

**Special**

## **Primary and Secondary School Principal Training Research Based on Implicit Wisdom**

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**Abstract:** *This paper focuses on a training programme based on implicit wisdom for primary and secondary school principals in China. In spite of great achievements, there are still some problems in this training programme, such as the majority of training remaining at a low level; there is little consideration of the actual needs of the trainee principals and the content of the principal training programme is updated slowly and does not keep abreast of the latest theory and ideas. Over the last two decades, many researchers have turned to the old concept of wisdom. Studies on wisdom can contribute to providing the solutions to the three main issues of principal training. This present study applied two methods, the implicit-theoretical method and a case study of training, and reached the following conclusions: First, the implicit wisdom of Chinese primary and secondary school principals contains 13 factors and can be divided into two dimensions: a "Cognitive Dimension" and a "Social Dimension". Second, based on the factors of implicit wisdom, this study formed a Case Evaluation Method to assess wisdom of principals. Finally, this study established simple procedures for the development of training programmes.*

### **Introduction**

School principals play an important role in leading school development. Hanson (2005) points out that people working in the field of education often ask why schools are so different. The typical answer is that it depends on school leaders. School principals, as the leaders of schools, are the main vehicles through which schools may gain a development advantage. Therefore, many countries lay particular emphasis on the improvement of school principals' working expertise and personality and conduct various school principal training activities. The Chinese programme for training primary and secondary school principals started in the 1950s-1960s and has gradually taken shape in a standardised and systematic way since the 1980s. In December 1989, related institutions stipulated a series of documents regarding principal training and clarified the goals and basic forms of principal training, which symbolised the establishment of the modern principal training system (Zhang, 2008).

After more than twenty years' development, in spite of great achievements, there are still some problems in principal training. First, the majority of the training of our principals remains at a low and basic training level. The main goal is to meet the basic standard of the position with basic, common and compensatory characteristics (Yang, 2003). Second, our principal training institutions are under the guidance of national administration with less consideration of the actual needs of the trainee principals. Third, the content of principal training programmes is updated slowly and does not keep abreast of the latest theory and ideas. The contents of principal training are adjusted every five years. However, the detailed content, such as the basic training principles and policies of government, still remains the same (Shi, 2008). In the light of these three problems, it is imperative to think about how to train the senior school principals, how to conduct principals' training to cater to the needs of their cognitive and intellectual development and how to improve the training work from the perspectives of international frontier leadership and management theories.

In the last 20 years, many researchers have paid attention to studies on wisdom. These, to some extent, inspire the solution to the problems of primary and secondary school principal

training. First, wisdom is a high-level analytic factor, comprehensive and thinking-centred. The research on wisdom from a scientific perspective has a contribution to focusing attention on the wisdom development of school principals instead of on basic and low level training. Second, the methods used to study wisdom are moving away from the approach of pure dialectic analysis. Conversely, they veer to pragmatic studies based on the inner conception of participants and pay more attention to their actual needs. This information can then be used to help to discover what content or curriculum is needed to train principals. Third, wisdom is an old, but new research field with Chinese characteristics. So if we add the wisdom factor into the development of principals training, it will make the principals' training more attractive and contemporary.

