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East Meets West: Thinking Styles of Chinese Executives

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*Oh, East is East, and West is West, and never the twain shall meet,
Till Earth and Sky stand presently at God's great Judgment Seat;
But there is neither East nor West, Border, nor Breed, nor Birth,
When two strong men stand face to face, tho' they come from the ends of the earth*
(Rudyard Kipling, 1889)

Abstract

The poem by Kipling is a perfect expression of the identity, the feelings and the meeting of two unique sides. This paper demonstrates that in fact East is meeting West in the new global order. Chinese executives are at the forefront of cultural change brought on by reform and decentralization in the new global economy which China has entered with alacrity. The paper explores the thinking styles of Chinese executives and analyses the self-reported perceptions of their own thinking styles. A description is presented of educational executive thinking styles from data collected from inventories developed by Sofo (2002) and by Sternberg (1997). It is thought that executives of educational institutions might differ in some way from those in more corporate cultures. Within this research, comparisons are made between educational and non-educational executives on a five dimensional Thinking Style Inventory developed by Sofo (2002). Qualitative data of ten in-depth interviews with educational executives are also presented to reveal their descriptions of their own thinking styles. The paper also presents education executive views of the differences between Chinese and Western thinking styles. The findings will be helpful in improving our approaches to teaching where Chinese executives are involved and the insights could also contribute to developing better relationships across our different cultures.

Introduction

In recent years we have conducted lectures and workshops with over 300 senior Chinese administrators both in China and within Australia. We have been fortunate enough to have the opportunity to conduct games and activities that have given us insight into their ways of thinking. There are some stereotypes that Chinese people's preferences for thinking are different from Westerners' preferences. This study sets out to illuminate styles of thinking in executives in China with the key research question of: What is the thinking style profile of Chinese executives? In a later study we will compare these styles with those of Australian educational executives.

Traditionally, humans' capacity to think has been measured using Intelligence Quotient (IQ) Tests. The literature in the few past decades has indicated the weaknesses of IQ tests in predicting achievement especially across cultures. Some theorists have therefore developed alternative models and theories of intelligence, notably, Howard Gardner (1984) and his theory of multiple intelligences. Our various intelligences allow us to perform certain tasks to a particular standard and it has been argued that there is a normal spread of distribution of these abilities in the population which epitomizes a group's intelligence.

This study is not concerned with thinking as an ability or intelligence but with thinking style, that is with particular ways of thinking or how we prefer to use our intelligence. While thinking is about ability, thinking style is about how we prefer to use our ability and not the ability itself (Sofu, 2004; Sternberg, 1997). There is a shift in focus from what we *can* do to what we *prefer* to do. Communities and organizations have particular values and cultures that promote distinctive ways of thinking. For example, schools can promote in students a liberal way of thinking and encourage creativity at different degrees. When we ask employees about their preferred ways of using their intelligence, we are asking them to share values they have which may or may not correspond to the organizational values where they work. When we ask executives to design and implement policy, we are asking them which particular ways they prefer to use their intelligence and perhaps asking whether they would be more inclined to reflect or promote the values of their organizations in their responses.

The study attempts to describe and analyze Chinese executives' preferences for thinking using Western research instruments and structured interviews.

What are the self-reported perceptions of executives' styles of thinking? What patterns emerge from their own conceptions of thinking? How do these conceptions compare to the literature? The key questions addressed in the paper include:

1. What are Chinese Executives' preferred ways of thinking about everyday problems and issues in the workplace? Do Chinese education executives differ in their styles from non-education executives?
2. What are your conceptions of thinking and what does thinking style mean to you? Comment on your own thinking style.

3. Describe what you think are the differences between Western and Chinese styles of thinking.

Review of the Literature

As an academic psychologist, Sternberg (1997) shows how thinking styles relate to cognitive styles and other approaches including the Myers Briggs Type Indicator. The theory of thinking styles is useful to the fields of problem solving, decision-making and management. It illuminates personal and organizational issues. It is a useful theory as a tool to help in matching people to roles.

Differences in personal preference extend to choice of instrument to explore personal preference and style. Which of the various approaches is used depends on what the goal is, and if used properly, each can build self-knowledge and appreciation of the value of difference. If used improperly, each can reinforce the fallacy that some styles roles or preferences are inherently better than others.

Conflict between thinking styles can be much more severe than inter-cultural conflict. Kirton (2003) maintains that people from different national cultures, but with similar thinking styles will get on much better together than people from the same national culture who have different thinking styles.

The review of literature indicates that Western frameworks are applied to the Chinese cultural context where thinking style has been described from such perspectives. The perspectives have emanated mainly from USA in the work of Sternberg. One consequence has been the importation of such approaches to other settings with dubious appropriateness. Since little research has been conducted in the field of thinking style it is not possible to say if such approaches have been successful in the non-Western setting. Cross-cultural understanding in the current globalized world is increasingly imperative. Any theories or practices used as the foundation for investigation should be aligned with the specific contextual factors. A grounded approach will be taken to the research endeavouring to build a framework unique to the conceptions of the people interviewed and surveyed. While Western instruments will be used, prominence will be given to the views of participants in the study in order to identify what the unique set of variables might be that describe thinking styles for them, that is preferred ways of using their intellectual abilities within the Chinese context.

In this study, thinking is seen as an essential component of learning that can enhance learning and performance. People have preferred styles of learning and differences in thinking that show particular strengths. Some people can choose to use their thinking to suit different situations while

others cannot adapt their thinking to different environments very easily. Thinking style is as unique as a person's signature. No learning or thinking style is better or worse than any other style (Sofa, 2004). Within any group of people one would expect to find that there are as many differences as there are similarities (Vos & Dryden, 2004).

Thinking style has been conceptualised in various ways. For example, Gregoric (2004) from University of Connecticut has divided thinking style into four groups: *concrete sequential thinkers* tend to prefer to process information in an ordered sequential way; *concrete random thinkers* tend to like to think as experimenters; *abstract sequential thinkers* like to think in ordered theoretical terms and *abstract random thinkers* tend to prefer unstructured and people-centred environments as the bases for their thinking. The conceptions that inform this model include how information is processed, whether the preference is along abstract or concrete terms or using sequential or random patterns.

Hermann (2004) structured a Brain Dominance instrument while manager of training and development with General Electric. His model uses an analogy of brain function that can be put into four quadrants to characterise the way people think: cerebral left hemisphere corresponds to analytical thinking preferring to focus on logic, analysis and facts; cerebral right hemisphere equates to future scenario thinking preferring to focus on intuition, integration, synthesis and a holistic view; limbic left hemisphere corresponds to action thinking focusing on detail, planning and sequencing; while limbic right hemisphere equates to social thinking preferring to focus on the interpersonal, social-emotional and kinesthetic dimensions. Unlike other authors Hermann (2004) suggests that a team can derive its composite score from the individual thinking styles of all its members to determine a thinking style for the group.

