and further distances the schism from any Eastern traditions because they become even further buried beneath the different traditions and "orthodoxies."

To better understand Mezirow's theory, Confucius needs to be brought to light. Confucius's humanistic assertions regarding learning and reflection have inspired generations of teachers and learners, while the theory of transformative learning is relatively new.

The purpose of this article is neither to solely study Confucian concepts in a contemporary perspective nor to present an analysis of Mezirow's critical reflection within transformative learning. It is rather an attempt to examine Mezirow's evolving theory of reflectivity by contrasting it with what was already advanced by Confucius twenty-five centuries ago in China and benefit from that body of knowledge as we bridge these two schools of thought. Indeed rather than definitive answers, this article poses many postulates and questions. We probe connections and possibilities. In addition to advancing our understanding of transformative learning, we hope this article will stir further international research in reflective learning and transformative learning specifically and the intersections of Eastern philosophies and traditions with Western traditions, philosophies and educational theories more broadly. We aspire that more colleagues will work to intersect different multicultural perspectives and benefit from juxtaposing them. We have many rich traditions within our world, if our understanding of teaching and learning can build and multiply upon our understanding with one another, we can open new doors for understanding and inquiry.

## Theoretical Framework

As we consider the theoretical framework of this proposal, we were reminded of some basic understandings and comparisons between human and animal learning. While animals learn via reflexes and behavior modification; humans also learn through reflection. Specifically, adult learners are faced with learning problems and these learning problems perplex and challenge the mind so that it makes belief uncertain (Dewey, 1933, p. 13). To Dewey, it is this perplexity that leads to reflective thinking, and in Western traditions of adult learning it has been promoted by Schon and also Freire in the 1970s (Argyris & Schon 1974; Freire, 1970, 1973; Schon, 1983) and Mezirow in the late 1970's through the 1990's (Mezirow, 1978, 1990, 1991, 1997, 2000).

In comparison, in the traditions of China, humanistic thought dates back twenty-five centuries to Confucius (Elias & Merriam, 1995). At that time humanism emerged in China in the form of self-criticism, characterized by a metaphor in this tradition as "inner digging and drilling" (like that of a well) that necessarily leads to an awareness of the self not as a mental construct, but as an experienced reality. To Confucius, learning could not occur without silent reflection (Confucius, 500BCEc).

In the late 20 th century, Mezirow developed three types of reflection and seven levels of reflectivity, taking into consideration both Confucius' inner experience and external situation. While a number of important unacknowledged theoretical regimes do exist which make much use of the concept of reflexivity as a means for enhancing self-understanding such as Festinger's (1957) cognitive dissonance and Kuhn's (1996) revolutionary paradigm shifts, this article intends to merge two prominent intellectual traditions by exclusively focusing on Confucius and Mezirow. A detailed analysis of Confucian humanism and Mezirow's theory of reflectivity may shed more light on the much-debated issue of how adults learn. Further, this analysis may equip adult educators with necessary knowledge and skills to better help adult learners learn in this knowledge society and information age.

## Analysis

This manuscript provides a comparison of the literature related to Confucian humanism and Mezirow's theory of reflectivity through a careful review and analysis of similarities and differences. These literatures represent major traditions of thought and can provide provocative insight and stir additional inquiry regarding these separate yet today necessarily intersecting schools of thought and practice. By understanding this social phenomenon through these literatures and their related traditions, we hope to gain additional insight into how to reach beyond our individual, culture-bound perspectives of teaching, learning and worldviews. This study is uniquely positioned in that these extensions and transformations of understanding are at the very root of reflective thought, so that our analysis is a metacognitive analysis of our very reflective thought and transformative itself. That is, we are using the method we are studying.

Miles and Huberman (1994) defined the literature review as largely an investigative and critical process during which the researchers gradually made sense of a social phenomenon by contrasting, comparing, cataloguing and classifying the data reported in accounts of the object of study. The purpose of the literature review was to provide a framework for establishing the importance of the study as well as a benchmark for comparing the results of a study with other findings (Creswell, 2003). The reason for this study was to establish an in-depth understanding

of Confucian humanism and Mezirow's theory of reflectivity to appreciate adult learning from a different perspective.