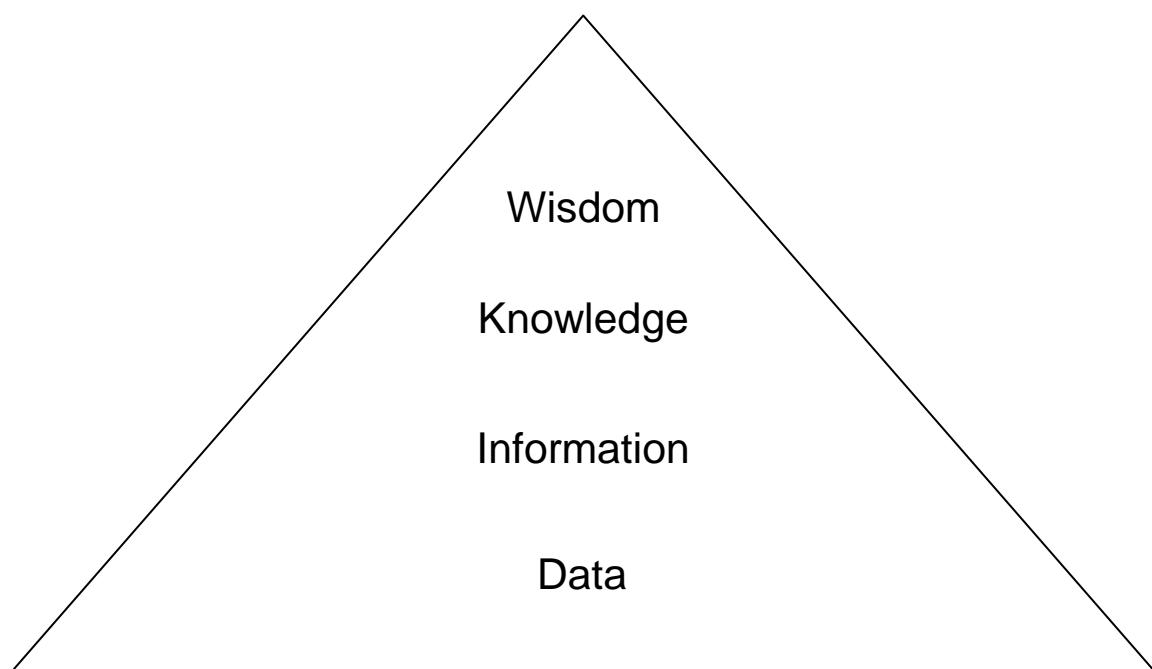
In China, there are already some studies on wisdom. For example, Sun (2005) and Kuang (2006) reached conclusions about the characteristics of wise principals, such as the scholar-like principal, doing well in teaching and managing, being fair and knowing how to judge and use people (Liu, 2006). There is another form, using a case study of an excellent principal to explain the understanding of wisdom (Fan and Wang, 2004; Tao, 2005). Also, some principals (eg, Tang, 2005) deem "wisdom" as the core value of school management. Wisdom projects include features such as "wise cultivation", "wise management", "wise teaching", "wise learning" and so on. It seems that meanings of wisdom vary differently. Currently, studies on wisdom are spreading on a large scale, and some institutions or organisations have held conferences on the topic of wisdom. For example, on 19 April 2006, the middle school affiliated to Nanjing Normal University held a conference on cultivating educational wisdom against the background of globalisation. Wisdom of principals, in Chinese minds, only originates from the practical life and practical understanding. We cannot deny the rationality of this and it has implications for guiding the principal's work. However, we have to admit that the summary of personal thinking and experiences alone cannot fully unveil the content and process of wisdom. Dialectic analyses cannot act as a substitute for scientific pragmatics. Furthermore, many scholars define wisdom according to their own understanding and these various definitions are not appropriate for establishing a common ground for studying principals' wisdom. Above all, the author holds that it is pressing to import research on wisdom into the principals' training with the application of scientific method compensating for the shortage of the studies of the previous stage.

## Literature Review

Research on wisdom can be dated back as far as 2,000 years ago when the concept of wisdom first played a central part in the field of philosophy. Now, research of wisdom has entered an inter-disciplinary era. In the course of history, there have been four stages in the development of wisdom. At the first stage, it was widely believed that understanding wisdom is the obligation of philosophers and thoughtful persons. Robinson (1989) notes that the *Platonic Dialogues* provided the first comprehensive analysis of wisdom. Wisdom is viewed as taking three forms: as the special gift of the philosophers and those who pursue truth; as the practical gift of statesmen and lawgivers; and as the gift of those who pursue scientific knowledge of the nature of things. Then, after the golden age of wisdom, the notion appeared to have essentially vanished from the modern scientific scene, especially in psychology in that behaviourism abhorred the "mentalistic" connotations inherent in the study of wisdom. Perhaps wisdom loomed as too large a unit or phenomenon to invite the attention of self-conscious scientific psychologists (Birren and Fisher, 1990). Later on, particularly in the 1980s and 1990s, more and more psychological researchers (eg, Clayton and Birren, 1980; Holliday and Chandler, 1986; Baltes and Smith, 1987; Sternberg, 1990) were engaged with the topic of wisdom. Researchers tried to set paradigms and convinced others of the worth of their paradigms (Sternberg, 1990). They drew upon the theories and methods of developmental (Labouvie-Vief, 1990), cognitive (Arlin, 1990), and personality (Orwoll and Perlmutter, 1990) psychology. And some also presented their studies of wisdom from the

evolutionary (Csikszentmihalyi and Rathunde, 1990) and organic perspectives (Pascual-Leone, 1990). At the fourth stage, for the current historical moment, however, renewed interest in the topic of wisdom is evident in a wide spectrum of disciplines, ranging from the traditional mentors of wisdom, philosophy, and religious studies, to cultural anthropology, political science, business, and psychology (Bierly, Kessler and Christensen, 2000).

