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**ECRP and integrated ethics education's effect on Chinese accounting students' ethical  
level**

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# ECRP and Integrated Ethics Education's Effect on Chinese Accounting Students' Ethical Level

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**ABSTRACT:** The aim of this research is to investigate the effects of ethics education component and ethical decision-making framework on the Chinese accounting students' ethical sensitivity and judgment. This research adopts mixed method in order to make use of both quantitative data and qualitative data (Martinov-Bennie and Mladenovic 2015). In addition, this research also uses t-test, Mann-Whitney U and Wilcoxon signed rank test to reveal the relationship among the variables. Based on the evaluation of 201 Chinese accounting students, this research finds the ethical decision-making framework does not have effect on Chinese accounting students' ethical sensitivity and judgment. In contrast, the unexpected results show that Chinese accounting ethics education classes have a negative effect on Chinese accounting students' ethical sensitivity and judgment. These results contribute to appeal to the attention of academic society to improving the efficiency and effectiveness of Chinese accounting ethics education.

**Keywords:** *Ethical sensitivity, Ethical judgment, Ethical decision-making framework, Ethical education classes.*

## I. INTRODUCTION

Recently, Chinese stock exchange growth accompanied by increasing discoveries of accounting fraud (Zhang, H. 2005), and accountant are regarded as the person play an important role in preparing financial statements and ethical sustainable business practices (Low et al. 2006). Under that circumstance, ethics education is important for students to behave appropriately in the future when they in an ethical dilemma (Low et al. 2006). These data and facts providing strong motivation for this study.

Additionally, there are many criticisms that existed at the society for the failure of accounting ethics education. Some researchers point out that the current Chinese accounting ethics education is easy to make students feel bored and tired, so the outcomes of the courses are not satisfying (Zhou You 2009). However, a few of Chinese researches providing real evidence for the failure of ethics courses and the effect of courses on Chinese accounting students' ethical level. In addition, many researchers come out different kinds of ethics education method to help increase the efficiency of ethics education, such as providing ethical decision-making framework and case study. This paper was facilitated by those incomplete researches and wants to evaluate the outcomes of failure of ethics education and possibility of using ECRP to increase Chinese accounting students' ethical level.

A number of papers investigate the impact of ethics education on students' ethical judgment and sensitivity. In Malaysia, Maisarah Mohamad Saat (1970) conduct a pre- and post-study on students accepting ethics education to determine its effectiveness. Using statistical analysis, they found that ethics courses are effective since the ethical sensitivity of students was improved. Moreover, Australian researchers also found that integrated ethics component improves first-year accounting students' ethical sensitivity and even greatly improved students' ethical judgment if they have not been previously learning the ethical framework (Martinov-Bennie and Mladenovic 2015).

However, there is a big difference between the Chinese accounting ethics education and other countries'. In China, academic society pay insufficient attention to professional ethics education, ethics classes being "marginalized". In addition, Chinese ethics classes are lack of professional ethics education professors, and most of them use single teaching methods (Yuan Haipin 2016). Furthermore, the most prevalent Chinese ethics education method are "spoon-feeding" method and the content of the classes is disconnected with practice (Meng Zhaosu 2019). In contrast, the ethics education in other countries seems to be more successful. Taking the U.S. for example, about 91% of American business colleges have business ethics classes by 1991. Furthermore, other countries' ethics classes are intending to provide an ethical framework in order to solve the ethical dilemma rather than dogmatically impose the rules to the students (Yuan Haipin, 2016). More than that, they are more willing to use experiential, action-learning based projects to teach ethics (Yuan Haipin 2016).

In China, research shows students' moral level is related with short term ethics education and social environment (Mao 2012). Huang Xi (2009) found out that Chinese accounting ethics education only focus on discussing the principles of ethics rather than the real ethical dilemma, and that's why Chinese accounting ethics education far behind other countries'. Based on that result, she came out that college should use more creative and international method to improve that situation (Huang Xi 2009). More than that, a research shows ethics intervention, such as

ethics education component, can significantly increase the ethical sensitivity of the Chinese accounting students (Wu Qiong 2008).

