University Teacher’s Knowledge, Personality and Teaching Effect: A Qualitative Study from Students’ Cognition Perspective

Rong Zhou¹, Yan Hu², Dengke Yu², Qian Cao¹ & Xue Bai³

¹ School of Economics and Management, Jiangxi Science and Technology Normal University, Nanchang, China
² School of Management, Nanchang University, Nanchang, China
³ China Institute of Marine Technology & Economy, Beijing, China

Rong Zhou and Yan Hu are co-first authors.

Correspondence: Dengke Yu, School of Management, Nanchang University, Nanchang, Jiangxi, 330031, China.
E-mail: yudengke@ncu.edu.cn

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Abstract
Teaching effect is a core index for measuring the validity of teaching practices in universities. How to improve it in class? It is an important issue in educational reform. From students’ cognition perspective, the study analyzed students’ statements about the knowledge, personalities and behaviour of their teachers. Through the process of text analysis, the study summarized the common elements of teachers’ knowledge and personality as well as their impacts on teaching effects. A new theory, i.e. Intellectual Management for University Teacher (IMUT), was constructed. Results show that: At first, university students can definitely cognize and appraise their teachers’ knowledge and personalities; Second, an effective combination of knowledge and personality decides one teacher’s teaching effect, and; Finally, according to the feedback of students, the elements of teacher’s knowledge should include knowledge level and knowledge behaviour, and the elements of teacher’s personality could be summarized as personality trait and personalized behaviour. In order to improve teaching effects, university teachers are suggested to implement intellectual management, for realizing intellectual beauty through building a syncretic system which helps to develop knowledge and personality together.

Keywords: knowledge, personality, teaching effect, university teacher, qualitative research

1. Introduction

The National Medium- and Long-term Educational Reform and Development Program (from 2010 to 2020) of China has clearly stated that the qualities of both higher education and talent training should be comprehensively improved, and teaching effect should be taken as one of primary contents for evaluating university teachers. As a basic function of college teachers, teaching demands to be taken seriously by most of full-time teachers. In China, the ability and effectiveness of teaching are often considered when university teachers, either teaching-oriented or research-based ones, try to promote their professional and technical posts. However, compared with the relatively simple quantification of scientific payoffs, the characterization of teaching effects seems to be more diversified and implicit, full of causal ambiguity. The assessment and evaluation of teaching effects are certainly more difficult. Because of the absence of effective assessment tools, in most instances, the improvement of teaching effects depends more on university teachers' self-discipline. Enjoying the services provided by teachers, students become one and sometimes only insider as well as beneficiary, from teachers’ teaching effects. Many colleges and universities therefore incorporated students’ appraisal into the evaluation system of teachers' teaching effects. However, we are required to consider and answer the following several questions before this action. First, what kinds of teacher’s characteristics do students mainly concern? Second, how do they perceive and appraise teacher’s characteristics? Third, do biases of selective perception exist in different teaching contexts? Finally, reverse thinking, how can university teachers make use of student’s cognitive mechanism to better display their characteristics, promote teaching activities and improve teaching effects?

In the Opinions for the Comprehensive Improvement of Higher Education Quality (issued by Ministry of Education, China), the construction of teacher’s ethics and the improvement of teacher’s professional level and teaching ability were advocated emphatically. Li and Chen (2016a) proposed that a good teacher in university should have good
reputations in both virtue and art. The art, reflected as professional level and teaching ability, mainly depends on the profound knowledge and teaching skills of college teachers. The virtue, manifested as moral, responsibility and attitude, is always closely related to teacher’s personality traits (Colnerud, 2006). According to the correspondent author’s working experiences, nearly 10 years as an university teacher, the fact that the post competence of a teacher depends on his/her knowledge and personality in most cases is approved. The release of signals in accordance with one’s unique knowledge and personality would significantly improve the effects of classroom teaching. We are further reminded to consider the following questions. First, how do students recognize the knowledge and personalities of teachers? Second, via students’ psychological cognition, how do the teachers’ knowledge and personalities affect their teaching effects? Third, fitting in student’s cognition, what types of knowledge and personality do university teachers commonly behave, and what types of knowledge and personality do they prefer to express?

In order to answer the above questions, taking advantage of the full-time position as an university teacher in Nanchang University in China, the corresponding author and his research team interviewed 14 students, from sophomore to postgraduate. By using qualitative analysis method to organize and analyze data, we completed an exploratory analysis of the characteristics of knowledge and personality displayed by university teachers as an occupational group, and the impacts of teacher’s knowledge and personality on teaching effect. Based on the research conclusions, a new theory - IMUT was constructed to lead to improve university teacher’s teaching effect.

2. Literature Review

The concept of personal knowledge management was firstly proposed by Frand and Hixon (1999). Gorman and Paulen (2011) emphasized that it is an evolving combination of knowledge, skills and abilities that makes individuals to survive and succeed in complex social environments. The research of personal knowledge management focuses on the exploration of knowledge learning, exchange and innovation, which help to establish personal professional knowledge system, improve individual work efficiency and competitiveness, and promote career development and the realization of life value (Razmerita et al., 2009; Jiang & Ma, 2009). As a result, university teachers, who are closely connected with knowledge creation and dissemination, are more in need of personal knowledge management. They should have both extensive theoretical knowledge and necessary practical knowledge (Wei & Chen, 2017). They need to not only create new knowledge through academic study activities, but also impart existing knowledge through teaching behaviors (Cao, 2011). Hence, in the context of studying university teacher group, the authors more agree with the discussion of Kong (2003) on personal knowledge management. He defined the construct from three aspects: First, the management of individual knowledge; Second, the learning of new knowledge through various ways, to make up for the defects of individual thinking and knowledge, and then show the characteristics of ones own knowledge system, and; Third, the integration of existing knowledge and acquired knowledge, helping to create new knowledge through mutual arousal (Kong, 2003). Li and Tang (2009), Xu (2013) and Tahir et al. (2016) have all carried out in-depth research on knowledge management of university teachers. However, their research results focused on the construction of knowledge management system or the analysis of knowledge sharing behaviors, but lacked the attention to the relationship between personal knowledge management and teaching effectiveness.