The field of management, in spite of the short time to study wisdom, produces relatively important theories, for example “data-information-knowledge-wisdom” model, “individual wisdom-organisational wisdom” and “intelligence-creativity-wisdom” leading model and theory of balance of wisdom. The “data-information-knowledge-wisdom” model originates from the popular theory of “knowledge management”. Researchers have found flaws in knowledge management, in that it only pays attention to maximising, obtaining and sharing knowledge, paying less attention to applying and institutionalising specific kinds of knowledge (Rowley, 2006). In the face of the flaws of knowledge management, Zeleny (1987) and Ackoff (1989) proposed the “Data-Information-Knowledge-Wisdom” model (The DIKW hierarchy; see Figure 1). The main points are as follows: the wisdom factor is a great improvement for knowledge management and it emphasises what knowledge to select, and how to select it (Rowley, 2006). A wise Chief Executive Officer (CEO) will make better decisions than a knowledgeable CEO (Schrage, 1996). A company with more knowledge will not inevitably be successful, but if they can make good use of what they know and know what is important to the company and society strategically, the company will be successful (Bierly, Kessler and Christensen, 2000).



**Figure 1.** The DIKW Hierarchy (Bierly, Kessler and Christensen, 2000)

“Individual wisdom-organisational wisdom” theory states that individual wisdom can be transformed into organisational wisdom. In an organisation, there may be very wise individuals. However, how can individual wisdom be transformed to organisational wisdom? There are three methods: transformational leadership; institutional culture and structure and knowledge transfer (Bierly, Kessler and Christensen, 2000). The first method is related to leadership style; the second method stresses institutional culture because wisdom is related to ethics and values which are embodied in institutional culture and the third underlines the important role of knowledge in organisational wisdom.

Sternberg (2007) proposed the “Wisdom-Intelligence-Creativity” leadership model (WICS - Wisdom, Intelligence, Creativity, Synthesis) after making a comparison with the other wisdom models. He thinks one needs creativity to generate ideas, academic (analytical) intelligence to evaluate whether the ideas are good, practical intelligence to implement the ideas and persuade others of their worth, and wisdom to balance the interests of all stakeholders and to ensure that the actions of the leader seek a common good. In the WICS leadership model, the important factor is wisdom. The proposition of wisdom originates from Sternberg's triarchic intelligence and successful intelligence theory. Here wisdom is defined as the use of successful intelligence, creativity, and knowledge as mediated by values to seek to reach a common good by balancing intrapersonal (one's own), interpersonal (others'), and extrapersonal (organisational, institutional and / or spiritual) interests over the short and long term to adapt to, shape, and select environments (Sternberg, 2007). Here, common good not only refers to people related to oneself, for example family, friends or the members of an organisation you like, but also refers to what is good for all the people. Dictators do not maximise the common good, because they sacrifice others' interest for the sake of their own interests or other stakeholders' interests. The conception of “balance” can be reflected in the proposed theory of successful intelligence, and is extended in the balance of wisdom theory. It not only refers to the balance between analytical intelligence, creative intelligence and practical intelligence in successful intelligence theory, but stresses the balance between three interests and three reflections to the environment (adapt, shape, select). Above all, we can see the conception of balance is the dynamic core of balance of wisdom.

In China, there are some scholars promoting the cause of wisdom. Following ten years' hard work and preparation, the China Wisdom Engineering Association (CWEA) was established officially on 6 September 2005. The CWEA is the highest academic association of research and application research. Following its establishment, this association has often held many seminars and explores education training and practice. In 2006, Professors Qingsong Zhang and Qinglin Zhang (2008) taught the selective course “University students' wisdom” and published related teaching materials. The aim is to transmit the individual wisdom-cultivation concept and method and help students to establish right learning objects, systematically grasp learning methods, consciously cultivate ethics and values, and improve their own intelligence and capability purposefully in order to help them make good use of their time at university. For the wisdom training practice mentioned above, there is less relationship with primary and middle school principals' training though the author thinks the application of wisdom to other fields offers a conceptual orientation for primary and middle school principals' training. For the present in wisdom training, transmission of wisdom is the main content. However, the author believes that the development of wisdom research is still pitched at a low level and it is not easy to develop it to a very specialised training course.