However, there is a knowledge GAP between this paper and others. Firstly, the research of Nonna Martinov-Bennie only focus on Australian accounting students, so the subjects are different from this paper. Secondly, Wu Qiong's (2008) research only using one university's accounting students as a sample, and didn't analysis the level of ethical judgment being effected by the accounting ethics classes and she didn't analysis the effect of ethical decision-making framework alone on Chinese accounting students' ethical sensitivity and judgment.

There are two questions that has arisen as a result of the previous research paper, the first one is whether providing ECRP can improve Chinese students' ethical sensitivity and judgment and the other one is whether providing ethics courses can improve Chinese accounting students' ethical sensitivity and judgment. The profession and academic community has been investigated the impact of different ethics education methods on accounting students' ethic sensitivity and judgment, but there is little research paper conducted in China.

The purpose of this study is to investigate whether providing an ethical decision-making framework alone or a part of a comprehensive integrated ethics education component in college influence Chinese accounting students' ethical sensitivity and judgment within a business context. In addition, this study contributes to raising attention about the ethical education in colleges since the ethics education in China being "desertification" or "marginalization".

This paper use mixed method which can make use of both quantitative data and qualitative data to analysis the trend of variables. In addition, in order to reveal the relationship among variables, the paper adopted both parametric (t-test) and non-parametric test.

Results indicate that providing ECRP alone does not have effect on Chinese accounting students' ethical sensitivity and judgment. However, the unexpected result is that ethics education component have negative effect on Chinese accounting students' ethical sensitivity and judgment no matter the students being provided with ECRP framework or not.

This research contributes to the existing criticism for the failure of the ethics education courses, since it provides evidence of the defective ethics courses. In addition, this paper investigates the ethical sensitivity and judgment of the accounting students in China which extended the previous paper.

The remainder of this research paper is followed by literature review and hypothesis development. The third section presents the results of data analysis. In section 4, the paper will talk about discussion of the results, limitation and theoretical contribution, and reliability and validity. The section 5 provides conclusion and suggestions for further research.

## **II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT**

### **Ethics Decision Making Model**

Ethics decision-making model is based on Kitchener's theory (1984) who published a paper about ethical decision-making guidelines. Then through several years' development, there are a lot of ethics decision-making models either based on pragmatic procedure or theoretical procedure (Cottone et al. 2000). The different areas or different problem have their specific ethics decision-making model (e.g. family counseling, counseling children, AIDS) (Cottone et al. 2000). The ethics decision-making model referred in this paper is based on Rest's (1986) four components model:

1. Moral Issue's Recognition (moral sensitivity) means explanation of the specific situation and noticed what actions possibly influence other parties.
2. Moral Judgment which means concern about the moral justifiable course of action.
3. Establishing Moral Intent which means moral value are priority consideration.
4. Engaging in Moral Behavior which means insist to implement one's intention.

This paper only focuses on the first two components since they are the foundation of ethical action (Martinov-Bennie et al. 2015).

### **Ethical Sensitivity**

The ethical decision-making process begins with recognized that a specific situation will adversely influence others' welfare (Armstrong et al. 2003). The term ethical sensitivity refers to the person who is a moral subject are easy to feel and pay attention to the ethical case (Wei Yaoyang 2008). One research concluded that ethical sensitivity is composed of two different parts: identifying a problem to be solved and cognitive the ethical factor in the ethical problems (Bai Li 2007). Report from Fulmer and Cargile (1987) indicates that accounting students recognized ethical issues more frequently than other business students since they learned the AICPA's *Code of Professional Conduct*. However, this study also shows that there is no big difference between accounting students and business students when referred to conduct the course of action. Similarly, Yang Tao and Zhu Dan (2009) found that there is no significant difference between accounting students and non-accounting students when referred to the ethical sensitivity. Saat et al. (2010) concluded structured ethics courses increase Malaysian accounting students' ethical sensitivity.