As early as the 5th century BC, Hippocrates has divided human beings into four types in terms of their temperaments: the choleric, the sanguine, the phlegmatic and the melancholic. From then on, the temperament theory was gradually formed. Nowadays, psychology has become a perfect discipline. Under its category, educational psychology is vigorously developed and plays an important role in directing teaching practices. On the basis of Big Five personality theory, Arif et al. (2012) found that the extraversion personality is most important to teachers’ development, in comparison to other four personalities. In order to build a model for exploring teacher’s competency, He and Xiong (2015) proposed that the personalities to be a qualified university teacher include adaption, persistence, confidence, humor, criticalness, self-regulation, fairness, tolerance, and communication friendliness and cooperative spirit. Rather than innate temperaments, these unique personalities only for university teachers are more related to professional environments and acquired training. Chen (2011) noted that teachers’ professional personalities are relatively stable psychologies formed in their careers, for better meeting the requirements of education. In terms of personality management, Sui and Chen (2007) suggested that the cultivation of teacher's professional personality depends on humanistic education and emotional education, through which the influential power of personality increases. Zhou (2011) proposed the improvement of teacher’s individual management relies on the optimization of social environments and teacher’s educational practices and self-training.

Both knowledge and personality are the key enablers of a good university teacher. For one thing, according to the
study of Li and Pang (2007), in order to do a good job in classroom teaching, university teachers are required to master comprehensive knowledge in terms of discipline, major, and teaching skill and creative thinking. Li and Chen (2016b) regarded teaching as a process of knowledge expression, which is supported by teacher’s reasonable knowledge structure. In consideration of knowledge stock and knowledge structure, Zuo and Hu (2009) defined the concept of knowledge system. They indicated that it determines the way and capability of knowledge sharing, and thus makes an important impact on the teaching effects of university teachers. For another, Wang (2008) argued that personality is the comprehensive expression of teacher’s moral quality, ideological realm and sentiment, which are beneficial to the improvement of teaching effects and the shaping of students’ personalities. Zhang (2012) emphasized that the personality charm of teachers, as a potential factor, could promote the success of liberal education in universities. Lim and Kim (2014) measured the significant correlation between teacher’s strength in personality and teaching efficiency by taking 111 South Korean teachers as samples.

The research in the field of knowledge management and individual personality provides theoretical supports for this study. However, knowledge and personality were usually analyzed as two separate factors at the individual level, lacking of integration. Especially in the field of higher education, although some scholars have recognized the independent influence of knowledge and personality on teaching effects, there is still no effective exploration on how they interact and jointly work. Integrating knowledge management and personality management, Yu et al. (2015) proposed a new concept, Intellectual Management, which focuses on the realization of intellectual beauty by means of knowledge development and personality cultivation. Intellectual beauty is a Chinglish phrase which is often used to describe a person who is elegant, pleasant and cultured on the basis of profound knowledge (Lin, 2013). Although the theory is under the background of enterprise management, it also enlighten and direct the individual management of university teachers from the individual perspective. In short, the study aims to construct a theory to lead university teachers to improve themselves through the cultivation and integration of knowledge and personality, in order to make themselves intellectually beautiful.

3. Methodology

Semi-structured interview was used to collect data. After the interview recording materials were translated into verbatim draft, research results and core viewpoints were gotten through qualitative analysis method.

At the convenience of working in Nanchang University, the authors selected 14 students for in-depth interview, through snowball sampling: one of students in the class taught by the correspondent author was randomly selected at first, and the next interviewee limited in different class but in the same school was recommended by the former, and so on. All of them were applied to take participate in the interview on their own initiatives, for free. In addition, all of them have made ethical approval for the interview, data usage and publication. All interviewees come from School of Management. The interviewees cover both undergraduate and graduate students. Considering that the freshmen do not have deep understandings towards their teachers and senior students are busy in employment or postgraduate entrance examination, only sophomore and junior students were selected among undergraduates. The major of undergraduate interviewees is limited in Management Science (MS). The majors of graduate interviewees include Management Science and Engineering (MSE), Applied Economics (AE), and Library Information and Archives Management (LIAM). The composition of samples and the information of interview are shown in Table 1, and the demographic information of the interviewees are further summarized in Table 2.

The interview mainly focuses on the following contents: First, from the perspective of student’s cognition, the criteria for appraising excellent university teachers; Second, comments on the teaching methods, styles, characteristics and effects of university teachers; Third, on student’s opinion, the impacts of university teacher’s knowledge and personality on teaching effects. In addition to these focal points, the interview was not outlined. Valuable information was collected through mutual communication and free questions. The entire process of the interview was recorded. The recording materials were transformed into verbatim drafts, which were analyzed by step-by-step coding. On the basis of the organization of the materials, generic analysis was adopted to distinguish and summarize constructs, extract core relationships, and thus obtain results and generate a new theory (Chen, 2000).

The authors took the grounded theory to direct the process of data analysis (Moghaddam, 2006). First, two of the research team members were required to make open coding to extract basic constructs; Second, a comparative analysis of the basic constructs was completed to test the coding consistency; Third, an axial coding was made to summarize the major clusters and minor clusters, such as knowledge level, knowledge behaviour and personality trait; Finally, core clusters and the relationships between them were explored through a process of selective coding, via which the constructs such as knowledge, personality and teaching effect were distinguished. The relationship analysis and framework construction were led by the theory of Intellectual Management which emphasized that the
core intangible resources of an individual or an organization could be summarized into knowledge and personality, and the coordinating governance of them depends the sustainable growth of the body (Yu & Zhou, 2017).