## Confucius' Silent Reflection

Confucius' major concern lies in his quest for self-realization. He reminds his followers (adult learners) to be authentic persons that are to be truthful to both their selfhood and their sociality. Confucius focuses on the cultivation of the inner experience, both as a way of self-knowledge and as a method of true communion with the other (Tu, 1979, p. 103). Within the Confucian tradition to realize one's inner self, one should be completely free from four things: arbitrariness of opinion, dogmatism, obstinacy, and egotism. Most importantly two major tenets emerge: (1) Confucian thought of learning emphasizes meditation to control oneself and (2) there needs to be an internal integration between self and nature. The learning process that facilitates the development of this meditative and integrated self is to be continually extended through dialogue with others within many different structures of human relationships.

As Zhu (1992) explains, Confucian philosophy is recorded in the Four Books: Daxue (The Great Learning) (Confucius 500BCEb), Lunyu (The Analects) (Confucius 500BCEa), Zhongyong (The Way of the Mean) (Confucius 500BCEc) and Mengzi (The Mencius) (Mencius 500BCE) (p. 20). The Analects and The Mencius are the sayings of Confucius and Mencius respectively. The religious orthodoxy of the writings is carefully traced through the centuries as seen in this article's Appendix, The Four Books Tradition of Orthodoxy.

It is literature of The Great Learning that advocates eight steps that should be followed to reach one's sagehood. And of course, sagehood is defined as striving to become a genuine human being who through self-transformation, a kind of inner illumination, realizes not only the moral goodness that is intrinsic to his/her nature but also the cosmic creativity that embraces the universe in its entirety (Tu, 1979). In this journey the "rectification of the mind" is a crucial step to extending knowledge of the self (Confucius, 500BCEc). The rectification of the mind is the phrase used to refer to the meditative practice that cultivates and furthers the devotee's pursuit of self-control and integration with nature. Based on the philosophy and teachings of TheGreat Learning, self-directed learning is the primary adult learning method used in the quest to become fully human or a sage.

According to this tradition, the integrated development of the sage's self-concept is not possible without silent reflection. According to Confucius, silent reflection is not a cognitive process isolated from the rest of the human being, rather it involves the entire "body and mind" (as cited in Tu, 1979, p. 103). Derived from the meanings of Confucius' Four Books, the original meaning of silent reflection refers to a deep examination of one's being rather than a thorough investigation of some external object, process or philosophy (as cited in Zhu, 1992, p. 20). Of course, this mental activity involves more than the comprehension of something beyond the Self, it requires a continuous process of internalization, that is, reflection, questioning, and seeking to integrate into harmony a resulting change of the understanding of the Self. Within the Confucian tradition it is widely understood and acclaimed that, "Study without thought is labor lost; thought without study is perilous." Upon consideration of the theories of reflectivity from Western thought, it can be seen that these same perspectives are aspired to and appreciated.

## Mezirow's Theory of Reflectivity

Since Knowles (1970, 1973, 1975) popularized principles of adult learning in the early 1970's in North America, no other theory has sparked more interest and research in the field of adult education than the theory of transformative learning, or reflectivity (as it is referred to in Europe (Jarvis, 1987) proposed by Mezirow (1978, 1990, 1991, 2000). This theory of reflectivity is described by Mezirow as having ten stages that progress from a characteristic "disorienting dilemma" that uses an experience of imbalance in one's life as an opportunity for considering new perspectives. From this new vantage point one may continue to examine unfamiliar views, critically reflect and evaluate them, test and explore new perspectives as one's own, make choices as to whether to adopt those positions and finally perhaps reintegrate these new perspectives (King, 2005).

The central focal point and power of transformative learning is fundamental change in perspective that transforms the way that an adult understands and interacts with his or her world. Reflective thinking is the foundational activity that supports and cultivates such "perspective transformations." The field that studies reflectivity has sought to describe and understand this focal experience of perspective transformation through multiple explanations and terms. Over the years as the dialogue, literature and later research developed, the vocabulary has described this broad, and yet foundational, change of understanding as new "meaning perspectives" (Mezirow, 1978), new "frames of reference" (Mezirow, 2000), new "habits of mind" (Mezirow, 1997) and new worldviews (King, 2002, 2003).

As described by King (2005) within an adult education setting this theoretical approach recognizes that learners who enter the educational process may realize a reawakening of their intellectual side. As they engage in learning that includes critical reflection, they may question their beliefs, values, and assumptions and begin to discover new perspectives. As they carefully contemplate and weigh their purposes and futures from different vantage points, they may also gain confidence in their abilities and from this confidence be empowered to try new philosophies, beliefs, careers, or other ideologies and experiences.