In China, a research found that the accountants who accepted case study ethics education are more sensitive than those only accepted professional ethics education (Wu Qiong 2008). Based on the study of Du Feiyue, ethical sensitivity will decrease when the students grow up, the intervention has positive effect on students' ethical sensitivity (Du Feiyue 2011).

### **Ethical Judgment**

The study so far shows education will generally help people conduct more ethical judgment. (O'Fallen and Butterfield 2005). Furthermore, ethical judgments are subjective and the ethical nature behind behavior is a social reality (Payne and Giacalone 1990). In addition, ethical judgment is subject to biases due to the cognitive limitations (Doerr and Mitchell, 1998). One report shows that ethical judgment builds on ethical sensitivity (Cooper et al. 2008).

Mao Jianfen (2012) indicates that ethical regulations can help people making ethical judgments. However, Chinese paper indicates that the main way of learning ethics for Chinese college students is self-reflection and their ethic judgments are mainly based on their imperfect inner ethics principles and rules. Under that circumstances, college students should accept principle based ethics education. However, Chinese college students still accepted rule-based ethics education which can not make the students understand the connotation and meaning behind the rules (Liu Yuelin 2019). In addition, there are two kinds of ethical judgments, one is the justice orientation which emphasize the importance of autonomy, justice, rights and universal principles, the other one is the solicitude orientation which emphasize the interpersonal relationships and the principles of not causing harm (Di Xu 2015).

### **Ethical Decision-Making Frameworks**

Some researchers believe ethical behavior do not be influenced by codes of ethics within the accounting context (Robinson-Backmon &Finney 1999). However, others believe codes of ethics provide guidance and emphasis for people. Codes of ethics are normally established by professional organizations to increase the reliability and quality of the services provided by the members (S. T. Jakubowski et al. 2002). Latest *CICPA Code of Ethics for Professional Accountants (CICPA CEPA)* requires members to recognizes the factors that adversely effect the professional ethics and assess the severity of those unfavorable factors and then take necessary precautions to eliminate or reduce to an acceptable level of the unfavorable effects (2010 p1). CICPA CEPA appears to positively influence Chinese accountants' ethical judgment (Fan Y.H et al. 2013).

According to Wang Yanfang's research, Chinese ethics courses pay more attention to how to compliance the regulations and laws instead of identifying and resolving the real ethical cases by using ethical decision-making framework. By using this kind of teaching method, students may be lack of practical knowledge to deal with ethical dilemmas (Wang Yanfang 2016). However, another research also shows that students who employ the case study method to learn the ethics are more sensitive to the ethical issues than those only learned the ethics decision-making framework (Wu Qiong 2008).

### **Integrated vs. Stand-alone Ethics Course**

Cooper et al. (2008) divided ethics education into two categories: a discrete and required lesson in ethics or an integrated method which means ethics being woven into a required lesson. Canarutto et al. (2010) concluded that business ethics should be taught within curricular courses and should not be taught as an extra class. Huang Xi (2009) came out that most Chinese colleges did not have stand-alone ethics course and just introduce some laws and regulations within the curriculums which did not effectively improve accounting students' ethical level.

Moreover, during the integrated ethics education courses in China, a few professors want to introduce the ethics at their classes. They feel the professional accounting knowledge is more important (Lai Huilin 2019). In addition, the professors of ethics courses are lack of relevant working experiences and knowledge (Lai, Huilin 2019). Worse still, Chinese students are care less about ethics courses, they don't think ethics courses will contribute to their future career (Lai, Huilin 2019). In addition, Chinese colleges still adopts indoctrination method to teaching ethics in ethic classes. Therefore, the students' thought being imprisoned and their knowledge of the ethics limit to the content of the book (Song Qiangwei 2019).