Table 1. Samples and interview

<table>
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<th>Interviewee</th>
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<th>Grade</th>
<th>Major</th>
<th>Date</th>
<th>Time</th>
<th>No. of Chinese Characters</th>
</tr>
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<td>AE</td>
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<tr>
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<td>MS</td>
<td>2017.6.23</td>
<td>0h 30m 18s</td>
<td>2651</td>
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<tr>
<td>D</td>
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<td>MS</td>
<td>2017.6.25</td>
<td>0h 58m 56s</td>
<td>4404</td>
</tr>
<tr>
<td>E</td>
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<td>Second-year graduate</td>
<td>MSE</td>
<td>2017.6.15</td>
<td>1h 00m 23s</td>
<td>4650</td>
</tr>
<tr>
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<td>Second-year graduate</td>
<td>MSE</td>
<td>2017.6.8</td>
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<td>2387</td>
</tr>
<tr>
<td>G</td>
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<td>Junior</td>
<td>MS</td>
<td>2017.6.8</td>
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<td>2672</td>
</tr>
<tr>
<td>H</td>
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<td>Junior</td>
<td>MS</td>
<td>2017.6.22</td>
<td>0h 44m 04s</td>
<td>2999</td>
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<tr>
<td>I</td>
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<td>First-year graduate</td>
<td>MSE</td>
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</tr>
<tr>
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<td>MSE</td>
<td>2017.6.15</td>
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<tr>
<td>K</td>
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<td>MS</td>
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<tr>
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Table 2. The demographic information of the interviewees

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<th>Frequency</th>
<th>Clusters</th>
<th>Number</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
<td>Ranking by score</td>
<td></td>
<td></td>
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<tr>
<td>Male</td>
<td>2</td>
<td>14.3%</td>
<td>Top 50% in the class</td>
<td>8</td>
<td>57.1%</td>
</tr>
<tr>
<td>Female</td>
<td>12</td>
<td>85.7%</td>
<td>Second 50% in the class</td>
<td>6</td>
<td>42.9%</td>
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<tr>
<td>Grade</td>
<td></td>
<td></td>
<td>Major</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sophomore</td>
<td>4</td>
<td>28.6%</td>
<td>AE</td>
<td>1</td>
<td>7.1%</td>
</tr>
<tr>
<td>Junior</td>
<td>4</td>
<td>28.6%</td>
<td>MS</td>
<td>8</td>
<td>57.2%</td>
</tr>
<tr>
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<td>28.6%</td>
<td>MSE</td>
<td>4</td>
<td>28.6%</td>
</tr>
<tr>
<td>Second-year graduate</td>
<td>2</td>
<td>14.2%</td>
<td>LIAM</td>
<td>1</td>
<td>7.1%</td>
</tr>
</tbody>
</table>

4. Results

4.1 University Teachers’ Knowledge

Through the coding and analysis of interview materials, we found that the knowledge of university teachers should include two elements, i.e. knowledge level and knowledge behaviour.

4.1.1 Knowledge Level

As the interviewee A said, “I think, a good teacher must have profound professional knowledge primarily”. The first president of Chung Cheng University, Xiansu Hu, also suggested that: “In terms of university education, specialization in a certain field is very important, but generalization is even more valuable to a certain extent”. Because of the requirement of scientific research in universities, many teachers are deep in their expertise, but lack profound and general knowledge. However, during the process of classroom teaching, through the matching and selection based on students’ cognition, teachers with profound knowledge, rather than the ones with deep professional knowledge, could always play greater roles in promoting the learning effects of most of university
students. In order to be competent for teaching several relevant courses in a subject field, university teachers are required to establish a complete knowledge system, not only professional but also profound. Through the in-depth analysis of interview materials, we conclude that university teachers should master seven kinds of knowledge in the teaching process, i.e. basic knowledge, professional knowledge, subject matter knowledge, teaching skills and experiential knowledge, talent cultivation related knowledge, practical knowledge, and worldview and methodology knowledge.

(a) Several interviewees mentioned that they become to worship some teachers after entry only because the teachers’ profound basic knowledge - “They seem to know everything”, “From advanced mathematics to spoken English, from ancient poetry to computer programming, they can express fluently”.

(b) Professional knowledge refers to the specific knowledge in a subject field. According to the interviewees involved in Management discipline, it includes the knowledge in accounting, marketing, production operation and economics etc.. As one of the interviewees said, “The fact that teachers master professional knowledge, can make us avoid repetitive learning in different courses, and also help us to absorb and integrate the knowledge from different courses”.

(c) Subject matter knowledge refers to the knowledge related to the student’s discipline (Mccutchen & Berninger, 1999). It is beneficial to the understanding of professional knowledge. In the field of Management, subject matter knowledge includes psychology, sociology, and philosophy and so on. An interviewee mentioned that, for example, when he studied the two-factor theory in the course, the teacher introduced some psychological knowledge to help understanding the principle and logic.

(d) Teaching skills and experiential knowledge are helpful for teachers to better express and present knowledge. It can be found from the interview that, for instance, the case teaching method commonly used in management teaching is generally well accepted by students.

(e) Talent cultivation related knowledge refers to the knowledge related to students’ physical and mental development, knowledge acquisition and personality cultivation, etc.. Several interviewees indicated that they could clearly feel that some teachers regarded them as talents to cultivate, but some others did not. The teachers with the idea of talent cultivation help to guide students roundly, and of course, they are more respected.

(f) Practical knowledge refers to the knowledge acquired and summarized by teachers from practice. In the teaching of Management discipline, teacher’ work experiences in enterprises or in social life play an important role in teaching effects. The interviewee M said, “The teacher who taught Management often told us her practical experiences in an enterprise before, and we thought it was quite good”. Several interviewees repeatedly mentioned that, they faced such a teacher, with over 30 years teaching experiences, who could nicely integrate his life experiences and the knowledge points of course, through which a boring theory could be illustrated deeply and thus be loved by most of students. The teacher was affectionately called as “god” by his students.

(g) The knowledge of worldview and methodology refers to the thinking mode and logic that teachers use to understand and transform the world. Some interviewees mentioned that in class, some teachers often emphasize that they “prefer to impart thinking methods rather than impart knowledge”, and the teachers with this teaching idea usually present more wonderful classroom teaching.