## Research Methods

A number of people have attempted to understand wisdom in different ways. In spite of the various methods to study wisdom, psychological methods not only offer a more scientific way to study it, but also further to improve the methods and bring wisdom into the field of scientific studies as well as other psychological constructs, such as intelligence, creativity and so on. The methods underlying some of these attempts are summarised in Sternberg (1990). Therefore, the focus of the following review is on studies from a psychological perspective by explicit-theoretical method and implicit-theoretical method. The present research will mainly focus on the implicit-theoretical method.

As Sternberg (1990) has stated, implicit theories are constructs by people that reside in the minds of these people. They thus constitute people's folk psychology. Such theories need to be discovered rather than invented because they already exist, in some form, in people's minds. Discovering such theories can be useful in helping to formulate the common-cultural

views that dominate thinking about a given psychological construct. In the 1990s, cognitive psychology achieved a ground-breaking development in the field of implicit cognition (Lu and Yao, 2007), which enabled researchers to determine the cognitive elements which lie implicitly in the mind. This method has been used to study wisdom in general (Clayton and Birren, 1980; Holliday and Chandler, 1986; Sternberg, 1990), not in a specific field, and to study other constructs, for example the theory of leadership. Generally, there are some standard procedures of this method: a) collection of the words and phrases from the participants; b) scale-making in terms of the word-frequency; c) then principal component analysis should be done.

There are some key studies of the implicit-theoretical method. Qiong Lin, Wenquan Ling and Liluo Fang (2002) aimed to study implicit leadership theory. They randomly selected 133 participants who were each asked to write at least 25 words on leadership. The authors made a 10-point scale with 163 items. Then, 622 leaders and workers, teachers, scientific workers, university students used the scale. Yan Wu (2001) asked 81 university students to each write 25 words in order to determine a definition of science fiction and then 253 students answered the 10-point scale with 19 items. In the West, Sternberg (1990) studied the relations between implicit wisdom and creativity and intelligence. The author selected 24 persons in the fields of arts, business, philosophy and physics, and some other people. There were no specific requirements for the number of words written. Then, 40 university students used the 9-point scale of 40 items. Holliday and Chandler (1986) studied implicit wisdom by the implicit-theoretical method. The participants of the word-collection included three different age levels (young, middle, old). Finally, 150 participants at three different age levels (young, middle, old) completed the 7-point scale with 79 items in which 44 items were from a literature review.

The present research employs the implicit-theoretical method to explore the implicit conception for the following two reasons. First, we can consider the reasons from the relation between explicit and implicit theories. Sternberg (1990) believes explicit theory that offers a much deeper understanding of psychological phenomenon stems from scientists' implicit theory - and implicit theory can help understand explicit theory, ie, implicit theory is the foundation of explicit theory. On the other hand, the core of wisdom could be in social customs. Different understandings of wisdom lie in memory and unfold through life and behaviours. It is appropriate to apply implicit-theoretical method to analyse wisdom which is a factor adapted by social common practice.

## Research Questions

The research questions are limited to analysing the wisdom factor of primary and secondary school principals. Through the implicit-theoretical method, we aim to find a simple method to discover the content of principals' wisdom and to evaluate principals' wisdom. The specific research questions are as follows:

1. What factors are included in Chinese primary and middle school principals' implicit wisdom?
2. Can we establish a simple method to evaluate principals' wisdom?
3. Can we establish the basic wisdom training procedure?

## **Study 1. Implicit Wisdom of Primary and Secondary School Principals**

### ***Research Procedures and Research Result***

The survey was presented to the principals from principal training classes of Beijing Normal University (BNU) on 12 December and 20 December 2008. The participants were asked the following questions: *“What is your understanding of principals’ wisdom? Or if you describe a wise principal, what characteristics do you want to include?”* They were encouraged to write down as many possible words and / or phases in response. There were 87 participants and 472 words were collected. In order to make the rating more reliable, two raters were chosen who were careful, responsible and familiar with the topic. The raters identified “Words or phrases that can be categorised as one category”, “the name of the category” and any remarks. They then produced a Likert Scale of wisdom with ratings on a 1 (low) to 7 (high) scale, with a rating of 1 meaning behaviour extremely uncharacteristic of wisdom and 7 meaning behaviour extremely characteristic of wisdom. The author and the raters categorised and united those collected words and phrases to gather statistics in terms of word frequency. They choose those words (phrases) which were listed as the top 20 to create the seven-point Likert Scale.