Sternberg (1997) has argued that IQ only accounts for a small amount of who succeeds not only at school, but also in the world. If you talk about jobs, what distinguishes those who succeed from those who don't is often whether their thinking style appeals to the person in charge. In school, children who are viewed as stupid often suffer from nothing more than a style that mismatches that of their teacher. Sternberg advocates a triarchic theory of intelligence. This includes analytical skills that produce good standardized-test scores; practical abilities, which he calls "street smarts"; and creative talent. A person's thinking style can have a profound impact on their school record, job performance and personal relationships because people are attracted to and value others like

themselves. Three key thinking styles described by Sternberg include: legislative, executive and judicial. Legislative thinkers enjoy ideas. They enjoy writing stories, inventing math problems and designing science projects. On the job, legislative thinkers make hiring decisions and give orders. Executive thinkers are implementers. They prefer to be given guidance on what and how to do something. They are valued by organizations that adhere to rules and guidelines. Judicial thinkers analyze and evaluate things and ideas. In school, they would rather analyze the plot of a story than write one. On the job, they like to critique a business plan, an employee's work or an advertising campaign.

The reason for conducting research into thinking styles is to raise awareness as groundwork for helping to improve the application of cognitive functioning and performance generally in different contexts. It is argued that thinking style informs problem-solving and decision-making. Most authors in the literature argue that individuals tend to have preferred styles of thinking and some individuals (for example experts) may be able to adapt their style optimally to suit the situation at hand. Thinking style tends to be equated to learning style research that maintains that there is a strong genetic disposition to learning in a particular way that can be influenced and changed by the environment and by personal effort but generally speaking the style remains constant throughout one's life (Sofa, 2004: 139). On this point we disagree with Sternberg (1997: 89) who maintains that many people change with age in their styles of thinking. He asserts that the modes of thinking with which one is so comfortable in one's youth often seem foreign and strange years later.

As thinking style is the basis for decision-making, the research can contribute to our understanding of Chinese executives' preferences for managing our thinking. Recently China has embarked on opening up to the globalized world not just in economic terms but also in other forms of practices such as education and social benefits. This emergence has intensified in the past ten years and China's culture has started to evolve thus influencing the thinking of decision-makers

In 2002 Sofa developed a thinking styles inventory where factor analysis identified five factors in the concept of thinking style based on how we like to accept, process and deal with information. Sofa (2002) labelled the styles as: (1) conditional, convergent thinking, which refers to a preference for accepting what others think and say without questioning. (2) Inquiring style refers to a preference for questioning to better understand what others are saying. There are elements of convergent thinking in this style because the goal is to better identify the existing links in the information given

which means that the key reason to interrogate is to clarify the meaning. (3) Exploring style refers to a preference for searching all sides of an issue. This is divergent thinking because there is an exploration of options within the given context. It is possible to also create options and alternative ways of thinking about the context itself by discovering new contexts. (4) Independent style refers to a preference for one's own views. One may accept the given views as their own because good reasons and intuitions for accepting them have been identified. Similarly, there may be good reasons and intuitions for rejecting parts or all of the given information and formulating one's own conclusions. (5) Creative thinking style refers to a preference for creating vivid pictures and perceiving the whole. This is divergent thinking because one is inventing images and seeing in wholes for the self.

This study aims to describe, analyze and compare ways of thinking that are characteristic of executives in China. Both conceptions and styles of thinking carry with them the richness of the cultures of the people. Studies on thinking styles conducted in China tend to be laden with Western perspectives and frameworks, notably Robert Sternberg's (1997) theoretical framework of thinking style (Cheng, Chen & Yu, 2002; Cheng & Chang, 2000).

Are we failing to recognize the variety of thinking and learning styles people use in different situations? Are executives interacting with staff in ways that don't fit them well? Rather than coaching and mentoring managers tend to discard employees without offering them the opportunity to develop their true potential. What particular styles of thinking do executives in China value? Do they mainly value the executive style and do they perceive themselves as preferring to use this style? Do Chinese executives use styles not known to Australian executives and Western literature?

Research Methodology

The sample includes nearly 300 executives from a wide representation of industry sectors who were surveyed using the Thinking Style Inventory (Sofu, 2002). A sample of 22 Chinese educational executives volunteered to provide information on thinking styles at a deeper level. These 22 completed the Thinking Style Inventory (Sofu, 2002) and three forms of Thinking Styles (Sternberg, 1997). Further 172 non-education executive thinking styles were compared with 48 education executive thinking styles using 'independent sample t-tests'. Then ten educational executives were engaged in structured interviews to gain further insights into thinking styles of Chinese executives.

Approximately 60% of the sample (n = 220) who completed the Thinking Style Inventory (Sofa, 2002) were executives on educational tours to Australia to discover new theories and practices. Twenty percent (20%) of these were executives from Beijing working in the oil and petroleum industry and another 20% were educational executives from the Zhejiang Province. The ten interview participants were volunteers from this latter group of educational Executives. The interviews were conducted in Chinese and then transcribed and translated into English. All the research instruments were translated into the Mandarin Language and an interpreter was used in all cases when the instruments were administered. Consequently this study used both a quantitative and qualitative approach. The quantitative analyses are shown in Table 1 below.

Table 1 Quantitative aspect and analysis of the data

QUESTION	DATA COLLECTION INSTRUMENT	NUMBER OF SUBJECTS	ANALYSIS METHOD
1a. What are Chinese executives' preferred ways of thinking about everyday problems and issues in the workplace?	1. <i>Thinking Style Inventory (TSI)</i> (Sofa, 2002) Five dimensions: Conditional, Inquiring, Exploring, Independent, Creative	220	1. Compute reliability co-efficient of Sofa's TSI
1b. Do Chinese education executives differ in the 5 styles from non-education executives?	2. Three Forms of Thinking Style (Sternberg, 1997) 3. T-tests on TSI (Sofa, 2002), education vs. non-education	22 48 172	2. Compare means of each dimension 3. Correlations between Sofa and Sternberg? 4. Do 5 "independent sample t-tests":
2. What are your conceptions of thinking and what does thinking style mean to you? Comment on your own thinking style.	Interview data from Chinese educational executives	10	Coding of interview data was done by four research academics. Discussion ensued on the differences.
3. Describe what you think are the differences between Western and Chinese styles of thinking.	Interview data from Chinese educational executives	10	Coding of interview data was done by four research academics. Striving for insights.

Interview data analysis

Interviews were transcribed and translated from Chinese to English. Data analysis was characterized by attention to reliability and validity issues, and was coded by four researchers. We subjected the data to coding by three Chinese researchers and one Australian researcher in order to check inter-rater reliability. Data from each executive was coded and compared with all others. The results of

this process were scrutinized by the two chief investigators and dialogue ensured where discrepancies occurred in order to arrive at a shared understanding of the interview material.