Although the above discussion on knowledge system and structure has been relatively complete, we also found a problem related to knowledge level but could not be explained by the mentioned knowledge system. In the interview, a classmate said, “Even a teacher is knowledgeable, it (the success of teaching) also depends on the way of expression; if a kind of ostentatious expression is taken, I will not approve or admire”. According to existing theories, we classify it as knowledge literacy. Knowledge literacy reflects the quality, accomplishment and demeanor of a teacher, supported by knowledge level (Crawford, 2010). It originates from but is above the knowledge level. It becomes a kind of temperament for a teacher when his/her knowledge is presented to public. Knowledge literacy is beneficial to teachers to make a good image and achieve the expected teaching effects.

4.1.2 Knowledge Behaviour

In the interview, students reflected that, extensive and high-quality knowledge creates conditions for successful teaching instructions, but the impact of profound knowledge on teaching effects is not simply linear. In a formal classroom, teaching effect is also closely related to the teacher’s behaviour performance. Teachers need to complete the whole process of knowledge transfer through effective teaching skills and methods. After analyzing interview materials, knowledge transfer was divided into two sub-processes: knowledge dissemination and knowledge
interaction. The former reflects as a knowledge transfer process in one-to-many pattern, and the latter expresses a two-way process, which promotes the knowledge communication and integration through the interaction between teachers and students (Kuiken & Peter, 2011). According to the responses from interviewees, knowledge transfer behaviors directly affect their learning willingness and the difficulties in absorbing knowledge, and thus have important impacts on teaching effects.

Knowledge dissemination refers to the process through which teachers impart their knowledge to students by their unique styles and modes. Nowadays many teaching modes, for example, traditional teaching, independent learning, inquiry-based teaching and case-based teaching, are coexisting (Yakovleva & Yakovlev, 2014). According to the interview, students make a general evaluation towards the traditional teaching mode, not obviously like and dislike, but they always speak highly of other modern teaching modes. However, students often find that many teachers have difficulties in introducing and applying new teaching modes, e.g. decentralized topics, unremarkable knowledge points, and low teaching efficiency etc.. A teacher’s style reflects his/her unique vocational personalities displayed in the process of classroom teaching. Mosston and Ashworth (1990) summarized the teaching style into seven types, i.e. legislative, executive, critical, holistic, detailed, and radical and conservative. Analyzing the interview materials, we found that students have more or less faced those styles of teacher. However, in addition to the legislative, critical and holistic ones, other styles of teacher could not receive favourable reviews, and they were nicely accepted only by the students with low requirements or strong adaptive capabilities. As the interviewee A stated, “[The teachers] don’t only have one style, [...] but what suits the teacher is the best, [...] students have the abilities to adapt to different styles of teacher”. In addition, the study also found that many students have different evaluations on the same teacher’s different courses. This implies that teaching style and teaching mode should be consistent with not only teachers’ personality traits, but also the nature of courses. In other words, individualized education and course-based education are required. Furthermore, we also drew a conclusion that no matter what kind of teaching style or mode a teacher has chosen, he/she must follow a fundamental principle, i.e. student-first and knowledge-oriented. That is, teaching mode and style are tools to assist knowledge dissemination, which is the ultimate goal.

The interview indicated that, rather than knowledge dissemination behaviors recognized by students, knowledge interaction behaviors got more expectations. Students hope to exchange knowledge and dialogue equally with teachers, rather than lofty and endless knowledge indoctrination from teachers. The highly appraised teachers are usually not the knowledgeable, responsible and eloquent ones, but those who “focus on students and care about their understandings of knowledge”. Some interviewees even reported that a respected teacher is usually not the one speaking well in class, but the one who often participates in extracurricular activities organized by students, or who has a lot of communications with students after class. Furthermore, during the interview, students highly appraised the teachers who are willing to give feedback for students. According to student’s cognition, knowledge feedback includes two kinds of behaviour. The first one indicates that teachers can make feedback and evaluation to student’s learning. For example, a good teacher is required to timely and effectively answer student’s questions, carefully correct student’s homework, and make pertinent comments on student’s ideas in class. The second one suggests that teachers should listen to student’s comments and suggestions, consciously accept student’s suggestions, and then make changes in the following teaching process. The feedback shows teacher’s respect on student’s opinions. For example, the interviewee I said, “He is different from other teachers; when he gives us comments, we find that he is very competent”.

4.2 University Teachers’ Personalities

As John Holland has stated: If vocational interests are construed as an expression of personality, then they represent the expression of personality in work, school subjects and hobbies and so on (Holland, 1973). University teacher is a kind of special vocation, and the group of university teachers may have its own personalities. Different from individual personalities explained by the theories such as Big Five or Enneagram, the vocational personalities of university teachers should be only or most fitted to describe the persons of this vocation, instead of the public. Considering the lack of the understanding of university teachers’ vocational personalities according to the existing literature, on the basis of analyzing interview materials, we summarized the vocational personalities of university teachers into two elements, i.e. personality trait and personalized behaviour.