Student principals who took part in the training course in BNU and BNU educational training centre participated in the survey. Of the 256 scales distributed, 228 (89 per cent) were returned. Respondents were predominantly male (76 per cent), between the ages of 30-49 (91 per cent) and had been working for 10-19 years (30 per cent) or 20-29 years (60 per cent).

### ***Principal Components Analysis and Promax Oblique Rotation***

First, Kaiser-Meyer-Olkin (KMO) and Bartlett’s test of sphericity was used to test whether the data were appropriate for factor analysis. If  $KMO < 0.5$ , factor analysis is not appropriate (Kaiser, 1974 cited in Wu, 2000). For the present study, KMO was 0.843, and Bartlett’s test of sphericity was 1200.1 ( $df = 105$ ,  $p < 0.01$ ) with implications that there were more common factors among the variables, thus it was proper for factor analysis.

Then, Principal Components Analysis was used to assess the factor loading, Promax Oblique Rotation, to easier explain the factor loading and scree test, to determine the number of the factors and name them. The scree plot indicated a two factor solution. The result of the implicit wisdom of primary and middle school principals is seen in Table 1.

**Table 1.** Item weightings for a two-factor solution

Items	Factor 1	Factor 2
Innovation	0.733	
Reflectiveness	0.732	
Acuteness	0.719	
Knowledge	0.689	
Learning	0.613	
Expression	0.598	
Coordination	0.571	
Tolerance		0.833
Justice		0.832
Benevolence		0.831
Practice		0.633
Cooperation		0.543
Communication		0.527
Variance Explanation (55.097% In Total)	38.346%	16.750%
Cronbach $\alpha$ (0.855 In Total)	0.817	0.834

Factor 1 can be defined as the “Cognitive Dimension”, including Innovation, Reflectiveness, Acuteness, Knowledge, Learning, Expression, and Coordination. Factor 2 can be defined as “Social Dimension” including Tolerance, Justice, Benevolence, Practice, Cooperation, and Communication.

For the cognitive dimension, there was a significant effect of gender,  $t = 2.77$  ( $df = 211$ ),  $p = .006$  with women scoring higher than men (6.24 vs 5.86). However, there was not a significant difference for the social dimension. There were no significant differences for age and working years.

## **Study 2. Case Study to Test the Principals’ Wisdom and Establish Training Procedures**

### **Research Procedures**

In order to test the principals’ wisdom and establish training procedures, the author determined first to write a school management case. Then participants were asked to propose their thinking relating to the case, which three raters evaluated. There are 13 evaluation points for the case which are the 13 factors of the implicit wisdom of principals studied in study 1. For each evaluation point, there are low scale (1-3 scores), middle scale (4-6 scores) and high scale (7-9 scores). From the results of the evaluation, we can summarise the training advice.

### **Writing the Case-Study**

Taken full consideration of 13 factors of the implicit wisdom of principals, the author referred to the qualified cases of school management, both from abroad and domestically. And the author also found the original case in a book (Hoy and Tarter, 2005). Then the author localised the case.

## Case Analysing

55 principals from national primary and middle school principals' training class analysed the case in October 2009 and proposed their own thinking and decision. The author selected 16 sheets of answers for further analysis based on an assessment of the quality of the written answers.

## Evaluation

The author made the evaluation standards according to 13 implicit wisdom factors and previous research conclusions. The whole evaluation process was performed by the author and two postgraduate students. First, the author explained the basic procedure, method and notices. Second, three evaluators reviewed the evaluation standards. Then, three evaluators read the documented answers wholly and in detail. Finally, the evaluators selected one answer to pre-evaluate and try to revise the evaluation standards and evaluation method. After that, three evaluators evaluated the answers independently and formally.