The interviews comprised the qualitative aspects of the research which tend to depict an old method of forcing and testing hypotheses in a new terminology, ignoring the more accurate contribution of grounded theory as explained in *Discovery of Grounded Theory* by Strauss and Glaser (1967) and in *Theoretical Sensitivity* by Glaser (1978). Grounded theory is a general method of comparative analysis. It is different from the more specific comparative methods now current. The logic of grounded theory (which *ensures* emergence, ie holistic view) is to ask two formal, neutral, not preconceived questions: (1) What is the chief concern of the people in the substantive area under study and how do they process the concern? (2) What category or what property of what category does this incident indicate? As researchers we asked these questions while constantly comparing incident-to-incident, coding and analyzing. We used this constant comparative method of analysis because the theory proposes that the method allows categories and their properties to emerge that fit, work, and are of relevance to the problem under investigation. We were seeking insights from a different cultural perspective not simply from the frameworks of the Western instruments used in the study. Glaser and Strauss (1967) argued that theory should follow from research not precede it. Theories should be grounded in data that are generated by the act of research. This is especially important in cultural research where Western imperialism is evident in both theoretical and methodological approaches.

The research instruments

Two thinking style inventories were used (Sofa, 2002 and Sternberg, 1997). Scores were interpreted according to instructions established by Sofa (2002) and Sternberg (1997) to identify patterns of thinking styles for individuals and groups. Data from all sources were compared and contrasted in order to consider the findings in the light of the literature to suggest a framework that is culturally sensitive.

Convergent thinkers are people who tend to use their understanding, logic, analysis and synthesis of a situation as a basis for accepting what they are told about the world without really questioning very much. Divergent thinkers move beyond simple analysis and synthesis of information by questioning, exploring and evaluating information and creating images as a basis for formulating their own views about the world. In life we need to be able to think in both convergent and divergent ways depending on the demands of the situation. Five types of thinking are included:

Conditional: you like to accept what others think and say without questioning. This is convergent thinking and you focus on accepting the information presented.

Inquiring: you like to question and to understand the reasons behind what others are saying. There are elements of convergent thinking because you are only asking about the cohesion and unity of the information given.

Exploring: you like to search all sides of an issue. This is divergent thinking when you explore options within the given context. You can also create options and alternative ways of thinking about the context itself by discovering new contexts.

Independent: you like to form your own views. You may accept the given views as your own because you have good reasons or perhaps intuition for accepting them. Similarly, you may have good reasons or perhaps intuition for rejecting parts or all of the given information and formulating your own conclusions.

Creative: you like to create vivid pictures when you think. This is divergent thinking because you are inventing images for yourself that create a sense of the whole or broader perspective.

A high score on a dimension indicates a preference for that style of thinking while a lower score indicates a lesser preference.

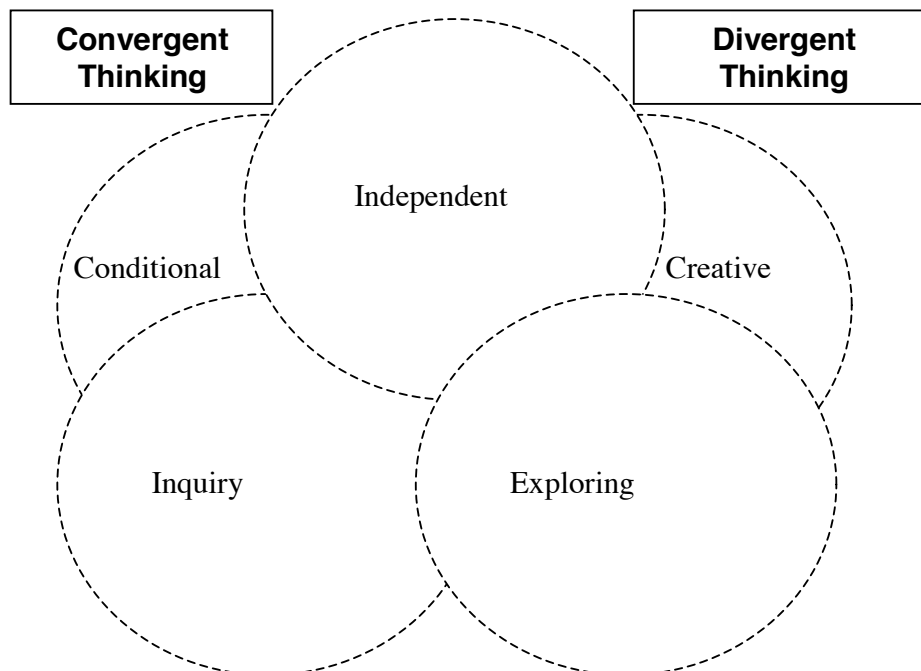


Figure 1: Five overlapping and interrelated styles of thinking

The stages are not arranged in a hierarchy and you do not need to be skilled in any particular stage of thinking before you can achieve another stage. The stages are not mutually exclusive. By this we mean that the boundaries between them overlap. It is likely that we can all operate at several stages depending on the situation. This is why the stages represented in the circles in Figure 1 are separated by dotted lines because the boundaries are semi-permeable. Of course people can act to best effect if they adopt an appropriate style of thinking in a given situation.

Cronbach's alpha measures were used to establish the reliability of the Thinking Style Inventory (Sofu, 2002). For each of the five dimensions of thinking style the reliability coefficient is reported here as follows for $n = 220$ cases: Conditional alpha = 0.7; Inquiry alpha = 0.5; Exploring alpha = 0.6; Independent alpha = 0.6; Creative alpha = 0.8.

Forms of Thinking Style

The three Forms of Thinking Styles developed by Sternberg and Grigorenko (Sternberg, 1997) is built on the metaphor of forms of self-government. Some people prefer to do their own thing despite being given detailed instructions. Conversely some people seem to be incapable of thinking of alternatives while some people are perfectionists continually adjusting their plans whilst others are continually bent on immediate action. The three types of people exemplified by Sternberg correspond respectively to the legislative, the executive, and the judicial arms of government. The legislator feels most comfortable when creating frameworks and solutions to the problems of the world. The executive feels most comfortable putting policy into practice and ensuring that all goes well. The judiciary (or High Court) prefers to evaluate the merits of policies and identify their shortcomings, a role that does not endear them to the legislator and executive but which is essential to the health of the system as a whole.

Different jobs have quite different requirements for the three styles. The chief executive's role is primarily legislative, concerned with what should be done. Middle managers need to be executives, concerned with how to put plans into action. Engineers and accountants need to have a judicial temperament, considering the pros and cons of alternative approaches. By considering thinking styles we can gain insights into job fit and personal communications issues, because peoples' decision making priorities are shaped by their thinking styles. Moreover, a style that is appropriate at one point in the career path is not necessarily helpful later on. Sternberg (1997) provides a comparative scale of each trend for male and female.

Results – quantitative analysis

To answer the first question on Chinese executives' preferred ways of thinking, descriptive statistics on all Chinese executives are provided for both the Sofo (Table 2) and Sternberg (Table 3) thinking style inventories.

Table 2 Means and Standard Deviations of Chinese Executives on Sofo's Thinking Style Inventory N = 220

Total scores Sofo Thinking Style Inventory 5 Dimensions	Mean	Std Deviation
1. Conditional	20.87	6.36
2. Inquiry	30.09	5.19
3. Exploring	35.79	5.47
4. Independent	36.68	5.57
5. Creative	26.53	7.95

Table 2 indicates that the least preferred style of thinking among Chinese executives was the conditional style while the independent style was the most preferred. These styles are qualitatively different (supported by ANOVA at $p < .001$) as far as conformity and clout in decision-making are concerned. The exploring style was preferred almost as much as the independent style and this indicates that Chinese executives reported that they feel most comfortable when they are able to generate options and explore possibilities in decision-making and follow this by making independent decisions. Even though the means of the exploring and independent styles are very close this does not indicate necessarily that the styles are measuring the same construct since executives were asked to rank their preferences across all five dimensions. The indication is only that these two styles are the most preferred styles.