4.2.1 Personality Trait

According to the interview, we found that not only knowledge is an important enabler of teaching effects, but also teacher’s personality plays a role in teaching performance. Through the analysis of interview materials, the teacher’s personality trait that influences teaching effects can be summarized into three components, i.e. innate temperament, acquired personality and personality charm.
According to personality psychology, the temperament, with genetic basis, is relatively stable in the process of human growth. Traditional personality psychologists often followed the humoral theory, which usually classifies temperament into four types, i.e. choleric, sanguineous, and phlegmatic and melancholic. The interview indicated that university teachers are also influenced by their own temperament types, which would be reflected in the teaching process, so that students can perceive and make different appraisals. For example, the interviewee C said, “(Teacher Z) is passionate and loud; I like very much”. This suggests that the student C prefers the teacher with choleric temperament. Another student (the interviewee E) said, “I like my English teacher best. She is very young and thus has no deep generation gap with us. She is also fashionable. In class, we have something in common, resulting resonance and affinity”. This statement indicates that the student tends to accept the teachers with sanguineous temperament. On the contrary, the interviewee L said, “I think teachers should be strict and principled”. It indicates that the teachers with phlegmatic temperament are more likely to be praised by L. The opinions held by N are different. She presented “I like the teacher who taught me probability theory. He has a kind of unique style, giving me a special elegant feeling, and often leads us to think philosophically in class”. This indicates that the teacher with melancholic temperament may also be popular with some students. From the perspective of temperament, any university teacher may not be recognized by all students, since the temperament, after all, originates from nature - it is always changeless but students’ preferences are various. However, as a professional teacher, he/she is required to avoid or discard the shortcomings in his/her temperament. For example, the teachers with choleric temperament are easily restless and irritable, and the teachers with melancholic temperament are restrained and thus they maybe not good at self-expression. If a teacher cannot restrain his/her shortcomings, which may magnify negative influences on students, he/she would gain bad teaching effects. For example, one of the interviewees mentioned such a story. A teacher giving students good impressions in class, often complained about her family and even shared with her friends via WeChat. When such behaviour was discovered by her students, they negatively perceived, diffused and overstated it. Since then, the appraisals from her students changed, and her teaching effects in class made a discount.

Acquired personality suggests that university teachers should be trained after they choose the occupation. It is selected (developed or suppressed) according to the special occupation, on the basis of teacher’s innate temperament. Through the in-depth interview, students generally proposed that teachers should be responsible, suiting action to the word, principled, rigorous, patient and so on. Among the characteristics, conscientiousness and walking the talk are regarded as the most important teacher’s vocational personality by students. As the interviewee A said, “A good teacher should be sincere to us at first, [...] how does the teacher expect us, such as to the class in time, at least he/she should be such a person - he/she could not be late for class; if he/she wants us to study hard, he/she should prepare the lessons carefully before”. Teachers in universities have very high requirements on vocational personality. Some personality traits are easily recognized and welcomed by most students, such as humor. However, not all teachers are recommended to develop towards such personalities. In many cases, the training and cultivation of a teacher’s vocational personality need to be consistent with his/her innate temperament endowed by gene. As the interviewee M stated, “If you (a teacher) are really funny, be funny; else if you are a serious person but try to be funny, it would be self-defeating and everyone would be embarrassed”.

The release and transfer of knowledge literacy, innate temperament and vocational personality usually generate attraction to students, since it is often difficult to describe and capture. The contributions of the attraction to teaching effects are also fuzzy. However, it does exist and we try to conclude it as personality charm. Through the analysis of interview materials, the personality charm was reduced to three types, i.e. intellectual love, temperament-based charm and characteristic charm.

(a) Intellectual love reflects as the attraction of university teachers towards the students who are eager to learn, innovative and energetic, by virtue of their profound knowledge and good qualities. The interview showed that the students with good academic performance generally prefer and even admire the knowledgeable teachers.

(b) Temperament-based charm helps university teachers to attract students by virtue of their innate temperaments. For example, the interviewee J has mentioned a “powerful, deep and vigorous” teacher, who could make students quiet through “banging the table”. She also appraised another teacher as “the kind of cold humor” - “Although he does not laugh, and may not feel funny by himself, but the students feel really funny”. She told the interviewers that such feeling makes her learn easily and happily. As the interviewee A stated, “We focus on the class because the teacher’s lecture is very interesting”. Similarly, the interviewee K presented, “When a teacher is not passionate in class, students will be less passionate and doze”.

(c) Characteristic charm is a kind of spiritual and moral culture, expressed by teachers in professional work. The culture has positive impacts on students - changing their views on life and value, which promote their success
Irresponsible, unprincipled, and unjust and immoral teachers are particularly hated by students. Such personalities would cause harm to student’s mental health. For example, a teacher referred to by the interviewee J, gave the students classes for only five weeks, while the designed contents were 16 weeks. According to her description, the teacher often missed class or left class halfway when he “has something important to do”. In addition, the interviewee B stated her views, “Teachers should have their own principles”. “They should continue to investigate and affix the responsibility for students since they are late or have not complete homework, regardless of student’s plea for mercy”. She also made a complaint against some teachers who “treat students well just when they know each other, and would inequitably give the students high marks at the end of semester”. The interviewers could obviously feel the negative emotion of the interviewee B, since she might be hurt by such cases. Furthermore, the interviewee G made a supplement before the end of her interview. She emphasized the appropriate distance between a teacher and his/her student, especially when they are of different genders. She also noted that “a teacher’s noble personality can easily infect to his/her students”.

4.2.2 Personalized Behaviour

A qualified university teacher should not only master extensive and high-quality knowledge and impart it to students, but also give positive guide for students to shape their views of world, life and values (Hao et al., 2016). The personality charm of a teacher can make tangible or intangible impacts on students, through direct or indirect ways. According to the interview, the impacting ways are created through three behaviors, i.e. motivation, demonstration and edification.

The charm of a teacher displayed in his/her teaching process would stimulate students to learn, thus realizing teaching aims (Li, 2009). As the interviewee H said, “Some teachers are strict, making us feel that we can do better. Their strictness, like a spur, drives us”. Facing attractive teachers, students are willing to get close to and respect them, trustfully and convincingly, thus change the attitude towards learning and increase the willingness to learn. A charming teacher could easily make students to cooperate with his/her teaching activities. However, students would resist or even bully in groups the teachers without or lack of charm. For example, the interviewee C mentioned a teacher who is gentle and good-natured, judging by his appearance. When the teacher try to hold a class meeting, students are almost absent, because “he is vulnerable”. In the interview, the interviewee I also introduced this teacher, “At first sight, we know that he is a yes-man, without strict requirements. It makes us relax and try to provoke him”.