## Confucius' Silent Reflection Compared

As Jarvis (1987) describes, Mezirow's theory of reflectivity is an important stage in the development of adult learning theory (p. 92). The power of this theory lies in the possibility of creating new knowledge and different techniques. In today's Knowledge Society and Information Age critical reflection and analysis holds one of the keys to successful learning. Although Mezirow (1978) never discussed Confucius in a study of eighty-three women returning to college in twelve different programs, he very clearly states that the roots of his theory lie in Habermas's humanism and critical social theory. Although Confucius never claimed that he had himself attained sagehood, his ultimate concern was not to become a Confucianist, but to become a genuine human being, a sage. Therefore, he prescribed "self-realization" as the ultimate goal of every learner. This goal is not only mirrored in Mezirow's theory but also another widely popular Western educational psychology theorist Maslow's self-actualization (Maslow, 1954).

With this brief consideration of how these different traditions gravitate towards the similar goals of what Confucius terms sagehood, this section provides Confucius' description of how the pathway is experienced. To achieve the goal of sagehood, adult learners must "travel" the way of Confucius as a standard of inspiration:

1. •At fifteen I set my heart upon learning.
2. •At thirty I established myself in accordance with ritual.
3. •At forty I no longer had perplexities.
4. •At fifty I knew the Mandate of Heaven.
5. •At sixty I was at ease with whatever I heard.
6. •At seventy I could follow my heart's desire without transgressing the boundaries of right (as cited in Tu, 1979, p. 46).

To date, critical reflection first appeared in Confucius' doctrines of learning in the form of self-criticism. Confucius claims that self-criticism is far from being simply a heuristic device, that is, only to search for meaning; instead, he asserts that the pursuits should include improvement of the self, even in ordinary responsibilities. At the same time, learning for self-realization occurs when learners probe more deeply within their personal knowledge about how to be human; learners need to transform their lives into meaningful existences.

Confucius' definition of learning poses a challenge to Western modes of investigation of external experiences. To Confucius, learning is both much more than the acquisition of empirical knowledge and more than another method of internalizing the proper manner of behavior in society. Confucius' definition of learning focuses on the cultivation of the inner experience so that learners can deepen their knowledge about how to be human and transform their lives into meaningful existences. As for critical reflection, Confucius describes it as follows, "to learn without silent reflection is labor in vain; to think without learning is desolation." Explicit in this statement is the importance of learning that is possible through intense reflection characterized by the Confucian phrase and metaphor of inner "digging and drilling," which corresponds to Chinese peasants ancient work in digging salt mines (Kurlansky, 2003).

Unlike Western scholars, Confucius suggested that to learn through silent reflection is not to truly comprehend an external truth. Instead, silent reflection is a way of examining, "tasting," comprehending, understanding, confirming, and verifying the quality of one's life. Underlying this process of integrated effort to reflect deeply, "digging and drilling," necessarily leads to an awareness of the self not as a mental construct but as an experienced reality. In Confucius' concept of "inner experience" conveys the meaning of involving the whole person. Thus, he characterizes knowledge as the "learning of the body and mind," which articulates the points above, but also further explains the concept of Confucian understanding that this is the way of becoming a genuine person.

Later, Confucius' writings indicate, "I won't teach a man who is not eager to learn, nor will I explain to one incapable of forming his own ideas. Nor have I anything more to say to those who, after I have made clear one corner of the subject, cannot deduce the other three." Implicit in the above statement is that unless reflection occurs, the teacher does not want to help a learner

learn. The Confucian perspective on learning and reflection may be summarized in three proposals:

1. •Learning results from reflection.
2. •Those who are incapable of reflection are less capable of learning.
3. •Hence, growth and development cannot emerge.

Mezirow's Theory of Reflectivity Compared

In considering a comparison of Mezirow's theory with Confucian thought on a deeper level, the concept of the "authentic person," or to reach sagehood, provides an additional dimension of understanding. To be Confucian is to become an authentic person. An authentic person must have no arbitrariness of opinion, no dogmatism, no obstinacy, and no egotism (Confucius, 500 BCEb). This sagehood cannot be realized without the rectification of the mind or self-criticism. To Confucius, meditation and self-control help adult learners reach their highest excellence.