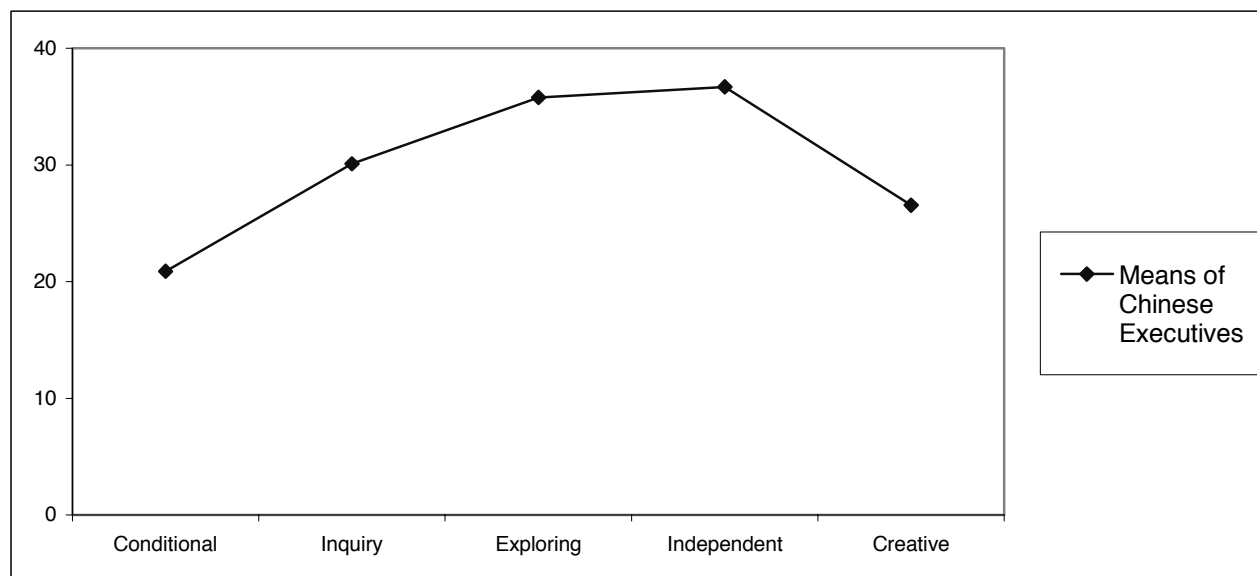


Figure 2 Profile of Chinese Executive Thinking Styles on Sofo's Inventory (N = 220)

A thinking style profile of Chinese executives of the five preferred styles is depicted in Figure 2. Both Table 2 and Figure 2 show that the exploring and independent styles were highly preferred among the Chinese executives. A repeated measures ANOVA indicates that each mean of the thinking styles is statistically significantly different ($p < .001$) from each other except for the exploring and independent styles where there was no significant difference. A Bonferroni adjustment was used for the 10 pairwise comparisons of the five means to avoid increased possibility of falsely obtaining significant differences among the means.

A smaller sample of Chinese executives who completed the Sternberg questionnaire saw themselves having a ‘high’ to ‘very high’ ranking on the executive thinking style as indicated in Table 3. A ‘high’ ranking followed this on the judicial style and a ‘high middle’ ranking for the legislative style.

Table 3 Means and Standard Deviations of Chinese Executive Rankings on Sternberg’s Thinking Styles

Thinking Style (Sternberg, 1997)	Mean	Std. Deviation	N
Executive Style	1.92 (Very high ranking)	1.17	38
Judicial Style	2.29 (High ranking)	1.35	38
Legislative Style	3.24 (High middle ranking)	1.22	38

Figure 3 shows that on average no executives ranked themselves as ‘low middle’, ‘low’ or ‘very low’ on any of these three styles (a mean of 4 or higher indicates low ranking). An interesting observation is that the Sofo instrument includes styles that Chinese executives rank themselves quite low on, that is they reject some of the styles, comparatively, yet they accept all three styles of Sternberg as high preferences. Later this result is compared to data from the in-depth interviews that acknowledged a high level existence of the conditional style of thinking when comparing Chinese and Western thinking styles more generally across the professions (see Attachment 2).

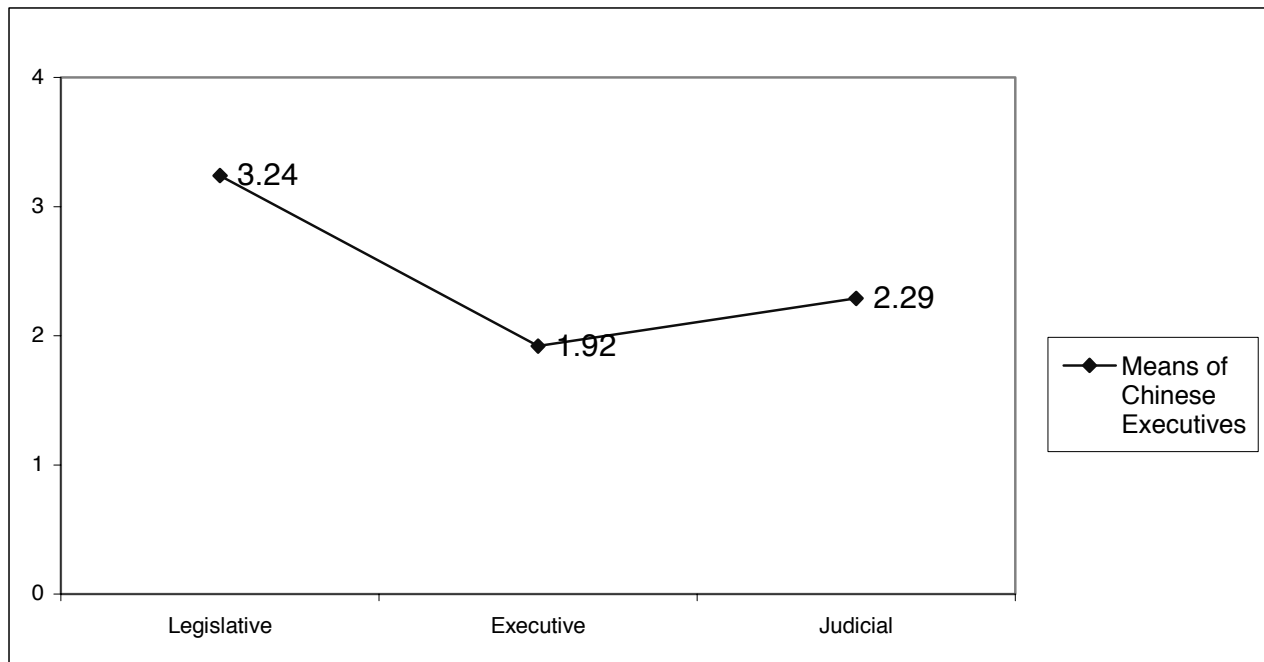


Figure 3 Chinese executive thinking styles on Sternberg questionnaire (N = 38)

The other part of the first question endeavoured to determine if education and non-education executives had similar thinking style profiles on Sofo's Thinking Style Inventory. Generally the profile of these two groups of executives was similar, that is the strongest preference was for the independent and exploratory styles followed by the inquiry and creative styles while the least preferred was for the creative style.