From the example, we know that personality charm is not equal to nice temperament. The real personality charm enables teachers authoritative among students, makes students comply with teaching arrangements, and improves the efficiency of knowledge transfer. The interviewee G told an interesting story in the interview. Four girls in my dormitory, she said, always get up after 7:50 am, late to the first class. However, a cry happens on every Wednesday on time, “Hurry up, today is teacher Y’s class”. Then, they get up quickly, never late. According to the description of the interviewee G, Y is a typical teacher with profound knowledge and charming personality. Students are “afraid” of him not because he may check on the attendance, but on account of his unchallengeable traits, such as solemnity, stateliness, and responsibility. It needs to be emphasized that some behaviors and habits of teachers may give very bad impression to students. For example, the interviewee G mentioned something like this, “[We] usually write homework, in the year of freshman. Many students seriously hand write it, hoping to attract the attention of the teacher. However, unfortunately, their scores are very low. On the contrary, the students who copy and paste their homework get higher scores”. “The irresponsible teacher lost our trust from then on, and all students were not willing to take their best shots in his other courses”, the student G said.

Demonstration refers to a kind of behaviour, through which a teacher can set an example for students by his/her own charm, so as to lead students to form a good habit of learning. According to the social learning theory, moral behaviors such as model demonstration, learning by doing, and self-efficacy motivation play important roles in the development of individual personality (Xu & Wu, 2015). According to the corresponding author’s work experiences about nearly ten years in the field of higher education, he also felt the importance role of demonstration by good examples of teachers. Students would subconsciously imitate their teachers’ behaviors and habits, which are taken as behaviour standards. Through this process, those behaviors and habits would be internalized into their own personality traits. Students would also despise some teachers’ behaviors and habits that they do not recognize, initiating a warning against themselves. The interviewee D held similar views, “If I feel good with a teacher, I will learn attentively and accept everything what the teacher required”. The interviewee J stated, “Our seriousness depends on whether the teacher is sincere. If he/she is serious, we will be similarly serious; else if the teacher is not serious, we can be more careless than him/her”. Analogously, the interviewee I said, “Students can feel the sincerity of their teachers. We are particularly disgusted the one who is not responsible, but trying to make many strict requirements”. Therefore, similar to the positive and negative incentive mechanisms, the demonstration effects of
teachers are also two-sided. Hence, a teacher wanting to motivate students with his/her personality charm should have senses of mission and responsibility, treat with his/her occupation, work and students seriously and rigorously. Only in this way can he/she play a positive role of demonstration in motivating and influencing students more convincingly.

Most of time, the impacts of teachers on students in teaching processes are like the life-giving functions of spring breeze and rain, soundless and stirless. The Confucius has said, “Living with a good person is like entering a room full of vanilla, in which you can not smell the fragrance after a long time, since you have been integrated into it” (Low, 2011). In higher education, different from primary and secondary education, imparting knowledge is only one of the functions; its responsibility with more importance reflects on the education and cultivation of young talents in terms of personality, which is beneficial to their integration into society. From this perspective, the significance of edification may be even higher than the knowledge imparting itself. Teachers with high personality charm have strong attractions and impacts on students. Their words and behaviors, and sounds and smiles may silently influence students, who are led to develop psychologically and spiritually. As the interviewee A said, “[A good teacher] may teach me a method or a theory, such intangible things, but he/she will not instruct me how to solve a specific problem, but will edify me the handling methods via his/her own actions”.

4.3 The Impacts of Knowledge and Personality on Teaching Effects

4.3.1 The Relationship Between Knowledge and Personality

Through the above analysis, the knowledge of university teachers is divided into knowledge level and knowledge behaviour, and their personality is examined from personality trait and personalized behaviour. Among them, knowledge level covers basic knowledge, professional knowledge, subject matter knowledge, teaching skills and experiential knowledge, talent cultivation related knowledge, practical knowledge, and world view and methodology knowledge, etc., which constitute a complete body of knowledge. Furthermore, the knowledge can sublimate, thus expressing as a kind of knowledge literacy. Knowledge behaviors include knowledge dissemination and knowledge interaction. The former forces most of students to study passively, while the latter leads a small part of students to study actively. Teacher’s personality trait is classified into three elements, i.e. innate temperament, acquired personality and personality charm. The roles of teacher’s personality reflect through three behavioral mechanisms - motivation, demonstration and edification.

On the surface, knowledge and personality represent different qualities of university teacher. However, their coexistence and interaction, becoming an integrative unit, bring teachers sustainable developments. The interactive relationship, rooting in the essence of individual gene, reflects as five modes. First, the body of knowledge, formed by a variety of knowledge, could transform into knowledge literacy only by the mediating effects of personality charm. Second, supported by the knowledge literacy, and integrated with innate temperament and acquired personality, the higher level of knowledge charm would appear. Third, the demonstration effects of personality happen in the process of knowledge dissemination, and the edification effects work in the process of knowledge interaction. Fourth, a teacher’s innate temperament and acquired personality would affect his/her way of knowledge dissemination and interaction. In turn, the motivation, demonstration and edification roles of personality charm would strengthen the efficiency and effect of knowledge dissemination and interaction. Finally, the developments of knowledge and personality, of equal importance in educational business, aim to improve teaching effects similarly, better cultivating talents. In other words, an internal mechanism exists in a good teacher, to promote the mutual transformation and enhancement of the one’s knowledge and personality. The mechanism urges the teacher to grow up continuously. The integration of knowledge and personality, as a unit, is the high-level requirement proposed by the theory of Intellectual Management (Yu & Zhou, 2015).

In the interview, evidences were also found to support the view that students could perceive the identity of knowledge and personality in teacher groups to some extent. As the interviewee M emphasized, “In many cases, the more knowledgeable and experienced a teacher is, the more serious and responsible he/she would be in the class. We could perceive the efforts he/she makes for us. On the contrary, those teachers who are lack of knowledge and capability are usually irresponsible, irrational and ill-conditioned in the meantime”.