Mezirow's and others' exploration of the theory of reflectivity and transformative learning led him to a position very similar to the Confucius' focus on "inner experience." However, it should be noted that these explanations on adult learners' making sense or meaning of their experiences included not only an "inner experience", but also external experiences that may interact with one's inner experience. King and Wright (2003, p. 102) further recognize this position by saying that more than a "change of mind," perspective transformations entail fundamental reframings of how individuals understand and conceptualize their worlds.

Although Confucius was the first one to define reflection twenty-five centuries ago, Mezirow should be credited with categorizing three types of reflection and seven levels of reflectivity. These types and levels of reflection help adult educators discern how adults learn. Western scholars have taken the inner experience promoted and described by Confucius one step further by adding the importance of an external experience.

Boyd and Fales (1983, p. 100) define reflection as the "process of internally examining and exploring an issue of concern, triggered by an experience, which creates and clarifies meaning in terms of self, and which results in a changed conceptual perspective" (as cited in Cranton, 1994, p. 49). And Mezirow (1991) defines reflection as "the process of critically assessing the content, process, or premise(s) of our efforts to interpret and give meaning to an experience" (p. 104). According to Mezirow, "content reflection" is an examination of the content or description of a problem. "Process reflection" involves checking on the problem-solving strategies that are being used. "Premise reflection" leads the learner to a transformation of meaning perspectives. While these types of reflection encourage learners to think reflectively upon their situation, Mezirow's levels of reflectivity provide further focus and explanation of learners' inner experience as proposed by Confucius:

1. •Reflectivity: an awareness of a specific perception, meaning, behavior, or habit;
2. •Affective reflectivity: awareness of how the individual feels about what is being perceived, thought, or acted upon;

3. •Discriminant reflectivity: the assessment of the efficacy of perception, thought, action or habit;
4. •Judgmental reflectivity: making and becoming aware of value judgments about perception, thought, action or habit;
5. •Conceptual reflectivity: self-reflection which might lead to questioning of whether good, bad or adequate concepts were employed for understanding or judgment;
6. •Psychic reflectivity: recognition of the habit of making percipient judgments on the basis of limited information;
7. •Theoretical reflectivity: awareness that the habit for percipient judgment or for conceptual inadequacy lies in a set of taken-for-granted cultural or psychological assumptions which explain personal experience less satisfactorily than another perspective with more functional criteria for seeing, thinking or acting (as cited in Jarvis, 1987, p. 91).

While Confucius claims that reflection involves the whole person, Mezirow recognizes that reflectivity demands both affective and cognitive aspects. From these different perspectives, a very similar conclusion is arrived at, and yet different dimensions of the journey are articulated by the traditions represented by Confucian teachings and the Western literature on reflectivity.

## A Critique of Confucius' Reflection and Mezirow's Reflectivity

As has been described in this article there are many similarities when one examines Confucius' reflection and Mezirow's theory of reflectivity. With the framework of Confucius' philosophy and practice of reflection the criticisms of Mezirow's theory of reflectivity provide another dimension of understanding. Although a powerful model and tool to guide the examination of adult learning, the theory of reflectivity has never been immune from criticism (Cranton, 1994; King, 2005; Mezirow, 1990, 1991, 1997).

Among a number of criticisms, the very first one is that this theory has included little attention to the social context that may strain the reflection process so that the social context may facilitate or inhibit the reflection process (Boxler, 2004; McWhinney, 2004). Secondly, gender and socio-economic class may play important parts in the reflection process and yet they are not frequently brought out as factors in the discussions of Mezirow's theory of reflectivity (King, 2005). For instance, while in many cultures women may tend to be intuitive learners, men may tend to be cognitive learners (Hayes & Flannery, 2000). Therefore should we expect a greater proclivity and ability among women and perhaps less ability, understanding, value, and more resistance among men? These are questions that are not asked frequently (King, 2002, 2005). Regarding socio-economic class, Freire (1970, 1973, 2003) argues that the oppressed have lost the ability to challenge living conditions and thinking about their life. They no longer have the self-confidence to be independent thinkers. Therefore in this paradigm, critical reflection does not exist among the oppressed. What does the ability of and consequences for all socio-economic classes to be able to engage in and benefit from reflectivity?