## Research Results

### 1. The Reliability of the Analysis

SPSS 13.0 statistical software was used to test the research coding using Kendall's index. For the Cognitive Dimension, values for the seven factors ranged from 0.624 to 0.790 with the Dimension itself at 0.805. For the Social Dimension, values for the six factors ranged from 0.480 to 0.838 with the Dimension itself at 0.721. Only two factors showed low reliability: "benevolence" (0.480) and "cooperation" (0.574).

### 2. Comprehensively Analyse the Evaluation Condition

There are three marking scales of every principal's case answer document: the low scale (scores 1-3), the middle scale (scores 4-6) and the high scale (scores 7-9). The evaluators computed the evaluation results as a whole, and that was used to compute the individual value for the low, the middle and the high scale. For example, as for the factor of Innovation: Evaluator 1 scored thirteen persons on the low scale, two persons on the middle scale, and no persons on the high scale; Evaluator 2 scored eleven persons on the low scale, two persons on the middle scale, and two persons on the high scale; Evaluator 3 scored seven persons on the low scale, five persons on the middle scale, and three persons on the high scale.

### 3. Conclude the Training Ideas from the Summary of Research Result

Through the summarisation of the evaluation results, we conclude the following results and the training ideas which can be seen in Table 2.

**Table 2.** Weightings from evaluation

Scale	Weighting type	Factor
High	Most	communication, cooperation, coordination
	Least	innovation, reflectiveness, learning
Middle	Most	acuteness, expression, cooperation
	Least	innovation, learning, justice
Low	Most	innovation, reflectiveness, learning, justice
	Least	expression, coordination, cooperation, communication

From analysis of the results, we can establish training advice. For example, from the table above, we find that “innovation, reflectiveness and learning” are three factors which are counted least for high scale and count most for low scale. These two perspectives can “double-check” each other. Consequently, these are the most important training aspects. The most important factors are: innovation, reflectiveness, and learning. The least important factors are: cooperation and communication. In-between are: acuteness, expression, and coordination.

#### **4. Research Results - for the Training Programme**

Before the training course, the training institution should test the wisdom factors of the principals using the method of present case testing and conclude the most and least urgent training aspects. Second, the training institution should organise the course experts and professors to write the outlines and materials of the wisdom course. Third, the professors will teach the student principals in accordance with the materials and outlines. Fourth, the training institution should design the questionnaire and evaluate the wisdom course. Fifth, the training institution could re-test the wisdom of the principals and compare with the former test to view the training effect. Finally, the training institution can summarise this training course, and use it as the reference for future training.

### **Discussion**

#### ***Study 1 - Implicit Wisdom of Primary and Middle School Principals***

First, comparing the present implicit wisdom factors with the previous research results, we can find that the 13 factors of implicit wisdom almost cover the description of the wise persons (Zhang, 2002). However, benevolence is a particular factor with fewer mentions in the previous literature and this is a new finding. The author considers that the main reason is the present research lays emphasis on primary and middle school principals and this focus in the field of education contrasts with the research subjects of previous studies who were from all sectors of education. The ‘individuality’ of schools is a characteristic of education and students are true individual persons, not objects, with emotion and will (Huang, 2002). Therefore, schools should take care of students, respect students and awaken the activity, creativity and independence of students, which is the basic purpose of education and these are what the school principals should practise. Sternberg (2007) considers that values play very important mediating roles in understanding wisdom and we cannot talk about wisdom without value.

Second, differences in age influence the acquisition of implicit wisdom. In the literature on wisdom, there is a vigorous debate on whether wisdom is related to age. Most psychologists (Clayton and Birren, 1980; Erikson, 1982; Perlmutter and Hall, 1985) think wisdom has a positive relation to age, because first, the necessary condition for wisdom is the growth of individuals, which will take a long time. Then, the core conception of wisdom is balance, while the young are commonly considered more impetuous and less deliberate. However, Meacham (1990) considers that with the increase of age, wisdom gradually disappears (Sternberg, 1990). He thinks the essence of wisdom is the balance of knowing and doubting, and a supportive and tolerant environment is beneficial to the development of wisdom. From this perspective, wisdom is the potential trait of all kinds of ages and cannot simply be considered as a quality which increases with growing age. For example, in the American contemporary social environment, the increase of aging will threaten the development of wisdom. Meacham thinks added to fast changes in technology and culture and personal setbacks, they can lead to dogmatism and scepticism, leading to the destruction of knowing and doubting, and the loss of wisdom. Similarly, Sternberg (2007) said that, “wisdom is not what you experience, but what you learn from what you experience”.