Table 4 presents the results of five independent sample t-tests of the scores of 48 education executives and 172 non-education executives on Sofo's five dimensional Thinking Style Inventory. All executives were aged over forty years and the mix of gender in each group was about the same (20%-25% women). All the education executives were two thirds of the way through a Master of Educational Leadership course being delivered by the University of Canberra whereas the education levels of the non-education executives was variable.

Table 4 Education versus non-education executives thinking styles: 5 independent sample t-tests

1. Conditional , p-value = 0.019 (<i>significant difference</i>) Education mean = 22.33, non-education mean = 19.73
2. Inquiry , p-value = 0.347 (non-significant difference)
3. Exploring , p-value = 0.027 (<i>significant difference</i>) Education mean = 34.35, non-education mean = 36.41
4. Independent , p-value = 0.254 (non-significant difference)
5. Creative , p-value = 0.077 (<i>a borderline significant difference</i>) Education mean = 25.10, non-education mean = 27.48

The results show that the education executives scored themselves significantly higher ($p < .01$) when compared to the non-education executives, on the conditional style which means they perceived themselves to have a greater tendency to accept rules and decisions without questioning. The non-education executives scored themselves significantly higher ($p < .02$) compared to the education executives on the exploring style which means that they prefer more strongly to search all sides of an issue, to engage in divergent thinking and to generate options. Similarly the non-education executives scored themselves more highly ($p < 0.7$) than the education executives on the creative thinking style which means they perceived themselves to have a greater preference for creating broad perspectives and a sense of the whole. The significant differences on these styles give some indication that the non-education executives tended to see themselves as, and prefer to be more exploratory and open to ideas in their thinking styles than did education executives.

Interview data – qualitative analysis

In order to explore Chinese executives' conceptions of thinking we conducted 10 in-depth interviews with volunteers from a group of 50 educational executives from the Zhejiang province, China. The questions we asked assisted us to provide insights on the second and third questions which deal with Chinese executives' comments on their own thinking style and perceptions of the differences between Western and Chinese styles. Table 5 gives details of executive work designation and their work duties as they described them in the interviews.

Table 5 Roles and Work Duties of Chinese Education Executives Interviewed

Executives in Education Departments in Zhejiang Province (N=2)	Executives in Tertiary Educational Institutions (N=3)	Primary and Secondary School Education Executives (N=5)
<p>ED1: Director of a Municipal Education Bureau and Chair of Party in Bureau. Regulates and provides guidance for education institutions and for all schools including all schools under the municipal jurisdiction universities and kindergartens PS, Secondary Schools, and Municipal Technical Institute in the city.</p> <p>ED2: Deputy Director of an Education Bureau at a County Level in charge of finances and educational targets</p>	<p>T1: Vice General Manager (Deputy Director) in Rear Services, Logistics for a University Provides food , medical care, recommendations for visitors at reception. Is a business manager with companies outside the University</p> <p>T2: Head of Instruction Dept of a School of Art at a university and teaches.</p> <p>T3: University Vice president responsible for academic discipline development, research, library, research institute and schools attached to the university and also for physical education and sport</p>	<p>PS1: Principal of Middle School Secretary (chairman) of the Party Supervise students</p> <p>PS2: High School Principal Party secretary Takes care of whole school; regular management and strategic planning</p> <p>PS3: Principal of High School and Party Secretary</p> <p>PS4: Vice principal in a provincial key secondary school in charge of instruction</p> <p>PS5: Principal of Primary School Member of the party Leader of the School</p>

The duties performed by Chinese executives includes a full range of tasks that one would expect to see performed by them such as preparing, field investigations, coordinating, attending meetings, public relations activities, teaching, organizing, monitoring and liaison work.

What is thinking?

The executives provided a range of in-depth responses all tending to indicate thinking is a process of comprehension in solving problems in work and in life. Reference was often made to distinctions in the process from a Chinese perspectives, eg ‘si kao’ and ‘si vai’ have important nuances in meaning in the Chinese language. A summary of responses is presented in Table 6.

Table 6: Executive views of what thinking is

<p>T1: Thinking means how to do work and how to be a person.</p> <p>ED1: Thinking is mainly internalization and creation. Something has become new and different</p> <p>PS1: Thinking is the process of solving problems and in terms of guidance of what kind of theory and method in how many stages and what kind of problems I will come across the process.</p> <p>T2: In daily life we use ‘si kao’, ie solving one particular problem and getting a solution but ‘si vai’ is a holistic thinking and more general.</p> <p>PS2: Thinking is judgement based on previous experience and or information received.</p> <p>ED2: Thinking is a decision making process and it is important to consider different perspectives.</p> <p>T3: There are three aspects about thinking: especially when we use thinking in a team and an organization: 1st layer: is direct experience where thinking enables oneself to have solitude space and time to memorize and reflect on one’s previous experience. Second aspect of thinking is indirect experience such as accumulation of individual reading and reflection from it to help with life issues. Third aspect of thinking is also research and relying on people around us to get some information so it is important for us to communicate with others especially those who have high IQ, experiences and are friends and colleagues.</p> <p>PS5: Thinking is a kind of reflection about a certain a incident or phenomenon. Reflection comprises thinking (‘si’ = thinking, direct sensation of one’s experience; ‘kao’= reverse, reflection about one’s feeling and feeling about one’s thinking). ‘Si vai’ also means thinking but a subtle differences exists as this is a more academic term indicating more rigour in the process and its dimension.</p> <p>PS4: Thinking is a process of focusing on a particular problem, a phenomenon from different perspectives and angles and at different stages of time. If we can think from different depths and widths we can have more comprehensive understanding of a phenomenon and of a problem.</p> <p>PS5: Thinking means a process of our brain about an incident or phenomenon.. Thinking brings understanding of an incident and the nature of phenomena. We understand the nature of something through observing the particular incident of phenomenon. We can see that everyone can think, the only difference is the degree and depth from different depths or perspective.</p>
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Views of thinking style (see Attachment 1 for further details)

Generally Chinese executives’ views of thinking style was that it is not a preference but rather how you use your thinking to suit particular circumstances. Some thought it is a kind of habit or tendency in the way they think. A diversity of opinions was expressed eg that individuals cannot choose one particular style but a number of them, yet individuals can have a dominant style eg a researcher is reflective and one’s occupation develops a style in a person. The concept of ‘jumping’ thinking was introduced to denote a style that managers should be using selectively and flexibly taking into account the great impact on thinking of emotion, rationality and will. Good managers tend to achieve balance among the different aspects of thinking. Some of the respondents liked to use the word ‘rational’ to express the ‘independent’ style of thinking since they interpret independence in thinking as having an evidence or scientific base of logic. Overall the views indicated that thinking style is a

mental process that is flexible and adaptive and the thinking style inventories of Sofo and Sternberg accurately reflected their particular styles of thinking.