Thirdly, reflectivity may be age related (Merriam & Caffarella, 1999). Confucius has addressed this question in his teachings (Confucius, 500BCEc). Noncontrolled studies in transformative learning have shown no direct correlation, but what would further studies indicate (King, 2002,

2003)? Fourth, reflectivity may vary from culture to culture (Baumgartner & Merriam, 1999; King, 2005; Merriam & Caffarella, 1999). People see the world differently and learn differently when they become conscious of their social situation. The reflection process may be shaped by different cultures. A recent critique by Merriam (2004) is that a high level of cognitive functioning serves as a prerequisite for critical reflection. Indeed, this analysis of the literature would indicate that without this prerequisite of cognitive functioning critical reflection may not occur. What does this mean regarding reflectivity, education, and opportunity, contextualization and impact among different cultures?

Despite all these critiques, the theory of reflectivity advanced by Mezirow has endured and continues to spark innovative, provocative and a prolific research in the adult education field (Cranton, 1994; King, 2004, 2005; Mezirow, 1990, 2000). Since Confucian humanism emphasizes how to become a sage through self-effort, his emphasis is on the experiential "how-to" rather than on the cognitive "why," and the road to sagehood is a matter of self-criticism and not only intellectual argumentation. The continuing Confucian "silent reflection" process proceeds from a foundational "inner experience" of critical reflection and progressively unfolds into self-transformation, over and again. While in one respect it has a goal of sagehood, and in another respect the journey is the goal as well.

While Mezirow's theory agrees in concept with Confucius' inner "digging and drilling" metaphor and practice in order to learn how to be human, Mezirow's three types of reflection take into consideration the external situation which poses challenges to inner experience so that analysis, synthesis and evaluation may occur. Mezirow's seven levels of reflectivity relate to Bloom's 1956 taxonomy of educational objectives, which helps adult educators more fully illuminate the different experiences that lead to reflective learning.

## Discussion – A Model of Learning through Critical Reflection

The strength of Mezirow's theory of reflectivity which has developed over the last 20 years lies in the critical reflection process, which may lead to growth and development of the learners (Merriam, 2004). If Confucius was right twenty-five centuries ago by advocating that "at seventy I could follow my heart's desire without transgressing the boundaries of right," then "critical reflection" holds the key to that goal. Prior to Mezirow's theory, Levinson (1978, 1986) and Erikson (1959) developed models similar to the way of Confucius. However, Levinson focused on life's developmental tasks while Erikson focused on identity development. Neither theorist recognized Confucius' silent reflection as the key to sagehood or wisdom. Mezirow's theory of reflectivity built upon a tradition of critical reflection that can be found in the humanistic thought and practice of Confucius. Mezirow's three types of reflection and seven levels of reflectivity help educators and learners more fully understand how one's sagehood, or wisdom, can be reached.

Confucius' humanism emphasizes self-realization, or self-actualization in its modern sense. Reaching this goal is the focus of learning for many adult learners and educators from a humanistic tradition. In this context, Mezirow's theory of transformative learning becomes one of the major factors that assist adult educators in articulating goals of learning and delineating

learning processes for adult learners. More importantly, a better understanding of this theory may enable adult educators to:

1. •Plan learning experiences that are conducive to learners' critical reflection.
2. •Capture and build on "teachable moments" to accelerate critical reflection.
3. •Prepare adult learners for critical reflection.
4. •Modify teaching styles and methods to fit learners' critical reflection.
5. •Become a co-learner in the reflection process.
6. •Become a genuine facilitator of the reflection process.
7. •Avoid teaching styles and methods that may inhibit learners' critical reflection.
8. •Grow and develop together with learners via the reflection process.