In addition, some researchers believe China has in an era of value diversification, and the value concepts and thinking styles of college students have not yet taken shape, so they are susceptible to the influence of network. The different kind of values comes from different countries gradually blurred the value system and evaluation standards of college students. As a result, college students in the new era are less moral and unable to cognize the ethical problem. These situations emphasis the importance of ethical education.

### **Ethical Case**

To accomplish the research, an ethical case was established based on real-world scenarios. Human right issue and environmental issue were concluded in this case. The ethic case is same

for pre and post ethics education component and ‘with ECRP framework’ and ‘no ECRP framework’.

### III. RESEARCH METHODOLOGY

#### Methodology

This study uses a mixed method in order to make use of both qualitative and quantitative data. Some researchers think it lacks ideological purity and lack of clear philosophical basis (Giddings 2006). However, Morgan (2007) said that a mixed method is a pragmatic framework. In this research, quantitative data are used to indicate the overall impact of the variables on accounting students’ learning outcomes. Then the qualitative data will provide detailed insights into the nature of the trends.

#### Subjects

The subjects in this study were Chinese accounting students. About 201 students will be required to complete the questionnaires. The respondents were required to complete the ethical case. Based on their answers of the first question “Have you been taking the ethics classes?”, the respondents were divided into pre-test group and post-test group. The details of the subjects are shown on the Table 1.

**TABLE 1**  
**Sample Details**

	<b><u>Pre</u></b>
<b>Pannel A-pre-test</b>	
Case: no framework	35 46.67%
Case: with framework	40 53.33%
Total sample	75 100%
<b><u>Post</u></b>	
<b>Pannel B-post-test</b>	
Case: no framework	66 52.38%
Case: with framework	60 47.62%
Total sample	126 100%

#### Data Collection

Data will be collected from both pre and post students accepting the ethics education. In this way, students are required to answer the question: Do you have been taking ethics education classes? Furthermore, to identify the difference between the situation ‘with ECRP framework’ and ‘no ECRP framework’, there are two questionnaires with same questions but different instructions, which means one questionnaire will add an ECRP framework instruction and another will not. In addition, the questionnaire will be post on the internet and social media,

such as QQ and Wechat. In order to gain more detailed answers, a small number of interviews will be undertaken. The purpose is to supplement the quantitative data.

### Data Analysis

Quantitative data will be analyzed using SPSS. The marking scheme of the questionnaire is that two mark for identifying ethical issues correctly, eight marks for selecting correct ethical judgment and justification.

## IV. RESULTS

The following results shows the findings of research questions. The first part of the findings is about Chinese accounting students' ethical sensitivity and the second part is about the students' ethical judgment.

### Ethical Sensitivity

Table 2 indicate the results for research question that if ECRP will influence Chinese accounting students' ethical sensitivity (pre-test data) prior to the accounting students taking integrated ethics classes. The differences of the scores students got for recognizing each of the two ethical issues (environmental and human rights) under the two situations (with ECRP and no ECRP) are displayed in Table 2. In order to increase the robustness of the results, this research use both parametric statistical tests (independent sample t test for unequal sample size) and non-parametric statistical tests (Mann-Whitney U).

The independent t-test in Table 2 shows there is no statistically significant difference between the mean score for the Chinese accounting students who were provided with ECRP framework and for the Chinese accounting students who were not provided with ECRP framework. The results are fit into both human right issue (with ECRP framework:  $M=0.63$ ,  $SD=0.49$ , no ECRP framework:  $M=0.71$ ,  $SD=0.458$ ,  $t=-0.811$ ,  $P>0.05$ ) and environment issue (with ECRP framework:  $M=0.75$ ,  $SD=0.439$ , no ECRP framework:  $M=0.66$ ,  $SD=0.482$ ,  $t=0.874$ ,  $P>0.05$ ). To verify this result, Mann-Whitney U test were applied which also shows the same results. In that case, the results prove the students' ethical sensitivity dose not influenced by the provision of ECRP framework itself.