There was some skepticism about the efficacy of one's 'preferred' thinking style among the Chinese executives. The view generally expressed is that preference is not relevant but rational choice based on the situation of the contextual factors is powerful in determining which thinking style will be used. Some executives regarded style of thinking also as being inextricably linked to decision making rather than just the cognitive aspect alone. Other styles mentioned by the Chinese executives include abstract, experiential, traditional, modern, rational, jumping, flexible, judging from different perspectives, positive, optimistic, negative, pessimistic, reflective and strong.

Chinese executive views of the differences between Chinese and Western thinking styles

Attachment 2 contains details of views on the differences that exist in thinking styles between China and the West. The key differences relate to those emanating from long standing cultural and historical events, values and practices. Chinese executives seem to have a number of stereotypes of these differences. For example the Western world is seen as democratic, free and open and consequently one that encourages exploratory and independent thinking while China traditionally has been closed and undemocratic and consequently tends to be seen as conditional and conservative in its thinking styles. A number of important similarities were also expressed that indicate a convergence of thinking styles between China and the West.

Conclusion

The researchers have constructed a model to depict a convergence of East and West as far as thinking styles is concerned. The convergence is derived from the views of Chinese executives interviewed who expressed their opinions about Chinese thinking styles and their own styles as measured on Western thinking style instruments. Figure 4 depicts both East and West thinking styles, both Sternberg and Sofo as well as those descriptions provided by the Chinese executives. Chinese styles are listed in the left hand column as well as in brackets within the pentagon in Figure 4 where we thought they paralleled Sofo and Sternberg styles.

From our research we can conclude that on average all Chinese executives rated themselves as having high to very high styles of thinking as measured by Sternberg's Forms of Thinking Styles (1997). Figure 4 presents a model derived from the result of this research where Chinese executives

can best be described as ‘executive’, enjoying implementing the projects already planned; ‘judicial’, enjoying analyzing, critiquing and evaluating ideas; and ‘legislative’, enjoying creating rules. These styles are depicted at the core of Figure 4 to indicate high preferences. In addition they had high preferences for both independent and exploring styles of thinking as measured by Sofo’s Thinking Style Inventory (2002). They reported low preference for the conditional style which indicates their unwillingness for accepting without questioning. They had moderate preferences for the inquiring and creative styles which indicates a reasonable level of comfort with questioning to better understand and a willingness to think more broadly and holistically.

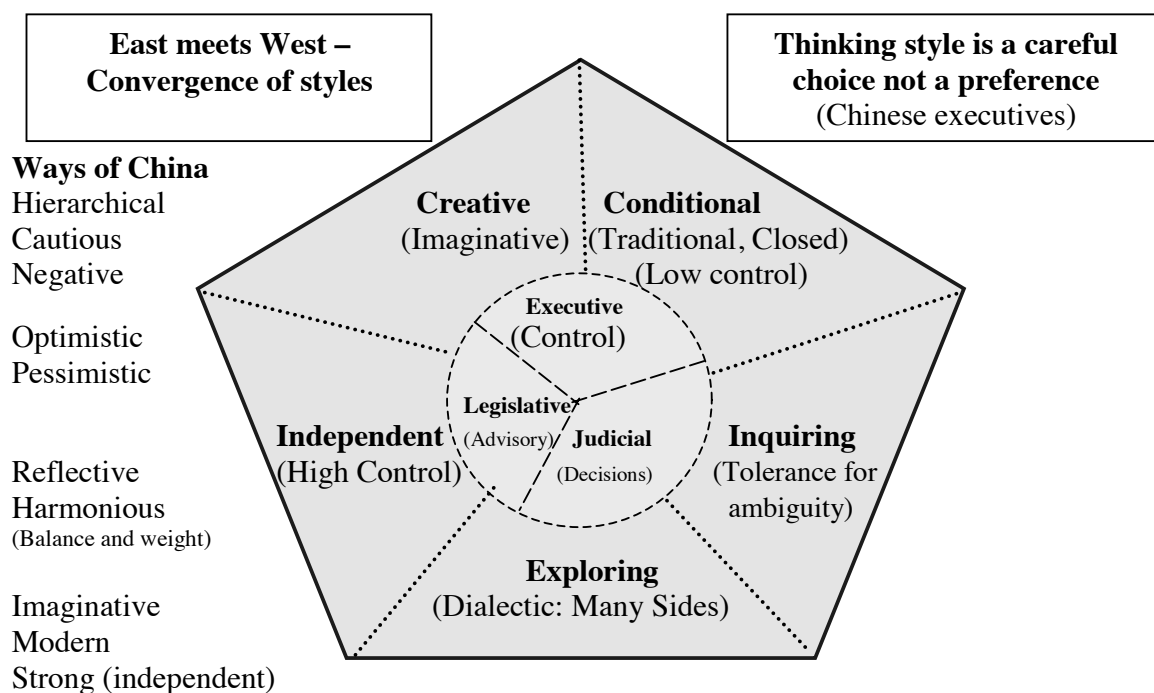


Figure 4: East Meets West: A Model of Styles of Thinking

The general view expressed by interview participants is that thinking style comprises a careful choice based on an assessment of the context and that effective executives should strive for a balanced use of the various thinking styles in the decision-making process. They stressed some key differences between Chinese and Western thinking styles based on differences in values, history and culture. Also some new thinking styles more suited to Chinese executives and culture were suggested and these are listed in a column on the left side as well as in brackets within the pentagon and circle in Figure 4. For example an advisory thinking style was suggested relevant to Chinese executives since some executive positions in China do not permit decision making but rather are

advice-giving only in nature; this type of executive mainly contributes to policy making. We thought that the 'advisory' thinking style actually reflects Sternberg's legislative style and so we have indicated this in Figure 4. Another style suggested is one stressing tolerance for uncertainty and ambiguity which reflects Sofo's inquiry style in that questions are asked but there is an acceptance of the rules and status quo even under conditions of disagreement. We have indicated this style as a 'tolerance' thinking style reflecting Sofo's inquiry style in Figure 4. Thinking styles of low and high control were also suggested and these reflect Sofo's conditional (low control) and independent thinking style (high control).

It is important to understand the values and beliefs of Chinese executives as the basis for their unique operation in the world. The research has helped somewhat to clarify the importance of particular values in thinking style preferences. The work has given some insight to the discipline knowledge on thinking style and culture and in particular there is the potential to help improve our understanding of preferences and perceptions of Chinese executives. There is an opportunity to have some further input to improving the delivery of courses and other services to our students and clients in China. The study has developed a culturally sensitive model of thinking style for executives based on qualitative research (interviews) as well as empirical analysis of thinking style inventories. This in itself contributes to our knowledge of Chinese executives' conceptions of thinking and problem solving.