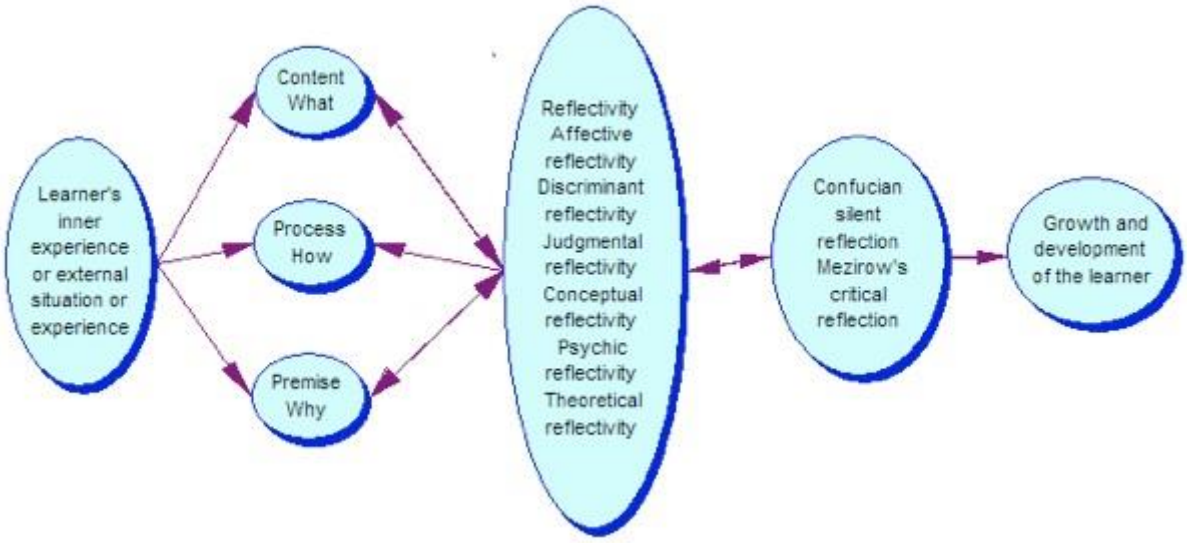
## The Model of Learning through Critical Reflection

In our process of analyzing and reflecting on these Eastern and Western theories and philosophies, we have seen a model of learning emerged. The Model of Learning through Critical Reflection is described and illustrated below. In this model the work of Confucius and Western theory of reflectivity are blended in order to enable educators to envision the processes of how adult learning from seemingly diverse humanistic tradition moves towards one common goal.

While a Confucian mode of learning focuses on experiential understanding (Tu, 1992), contemporary modes of learning focus on the art of argumentation, or dialogue (Mezirow, 1990, 2000). An overview of the Model indicates that: for the art of dialogue to occur, first there must be a hypothesis about possible solutions to problems followed by a comprehension of the problem to be solved. Following this stage, there is then data collection, reasoning and experimentation to solve the problem.

The theory of reflectivity offers a tool, namely critical reflection that can tackle both experiential understanding and the art of dialogue. Therefore, this theory furthers Confucius' humanism and can be further applied to educational settings. The wide-range of adult learning experiences is a complex phenomenon which defies any one learning model (Merriam & Caffarella, 1999). Indeed discreet, enumerated principles of adult learning alone cannot explain every aspect of learning. However, Mezirow's theory of reflectivity, transformative learning, provides a powerful vantage point to explore adult learning.

Through this discussion of Confucius and Mezirow the model of learning through critical reflection that is illustrated in Diagram 1 has been developed: The Model of Learning through Critical Reflection.




***Model of Learning through Critical Reflection***

This Model illustrates the dynamic interaction of factors (variables) that contribute to Mezirow's critical reflection and Confucian silent reflection. Derived from this model of learning through critical reflection are a number of significant points:

1. 1.Mezirow's three types of reflection can be dependent upon learners' inner experience or an external situation or experience. An internal issue of concern has to be triggered by an experience. In Mezirow's terms, the learners then engage in asking what, how and why questions in order to make meaning out of these experiences...

2. 2.The three types of reflection relating to what, how and why questions are dependent upon the seven levels of reflectivity Bloom's (1956) affective and cognitive domains of educational objectives. The three types of reflection in most cases predetermine a learner's level reflectivity. The types of reflection and the levels of reflection interact with one another via what Confucius describes as "inner digging and drilling" to deepen one's knowledge of the self or what Mezirow describes as analysis, synthesis and evaluation of one's perspectives to "make meaning".

3. 3.The three types and the seven levels of reflection take the learners to the next stage of reflection. It is at this stage that learners' silent reflection or critical reflection occurs. The three types and the seven levels of reflection enable learners to develop the ability to think analytically or evaluatively as well as casting negative judgments. It is at this stage that learners' self-criticism becomes automatic as a result of the interaction of the three types of reflection and the seven levels of reflectivity. Without the multiple types of reflection or the levels of reflectivity, the automaticity of silent reflection or critical reflection cannot occur.

4. 4.This crucial stage of silent reflection or critical reflection leads to an end result: growth and development of the learner, or changed perspectives of the learner as proposed by Mezirow. It is interesting to note that according to Confucius learning via reflection denotes a rather lengthy journey so that learners could follow their heart's desire without transgressing the boundaries of right. Indeed, self-actualization can be realized if learning is undertaken via silent reflection or critical reflection.