4.3.2 The Role of Knowledge and Personality in Teaching Effects

The stage of learning in university is important to the cultivation of student’s personality and moral. In the stage, the guidance of a good teacher is fatal. Teachers should pay attention to their own personality and knowledge, the charm of which influence and shape students in educational activities. Teaching effects not only reflect as the knowledge acquisition of students, but also the cultivation of student’s personality, spirit and moral. According to the above...
analysis, university teacher’s knowledge and personality would improve their teaching effects through interaction. The impacting mechanisms are twofold. First, in the process of occurrence, the roles of knowledge and personality generate together. A single process of knowledge action or personal edification does not exist. Personalized behaviors usually take place in the process of knowledge transfer. However, the effects of teacher’s knowledge and personality on teaching effects are different, and sometimes they would even change due to different students.

As the interviewee E stated, “In my opinion, [teacher’s] knowledge is quite important. After all, my purpose is learning, and so knowledge level is the most important criterion for me to evaluate a course. Of course, teacher’s personality is also very important. At least, a nice teacher makes me learn happily”. On the contrary, the interviewee K believed that “Although being happy in class is not more important than learning, happiness is indeed very important to me”. The interviewee B integrated their views and proposed a detailed idea. “To distinguish which one is more important requires to consider the situations. I want to learn more knowledge in important courses, such as basic courses and professional courses, so the teacher’s knowledge level is important. But in the class of a public course or innovative credit course, I aim to gain credits, so that the teacher’s personality charm is relatively important, making me relaxed and happy”. Among the above students, the interviewee E and K represent the top and middle class of students respectively, and the interviewee B ranks the first in her class. It indicates that the impacts of teacher’s knowledge and personality on teaching effects not only depend on the efforts of teachers, but also rely on the goals, expectations and adaptability of students. Furthermore, it also indicates that the promotion of teaching effects on the basis of teacher’s knowledge and personality is always random, unstable and complicated. The key to solve such problems lies in the observation and control of student’s psychology, on basis of which teachers can make self-adjustment. Thankfully, no matter how much uncertainty there is, knowledge literacy and charming personality traits would always play a positive role in teaching effects. It provides theoretical support for university teachers to enrich knowledge and cultivate personality, thus their impetuses being strengthened.

It should be emphasized that, compared with personality, the influence of teacher’s knowledge on teaching effects looks like more stable and sustainable. In the interview, more than one student mentioned that the teacher’s style and characteristics in class, as well as the traits such as humor, authority and pressure, might have a temporary impact on students’ learning. However, in the study of a 16-week course, the positive effects based on teacher’s personality charm gradually decrease, while the negative effects appear and gradually increase. The interviewee B mentioned a fact that some teachers try to piffle in class, hoping to adjust the learning atmosphere. If such action lasts within 5-10 minutes, it has effects; else it would be hated when it continues more than 20 minutes. The interviewee E told us a story that he experienced personally. In a class, a teacher, not good at lecturing, entertained himself by telling many jokes and gossips. No one listened to him, and almost all students were playing with their mobile phones. However, a student wanted to pass the exam of postgraduate entrance. This course was therefore very important to him. At last, he stood up and asked the teacher a question, “Can we talk about the course itself please, sir?”. The views of students and practical examples indicate that in university classes, teaching effects are mutually supported by the teacher’s knowledge and personality, whichever is indispensable. From a long-term perspective, knowledge plays the core role, and personality supports the former. As the interviewee B summarized, in student’s expectation, “they want to have a fun learning”.

5. Conclusions

According to the above analysis, a comprehensive system (as shown in Figure 1) of the relationship between knowledge, personality and teaching effect of university teachers can be summarized. The system is considered to consist of knowledge subsystem, personality subsystem, and an interactive subsystem, which directs the interaction between knowledge and personality and their combined influence on teaching effects. As the figure shows, the comprehensive system tries to embed teacher’s individual trait system into teaching process system. In the comprehensive system, the teaching effects originated from teaching process system is the ultimate goal, and the self development and optimization of teacher’s knowledge and personality is underlying basis. Many Chinese university teachers may have similar feelings - Teaching is both a technical and conscientious task (Li, 2014). Teaching effects of higher education therefore depend greatly on the quality and literacy of teachers themselves. Hence, issues in terms of teacher’s training, motivation and management from self-efficacy perspective are important to the improvement of teaching effects in classroom. In a word, the teaching effects in universities are supported by the self-management of teachers.
How could university teachers realize their self-management? In the study, the authors introduced Intellectual Management theory (Yu & Zhou, 2017) into teacher management and constructed a new theory called Intellectual Management for University Teacher (IMUT), which follows the inherent laws of individual’s personality evolution and knowledge growth. Stimulating the integration of a teacher’s knowledge and personality through the mechanism of mutual transformation is beneficial to the joint improvement of teaching effects. The essence of IMUT is “a syncretic system of knowledge and personality”. For one thing, teachers’ attitudes towards knowledge learning can be improved by virtue of their sound personalities. The improvement helps to enrich one’s knowledge and optimize the knowledge structure. For another, a teacher’s knowledge may lead to form his/her acquired personality on the basis of one’s innate temperament. The cultivation of knowledge literacy supports the formation of personality charm in the meantime. The goal of IMUT is to realize the intellectual beauty of university teachers. In other words, as intellectual and the soul engineer of human, with the mission of cultivating young talents, university teachers should have the personality trait of intellectual beauty. It should be the symbolic feature that distinguishes university teachers from individuals in other fields. Nothing else than this feature makes university teachers respected by the public and imitated by their students (Süssmuth, 2006).

According to the development rules of IMUT, we can gain some implications to teacher management and higher education.