This work is exploratory and it could be useful to follow up to confirm some of these findings and also to monitor the impact of unparalleled changes that are being revealed in China since entering the modern globalized world. Further study of thinking styles in Chinese and Western executives will assist us to gain additional insights into the contributions that are being made in our one world. This we are sure will greatly contribute to the exchanges across economic, political and social dimensions whenever East meets West.

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ATTACHMENT 1:

Chinese executive views of thinking style

- T1: Thinking style can be regarded as a process of thinking that uses deduction and induction. For me I tend to use my frame of reference of past experience and next I will think the way my boss will be thinking and how other staff will think about it. So my style is to think from perspective of different persons. In terms of Sofo's thinking styles, mine is independent thinking. Is it accurate? At that time when we did it and compared with other five students who sat nearby, we thought Sofo's could reflect fairly accurately our thinking styles. I am an independent thinker so if I make a decision it was based on my thinking and is difficult to change. So I think independent is accurate of my style.
- ED1: Thinking style is like a habit. Different persons have different thinking styles. It is a person's tendency or way of thinking. My thinking style is like the white hat (Edward de Bono) and tends to be rational. Different thinking styles may have impact on one's occupation and different occupations benefit most when they use the most appropriate thinking style. I belong to the Independent thinker which reflects my actual style which is rational.
- PS1: Thinking is the process of solving problems in terms of guidance of what kind of theory and method in how many stages and what kind of problem. Thinking style is not a person's preference: this definition is not accurate and comprehensive enough because your preferred thinking style cannot help you accomplish certain tasks. Sometimes you must force yourself to think according to the rules in this way. You do not use a style of thinking that is your preferred style but a style that suits the situation, the task you are going accomplish. My style is innovative. I like creative and new ideas and I think that my style belongs to independent thinking. I also belong to Sternberg's comparative evaluation (Judicial) category. Comparatively speaking these questionnaires can reflect thinking styles. On Sofo's I belong to independent style which I agree with.
- T2: Thinking style can be comparatively open or closed. It means different ways of thinking and dealing with questions. It is not a person's preferred way People can choose one particular style depending on circumstances and person you are dealing with. There is no one style that you prefer to use all the time. I don't think a person can choose any particular style; they may choose several styles. I have used many styles. There is one difference from others. I tend to be more reflective as my style. Because I'm an academic I need to do research work and so my focus might be on reflection. On Sofo's inventory there are five thinking styles so I have some impression and I belong to the fifth one, creative thinking. There were only three students who chose this category in our class of fifty executive students. Sofo's is accurate of my style comparatively speaking as I am an artist so this style is no surprise.
- PS2: My thinking style is a rational style. I tend to make my judgement based on the facts, data or my previous experience. We need to understand thinking style from biological perspective and my major is biology. We can regard the brain as a computer so it is a kind of processing and dealing with data. I don't agree that thinking style is a person's preferred thinking style. Sometimes we tend to use our preferred thinking style but when we come across something new or different we may break out of the stereotypes and choose different ways in different circumstances and use different styles. The way we choose thinking styles depends upon the objective phenomenon such as external information and the status of objective phenomena. Also people tend to use different ways of dealing with others.
- ED2: Thinking style is a fixed strategy that we adopt. All we can see is a habitual strategy adopted in our life. My background is a maths teacher and my thinking style is influenced by this. For example I ask students to have different answers to a question. You need to find different solutions and consider different aspects but you are supposed to choose the simplest easiest solution. My way of thinking is divergent style so my understanding is that divergent is thinking

that is sent in different directions. During divergent thinking it is important to make decisions as well. Divergent thinking is a precondition, first comes this and then later we need convergent thinking. We need a combination of both. My style is a kind of divergent and convergent style. On Sofo's test I think I belong to the independent thinker not divergent This questionnaire does reflect my style accurately and comparatively. I feel I am an independent thinker.

T3: Thinking style is thinking about experience; one is philosophical, theoretical and another is comparative contrasting similar things and phenomena. I notice that those who have imagination, eg artists tend to be imaginative. I think I am weak in this aspect. I am strong in abstract thinking and experiential thinking I belong to this unconscious capability. Thinking can be divided into traditional and modern. Traditional is habitual relying on past experience and experience of past work also would be able to get info from data base to deal with new problems. Modern thinking is up to date and new. Thinking style is not a preferred way of thinking. If we say that preferred thinking is like a stereotype of thinking which is not really good but people tend to have these kinds of stereotypes. As a manager my thinking should be 'jumping' thinking and I need to select among the diff styles and I need to be flexible. Three things have great impact on my thinking emotion, rationality and will. Good managers tend to achieve balance among these three aspects. I belong to the 'executive' style on the Sternberg questionnaire and to 'exploring' style on Sofo's. When most managers will not have enough time to think of their own style especially during decision making. Sofo's does not reflect my thinking style accurately enough.

PS5: Thinking style means thinking from a particular perspective, eg if we focus on one phenomenon and look at it from a particular perspective. Eg I have just learned about the six coloured thinking hats and this stands for 6 different perspectives and mentalities which is very important So thinking style means you judge a phenomenon from different perspectives. My thinking styles are quite positive and optimistic. I tend to think from perspective of the positive side. At the same time my reflective abilities are very strong. When I predict a thing is positive I will try to promote it and make it happen and when the negative sides comes out I tend to accept it in a positive manner to accept its disadvantages elements and I try to adjust myself to unfavourable conditions. I remember that in Sofo's thinking style inventory there are five categories. It seems that I belong to the inquiry category. When I completed the questionnaire I found there are not great differences between the different choices and there seems to be some overlapping and so I cannot understand it very well so I don't think it reflects my style very accurately. My style is between inquiry and exploratory categories.

PS4: Thinking style is like a process of thinking. A person may choose a different thinking style depending on different circumstances eg I'm not in a good mood at times and I spend a lot of time in independent thinking which will be more rewarding. Sometimes you need to talk to others and then get collective wisdom and can get a more open mind. When I think I imagine something from the beginning, the whole process, the possible results and the outcome. I am a Chinese teacher and this kind of imagination has to do with my language background. I filled in the questionnaire this morning and I imagined it as a scenario as a picture. My style is 'creative' as well as independent. On the Sternberg I belong to the Judicial category On the Sofo I belong to the creative thinker. In the whole class there were only three students who put up their hands and they are imaginative thinkers. When I solve problems I can almost imagine the whole scenario as I talk about it. I can use my imagination to see how people enacted their facial impressions and all the details in the picture. Sofo's reflects accurately my way of thinking.

PS5: The position you take when you are thinking is a kind of thinking style. During the thinking process you may make a judgement about the depth dimension of this incident and the nature of the question. My style belongs to the exploring dimension. When I come across a problem I may want to explore its nature its origins and the way it will develop and what measure I should take to deal with this. Sofo's Thinking Style Inventory is close to our preferred thinking styles.