## Recommendations

As Confucius' Great Learning reveals, learning can move one through a journey towards sagehood, or toward becoming a sage (Shengren) (Zhu, 1992). In its modern sense, the purpose of adult learning is to transform society, in Confucian terms- to love the people, who comprise that society, and to find "rest", or peace, in the highest excellence. Indeed, Confucius' humanism is foundational in its impact on the dominant modern branch of adult learning theory —the theory of reflectivity as advanced by Mezirow. Without a fuller understanding of Confucius' philosophy in learning, our understanding of Mezirow's theory would be limited.

Like Confucius' humanism, Mezirow's inner critical reflection seeks to foster positive outcomes and development in learning. Both Confucius' and Mezirow's approaches lead to the possibility of creating new knowledge via critical reflection. In learning, we seek theories that are truly revolutionary and utilitarian. In this sense, both Confucius' humanism and Mezirow's theory of reflectivity are useful guides to help adult learners become fully human (sage) or to realize self-actualization and development in learning as in Merriam's terms (2004).

Therefore, this comparison of Confucius and Mezirow is not only necessary, but also vitally important in our further development of new models and theories of adult learning. Despite its vigor and vitality, in comparison to Confucianism, the theory of reflectivity is still in its infancy. Further research is needed to validate many dimensions and implications of this well-reasoned theory such as political dimensions, viability within pedagogical modes of learning, its role in a "Knowledge Society," and the multiple factors and learning possible. As of yet these concerns have not been addressed within the Western traditions in which it has been primarily been studied, discussed and developed.

## Political Issues- More than Social Change?

One area of significant interest would be its political dimension. Although the Cold War is over, in our world today it cannot be denied that there is still a considerable portion of our global society that has had political issues and crises take precedence over educational policies. In such environments, critical reflection could be twisted to serve political purposes at the expense of learners' self-authentication amid a variety of depersonalizing forces. Freire's work in Brazil demonstrates how addressing the political context through educational applications can result in political and educational outcomes (Freire, 1970, 1973). Rather than mobilizing social change through empowerment, voice and literacy learning, the theory of reflectivity offers another theme of potential impact on political conditions.

By focusing on inner reflection, deeper meaning, and seeking sagehood change in self would replicate as a model and inspiration for others. The model of Confucian reflectivity lends itself to a balance of society/universe through individual enlightenment and responsibility. The basic concept may be seen from this lens as being that to reach community, first self must be mastered. Political goals would be supported through educational pursuits focus would guide contemplating understanding to reach meaning.

## Can critical reflection occur within a pedagogical mode of learning?

It would seem that the theory of reflectivity has endured in the field of adult education because it resonates with a breadth of human philosophy and human condition- it is derived from Confucian humanism and Habermasian, Marxist critical theory (Mezirow, 1978, 1990). Based on the roots in adult learning (andragogy), scholars may assume that the theory of reflectivity may be in conflict with pedagogy, which emphasizes a directing relationship between educators and learners (Wang, 2005, in press). If this is true, research is needed to find out why the directing relationship between educators and learners inhibits learners' critical reflection. The question becomes, Can critical reflection occur within a pedagogical mode of learning? Sporadic studies regarding how social contexts can strain critical reflection can be found in the literature (Wang, 2004-2005). However, more comprehensive studies are needed in this area in order to produce a definitive model for researchers in the field.

Indicative of these possibilities we have at least one model of transformative learning that provides opportunities for adult educators to blend facilitation and transformative learning with self directed learning- the Transformative Learning Opportunities Model (TLOM) (King, 2005). This model is dynamic and interpretative and opened by the researcher for comment and additional inquiry in diverse contexts, cultures and settings.

## Body and Mind Together- "I do, I understand."

The literature discusses the cognitive and affective domains that reflection may involve within adult learners (Bloom, 1956). However, we must also consider the psychomotor domain when learners are engaged in reflection. As a Chinese proverb says, "I do, I understand." It seems that there is a positive correlation between the psychomotor domain and reflection. Yet, it would seem that researchers have yet to address this particular area. How do we effectively assist adult learners in using active learning in reflective learning within Western traditions?