First, university teachers are required to strengthen knowledge management. In current China, most of universities require PhD degree when they recruit teacher (Welch & Zhang, 2008). Those who have obtained the degree usually have received a long time of study practice and research training, resulting in a high level of knowledge in professional field. The doctoral training, emphasizing the ability of scientific research, deepens the professional and domain knowledge. However, most of young teachers, just graduating from doctoral degree and newly joining university, are often unable to achieve profound knowledge. The imperfect knowledge system becomes a bottleneck factor, restricting some teachers’ teaching capabilities. Consequently, for those teachers, a process of learning to expand and optimize knowledge structure is required. For example, for young teachers in management field, they are demanded to enrich practical knowledge through temporary job training in enterprises, improve teaching skills through continuous teaching experiences, and enrich discipline knowledge via curriculum rotation, and learn talent-training relevant knowledge through induction training, learning from old teachers and participating in various teaching meetings, as well as accumulate sophisticated professional knowledge through research practices (Dai & Yan, 2016). More importantly, teachers should start to learn to effectively externalize their knowledge and lead students to correctly perceive their knowledge level and abilities. In addition, university teacher’s knowledge management focuses on the transformation of knowledge from individual to others, and from implicit knowledge to explicit one.

Second, university teachers should strengthen personality management. Each person has his/her own genetic predispositions and personality traits, but once he/she becomes an university teacher, his/her personalities are required to be selectively carried forward and restrained according to the characteristics of occupation, so as to ensure the behaviors inspired by the personalities in line with the professional ethics (Guseva et al., 2014). In fact, in
addition to the explicit threshold in terms of knowledge level, an implicit threshold for personality trait does exist when a new university teacher enters the job. Those who cannot bear loneliness, have low moral standards or quest for money and so on are rarely chosen by universities. Even they have chosen this career, it would be difficult for them to stick to it for a long time. However, as a halo occupation, the university teacher is higher required in terms of personality trait than the entry threshold. This may be one of the reasons that only a few of university teachers are really popular and respected by students. An excellent university teacher should not only have good congenital temperament conditions, such as favorable appearance, nice voice, and good temper, but also have noble personalities in line with the occupation, in terms of moral, principle and spirit. In terms of innate temperament, teachers need to make up for the defects as much as possible under feasible conditions. In terms of acquired personality, teachers should continue to improve themselves through self-training and self-constraint, making themselves noble and sound. Moreover, university teachers can take advantage of their knowledge to make up for the inherent disadvantages in personality. Attracting students via profound knowledge is beneficial to the creation of knowledge charm.

Third, university teachers should try their best to build the syncretic system of knowledge and personality. In IMUT theory, knowledge and personality are two core dimensions for an individual teacher. Any one of them is indispensable. But in reality, a large part of teachers faces the problem of intellectual separation - only developing one of them successfully, or developing them independently (Guo, 2017). Li and Chen (2016a) pointed out four styles of university teacher: “personality-based perfect style”, “knowledge-based perfect style”, and “personality-based separated style” as well as “knowledge-based separated style”. In particular, in the impetuous context of Chinese higher education system, overemphasis on quantitative assessment and reward for research, the problem of “knowledge-based separated style” is common (Li, 2014). However, a good teacher recognized by students should be the “perfect style”, with equally abundant development of personality and knowledge. The syncretic system is therefore a necessary management tool. In order to build the syncretic system, we should understand and master the rules of mutual transformation between individual knowledge and personality. On the one hand, an individual should temper one’s personality to high-intensively acquire and create knowledge. On the other hand, the individual should shape one’s acquired personality and thus generate personality charm through the accumulation of knowledge. The development of the system requires teachers to have a strong sense of mission and professional identity. Only with the strong driving force, can they be willing to continuously enrich their knowledge and challenge their personalities. Only through continuous change and mutual transformation, could one’s knowledge and personality gradually integrate, resulting in the syncretic situation. On the contrary, teachers who are unwilling to make changes are unable to improve their teaching capabilities, and then lose in teaching gradually (Harrison, 2005).

Finally, university teachers are required to implement Intellectual Management in teaching practice, and take the theory to improve teaching effects. Although personality is partly congenital, acquired personality and knowledge level can be improved through hard-working by practice. Even though it is difficult, teachers need constant improvement. Through teaching practice, social experience and professional training, their shortcomings in knowledge and personality can be discovered and then optimized. Taking teaching tasks as the goal, teachers could more quickly develop the programs and channels for learning knowledge and cultivating personality. Moreover, only in teaching practice, taking the improvement of teaching effects as the goal of the implementation of IMUT, can its optimal direction ensure correct. Through these processes, the IMUT can be continuously improved to better serve teaching practice. In addition, IMUT not only emphasizes the improvement of teacher’s knowledge and personality, but also focuses on the functional development of knowledge and personalized behaviors, of which the functional object is teaching practice. Consequently, the improvement of teaching effects should be the target of IMUT, and teaching effects perceived by students should be one of standards to appraise the effect of IMUT. An excellent university teacher can balance the developments of his/her knowledge and personality through IMUT, thus achieving teaching objectives, realizing teaching outcomes, and gaining students’ respects.

In conclusion, the IMUT theory emphasizes the idea that university teachers should attach equal importance to the development of knowledge and personality, and make full use of them to improve classroom teaching effects. IMUT should not be developed into a set of strict management system, which could not fully motivate the initiative and potential of teachers. Excessive emphases on the control of IMUT would lead it to the opposite direct, resulting in a disaster for both teachers and students. Teaching reform from IMUT perspective advocates “doing nothing redundant” but “following the natural rules”. The theory is suited for the sustainable development of higher education, and benefits the Double First-Class initiative proposed by Chinese government (Peters & Besley, 2018).

Limitations do exist in this study. For instance, the evidences provided by the study are only on the basis of an
interview of 14 responders in the same school, the generalization of the theory thus requires more evidences and broader discussion. Furthermore, the grounded theory was used to direct the data analysis of this study, but in fact we did not demonstrate a strict coding process in the paper, since the authors considered to tell an interesting story instead of to display cold data in tables. However, it may cause to loss of preciseness and systematization. In the future, the authors will try to collect more structural data through questionnaire survey and make an empirical study by quantitative analysis, through which the evidences for the theory would be more perfect.

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