In the previous studies, the researchers discuss whether wisdom can increase with age, while in the present study, the implicit understanding of wisdom was studied and SPSS statistical software was used to analyse the influence of different stages of ages exerted on the understanding of wisdom. The conclusion is there is no difference. The possible reason is as follows: there is a similarity in the whole environment of Chinese primary and middle school principals. Most principals first became teachers, and worked in all kinds of positions and maybe they share similar experiences.

## **Study 2 - Using Case Study to Test Principals' Wisdom**

The statistical analysis shows “benevolence” and “cooperation” bear the low reliability of the evaluators. The possible reason may be that the evaluators understood differently the connotation and denotation of these two factors and they thought these two factors could not be easily quantified, despite a pre-evaluation to avoid such a problem. However, this deviation is inevitable and acceptable, because of the thirteen factors, only two factors have low reliability, accounting for just 15%, and overall reliability is sufficient.

It was shown that the most important training aspects are innovation, reflectiveness and learning. The less urgent training aspects are acuteness, expression and coordination. The training institutions have not paid sufficient attention to the most important training aspects. The least important training aspects are communication and cooperation. This is a little bit contradictory for the courses in the present principals training courses. The contradiction may lie in the following reasons: on the one hand, communication and cooperation factors are two factors laying particular stress on practice; it needs the accumulation of experience in school management practice and it is difficult to improve only through the training courses. On the other hand, before becoming principals, they accumulated experience as teachers and middle-level managers and in this period, they have acquired extensive experience of communication and cooperation skills. However, there is another possible reason. In the current courses, there are many courses on communication and cooperation. Consequently, the principals have mixed feelings about these words and courses. Therefore, it does not seem that primary and middle school principals' training should pay more attention to communication and cooperation, but instead focus on other aspects.

Establishment of the training course procedures is discussed. In the whole procedure, every person should balance their different inner opinions and balance their opinions and others'. This is balance of wisdom. Simultaneously, the present research abides by “balance”. First, in the implicit wisdom research, the author applied multi-evaluating method to evaluate the words collected. Then in the case study to test principals' wisdom, the design of the case balances the 13 wisdom factors.

## **Limitations**

There is no appropriate reason to explain the gender difference in the understanding of implicit wisdom. This research found a significant difference between men and women in the social dimension. It may be because of the different functions and development levels of brain hemispheres between men and women, and it leads to the different cognitive understanding of the same matters. Whether this explanation is proper and whether this finding is useful for further research needs to be investigated by further studies.

The representativeness of the sampling is discussed. Because of the limitation of time, energy and other outside conditions, the sample was principals from national principals training courses. While not a random sample, it is diverse because there are different levels of training and the principals are from different areas. These principals are selected by

certain standards in different provinces and almost every province selected some principals to participate in the training course. Therefore, the sample covers an extensive range.

The discussion on the abundance of the collection of words of principals' wisdom was considered. Because of the time limitation, words from principals of two training classes were collected. However, while there exists a different implication in every person and everyone has a different understanding of wisdom, within the same culture (in this case Chinese civilisation), there is some overlapping understanding of wisdom. Therefore, in the present research, we do not pay more attention to the number of the principals or the number of the words collected, but the stability and regularity of the number of the words listed in the 15 places.

## Conclusion

Implicit wisdom of Chinese primary and secondary school principals contain 13 factors and can be divided into two dimensions: "Cognitive Dimension" including Innovation, Reflectiveness, Acuteness, Knowledge, Learning, Expression, and Coordination; "Social Dimension" including Tolerance, Justice, Benevolence, Practice, Cooperation, and Communication. In addition, there are gender differences that influence the understanding of principals' wisdom in the cognitive dimension. Based on the factors of implicit wisdom, this study formed a Case Evaluation Method to assess the wisdom of principals.

This study also established simple procedures for the development of training programmes. First, before the training course, the training institution tests the wisdom factors of the principals using the method of present case testing and identifies the most and least urgent training aspects. Second, the training institution organises the course experts and professors to write the outlines and materials of the wisdom course. Third, the professor teaches in accordance with the materials and outlines. Fourth, it is necessary to design the questionnaire and evaluate the wisdom course. Fifth, re-test the wisdom of the principals and compare the former test to view the training effect. Finally, summarise this training course, and take it as the reference for the next training.

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