ATTACHMENT 2:

Chinese executive views of the differences between Chinese and Western thinking styles

Summary only

CODE	CHINESE CHARACTERISTICS	WESTERN CHARACTERISTICS
T1:	Layers by layers thinking: so if you get rid of one layer it is difficult to understand the layers More abstract and theoretical.	Westerners have strong ability of creativity, imagination; jumping thinking in segments, discrete, self contained. Better at logic, empirical, scientific studies.
ED1:	Pay more attention to one's feelings but not very rational and justice so it seems difficult to keep justice and fairness in the Chinese culture. A person's face seems to be very important.	Westerners tend to be more rational and do not pay attention to face but justice, fairness seem to be given much attention in western society.
PS1:	After China opening to outside world we pay attention to student originality but we are still traditional and book and course material and teacher centered. Leadership is top down and hierarchical structure is very obvious. Re Thinking Styles we tend to implement the tasks and plans from the top. In terms of TS in China conditional thinking is dominant but later on creative thinking will be developed.	Equality, democracy and openness are heavily emphasized; pay attention to student originality, creativity so they are better than Chinese. The same in Western countries the decision process goes from bottom to top , first consider consultation and feasibility and also management structure is flattened and basically flat
T2:	Chinese people are quite creative but because we have many constraints plus the impact from the traditional culture therefore Thinking Styles are comparatively speaking conservative. In China diff people have diff ideas eg students at univ study science and may look down on those who study arts and humanities and vice versa. Chinese are very wise even many philosophers recently put forward deep thought including philosophy of humanity.	West is a broad concept. The situations are not completely the same, eg UK and people from there are quite conservative but in USA situation is quite different. There are some diff regarding emotional and rational aspects eg the westerners pay much attention to science and rationality and they have idea that science is most important thing
PS2:	More conservative and reserved and this has to do with Chinese culture. Many Chinese people are not very successful in China but why when some of them come to the foreign countries they can be quite successful. This could be communication and the different way of thinking which compliments western way of thinking and so they are successful. I think there are more similarities than differences if we compare both.	More direct and more open. Different way of thinking between west and China could be complimentary Americans have a broad way of thinking and could break their stereotypes. Eg the American talk about the film star wars and also martians so Americans are very creative. But Chinese people are likely to be constrained because of habits and rules and habitual way of thinking.
ED2:	I stayed in Australia for 15 days last year and Western academics helped us to open our ideas. In China we consider a lot about techniques and strategies eg the art of Sun Zi is a famous strategy in Chinese history. In China we pay attention to broader strategies. We pay much attention to stability in thinking Styles. Chinese have dialectic and consider many sides.	Pay attention to specific data and empirical studies. But in Westerners have jumping thinking. and use jumping so they pay more attention to one side rather than to another side. eg this teacher once produced a stone and then cars and in his thinking the elements of jumping seem to be more than the Chinese ways of thinking. Western countries they pay attention to specific techniques not broader strategies.
T3:	China emphasize collective culture from past agricultural society or towards university in modern society. We have been influenced by Chinese traditional culture that emphasizes collective group where individuals must comply to interest of the	Western values pay more attention to individual feelings, experience, right and duty in terms of relation of individuality and society values tend to favour individuals rather than orgs and society or nation. Rights are higher than other values.

	<p>organization. Harmonious and interpersonal relations and internal balance of individuality are important. Asian scholars stress mental balance and morality of human being. Balance and weight are important in thinking styles. Chinese way of thinking tends to be more closed because individual response to external stimulus is fast but response to collective group to external stimulus is slow because slow process to communicate the responses to the outside.</p> <p>In Buddhism there are 36 layers and people are stratified into diff classes. So this influences thinking styles. Buddhism has diff classification so Chinese thinking is very hierarchical and we have diff judgement based on stratification.</p> <p>China has over 2000 years of feudal history and modern China after Qing Dynasty, with the establishment of the Republic of China, has more than 100 years China. We can see that the impact on the Chinese thinking styles is not from capitalism but from feudalism. To some extent my ideas are quite radical but I think in the modern society the changes are so quick and great and the Internet particularly the intercommunication from multi-cultures is a great thing because it has made deconstruction happen (post modernism). This kind of deconstruction is a kind of incremental change and it has impact on traditions, so it's a good thing.</p>	<p>Society is composed of diff individualities and if you pay no attention to individual then there'll be no value for whole organization or society.</p> <p>Third aspect is political. If you look at the history of the Western countries; I think many Western countries have accepted ideas such as equality, justice and love dated back to the French revolution, US Declaration of Independence,</p>
PS5:	<p>Comparatively thinking (China likes dialectic thinking don't want to be too extreme or too definite, to be tentative that ideas are extreme) there are some differences. Generally speaking Chinese way tends to focus on acceptance and conformity. If the public has some ideas and a certain person will follow suite and constantly conform to these kind of ideas. So when they are thinking they tend to follow the mainstream of idea. I think a problem exists in China. eg system administrators may follow their original old way of thinking but for us school principals as a small group our personal development tends to be diff and more creative and we may think from a unique perspective. School principals are more open than administrators from the education dept.</p>	<p>Westerners may not follow suit so quickly and he may have some diff or creative ideas.</p>
PS4:	<p>Chinese people tend to be reflective. Tend to reflect on their own experience.</p> <p>Secondly, culture has great impact on thinking styles. Eg Westerners are open comparatively speaking so when they make judgments they tend to think from a broader perspective and from long term perspective but Chinese we might focus on short term instrumental result.</p> <p>What we have in common is something in life eg goals and aspiration are common to both cultures and also happiness eg we have longing for certain things</p>	<p>Although Westerners are reflective but not from their own perspective. The degree of reflection of their own perspective is not as good as Chinese who have very deep degree of reflection from their own perspectives.</p> <p>Eg if someone violates their rights but Chinese will think they will just endure this rather than the Western sense of protecting their own rights.</p> <p>Many times Westerners have strong sense of democracy so western democracy has great impact on them so they always have this when thinking.</p>
PS5:	<p>Chinese pay more attention to rules and regulations and tend to be closed. We tend to think with a circle and one dimension. This has to do with historical background. Eg school should be surrounded by walls as well as a home. If we open it we may not have sense of stability. But wall gives sense of stability. You are</p>	<p>From my understanding and experience westerners tend to think in more open way and as individuals are more open active and optimistic and also tend to get along well with others and the sense of equality is better.</p> <p>Westerners pay more attention to how to do things</p>

<p>supposed to do within the wall and rules and you can do better if you comply within the walls. If its within the walls I should be responsible and so we enclose ourselves and don't want to be outside the walls. The Great Wall of China so we tend to enclose ourselves. Chinese teachers tend to talk and give lectures but Western teachers tend to make it happen by learning by doing interaction communication and through this to have a transfer of knowledge.</p> <p>Eg Chinese % of creative is less than with the western but the categories will be very similar.</p> <p>Individuality also differ. We pay attention to regulation but less to creativity and originality and vice versa for westerners.</p>	<p>– learning by doing.</p> <p>Exploring thinking is common among Western and Chinese people.</p> <p>After thinking Chinese may not want to do it but westerners after thinking want to do it and to collect data and do experiments.</p> <p>Experiential learning stressed in the West.</p> <p>For learning styles and Sofo's five styles Chinese also have these styles maybe the percentage of each style I different. Different % of categories will be diff.</p> <p>So the %s may be different. That is my supposition and my hypothesis.</p>
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