Building on eastern traditions, do currently renewed interests in Yoga and Tai Chi illustrate westerners experiencing the benefits of focusing mind and body together in reflection, rather than prior practice of mind alone? In 2006 we see an accepted blending of these and other traditions of mind and body. It is a prime opportunity for educational researchers to explore them for instance what learning style or personality styles respond best to these eclectic perspectives? What instructional methodologies are most effective for this learning? What purpose could be served for this application? Health education, pain management, cross cultural learning, psychotherapy, physical rehabilitation? Each of these can benefit form the field of adult learning intersecting with them and many possibilities for extending the application of adult learning are embedded within them

## Multiple Factors and Learning

The reflection process is a complicated process that may result in creating new knowledge and different techniques in this knowledge society and information age. In our global and technological society only gathering information is no longer sufficient; successful learning is evident when individuals are able to reflect, critically analyze, synthesize and apply knowledge (Bloom, 1965). Increasingly, critical reflection has replaced memorization as preferred by Confucian learners. In learning, there are many ways to cultivate critical reflection, thus raising the question, How do we apply a seemingly non-technical perspective to the fast-paced constantly changing Knowledge Industries of today? How can adult education articulate our growing understanding of the depth and benefits of reflectivity and critical thinking to business and industry to increase the quality of life in the hectic multi-tasking, information overloaded business community?

Better understanding the connections between Confucian thought, critical reflection, and workplace learning can provide ways to help adults develop skills and strategies to cope with a Knowledge Society. Being able to probe the deeper meaning of information and looking for relationships and connections among seemingly separate scopes of understanding are increasingly valuable perspectives and abilities in our technology driven, constantly changing society. Exploring these strategies in the context of human resource development and workplace learning would be new directions of inquiry and research.

## Critical Reflection for a "Knowledge Society"

Additionally, we cannot overlook the fact that multiple factors and dimensions enter the learning process and reflection, such as age and gender. Confucius recognized these dynamics when he said, "At forty I no longer had perplexities." If people no longer had perplexities at a certain age, then apparently reflection has truly occurred. However, what about those who still have perplexities? Has reflection not occurred? Can reflection still be learned? What are the obstacles to learning reflection and how can they be overcome? Indeed, in order for all to benefit from this rich tradition of learning, research is needed to determine what variables lead to this non-reflective learning process and how to surmount them for people of varied ages, races, traditions, cultures, backgrounds and genders.

Examining these questions in different settings and with varied combinations of parameters will be valuable in understanding the complexities of teaching and learning beyond the traditional behavioral sciences. At a time when we are fully embedded in global communications, economies, and dependencies we need to better comprehend how to not only understand ourselves and one another, but also how to teach and learn from one another. As the educational field invests in inquiry which embraces affective, contemplative, meditative and spiritual dimensions, additional cultures, perspectives and understandings stand to be able to be understood and to contribute to all aspects of understanding.

## Conclusion

This preliminary analysis of the literature on reflective theory has introduced the landscape of Confucian humanism and Mezirow's reflective theory, transformative learning. By doing so we have sought to bring together similarities from these different traditions, and yet illuminate differences by the very fact that these different cultures and histories represent different perspectives. Drawing from a highly rational and behaviorist tradition of the West and connecting with the much longer spiritual traditions and history of the East, many questions arise that help us begin to examine our assumptions in new, thought-provoking and exciting ways.

While examining these different traditions of reflective thought, we have also integrated them into a conceptual model to express the process of reflectivity. Taking a wider view, drawing back from what we take for granted, considering and analyzing our theories from different vantage points, brings new questions to the surface. Undoubtedly some of these answers will be found through future academic inquiry, some through our experiences of teaching and learning, some within ourselves, and some through our seeking to reach within ourselves, outside of ourselves to one another and understand. Learning experiences that create such moments have meaning beyond ourselves.

It is with great appreciation that we realize that through understanding one another we create ourselves, and by knowing ourselves, we can reach one another. We invite you to enter into this journey with us and to share your research and understanding share with our global academic community.

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**Appendix: The Four Books Tradition of Orthodoxy**

Han Yu of the Tang dynasty claimed that over the classical period there had been an orthodoxy (daotong) that was passed from Confucius to Mencius and then it was discontinued. Scholars of the Song researched this orthodoxy, and finally Zhu Xi affirmed the system of transmission, saying that Confucius handed it down to Zeng Sen, Zeng Sen transmitted it to Zi Si, and Zi Si to Mencius. In the Liji (Record of Rites) that appeared in the Western Han dynasty, the Daxue and Zhongyong were written respectively by Zeng Sen and Zi Si. (Zhu, 1992, pp.20 ff.)