**TABLE 2**  
**Differences between Pre-test with ECRP and Without ECRP in Ethical Sensitivity**

<b>Ethical Issue</b>	<b>Pre-test mean score with ECRP</b>	<b>Pre-test mean score no ECRP</b>	<b>Difference (pre with ECRP-pre no ECRP)</b>	<b>Significance (2-tailed t test)</b>	<b>Significance t (Mann-Whitney U)</b>
Identify environmental	0.75	0.66	0.09	0.39	0.38

*(Continued on next page)*

**TABLE 2(continued)**

Identify human rights	0.63	0.71	-0.09	0.42	0.42
Total scores (out of 2)	1.38	1.37	0.00	0.98	0.95

Table 3 hints about the effect of integrated ethics component on Chinese accounting students' ethical sensitivity (pre-test against post-test). Table 3 shows the differences of scores between Chinese accounting students whom accept the ethics education component and whom not accept the ethics education component for identifying two ethical issues (environment issue and human right issue). In order to increase the robustness of the table, independent samples t-test for unequal size and Wilcoxon Signed Rank Test are used.

The results of paired sample t-test indicate statistically significant differences between the mean score for students prior to taking ethics education classes and students after taking ethics education classes. This result is only held true for environment ethical issue (pre-test condition M=0.71, SD=0.69; post-test condition M=0.42, SD=0.62;  $t = 4.068$ ,  $p < 0.05$ ) and the human right ethical issue (pre-test condition M=0.67, SD=0.475; post-test condition M=0.497;  $t = 1.336$ ,  $p > 0.05$ ). Wilcoxon signed rank test proved these results as well. In that case, the results indicate that the Chinese integrated ethics education has a negative impact on students' ethical sensitivity of environmental issue.

The pragmatic significance of these results with regard to the actual educational outcomes for students is that an increase of 29% students were failing to identify the environment issue. As to the human right issue, an increase of 10% students were failing to identify the human right issue when compared to pre-test data.

**TABLE 3****Differences between Pre-test and Post-test Scores in Ethical Sensitivity**

<b>Ethical Issue</b>	<b>Pre-test mean score</b>	<b>Post-test mean score</b>	<b>Difference (pre -test-post-test mean score)</b>	<b>Significance (2-tailed t test)</b>	<b>Significance (Wilcoxon signed rank test)</b>
Identify environmental	0.71	0.42	0.286	0*	0.001*
Identify human rights	0.67	0.57	0.095	0.183	0.317
Total scores (out of 2)	1.337	0.99	0.38	0*	0*

\* Denotes two-tailed statistical significance at the 5 percent level.

To investigate the pragmatic significance of the results, the pre-test data were divided into four categories: with ECRP, no ECRP, pass and fail. Table 4 indicates the number of students allocated in each category and the percentage as well.

The research also interviews some Chinese accounting students who have been accepted ethics education. Students were required to give feedback on whether the ethics education classes changed their ethical beliefs. Of 6 Chinese accounting students, 5 (83%) students said their ethical beliefs did not change after taking the ethics classes. They said Chinese accounting ethics class is a “bird course” which means the course is easy to pass and meaningless. In contrast, one student said their ethics classes was challenged and meaningful since the student learned a lot of ethics cases like “Mississippi Bubble”. In addition, the student was required to write an essay about what they learned during ethics class every time they finish the class.

**TABLE 4**  
**Differences Between With ECRP and Without ECRP’s Pass and Fail Rates in Ethical Sensitivity (Pre-test)**

	<b>Pre-test</b>		<b>Post-test</b>	
	Fail	Pass	Fail	Pass
No ECRP	4 11.43%	31 88.57%	17 25.76%	49 74.24%
With ECRP	5 12.50%	35 87.50%	8 13.33%	52 86.67%

### **Ethical judgment**

Table 5 shows the outcomes of the relationship between an ECRP framework alone and Chinese accounting students’ ethical judgment (pre-test data). The differences between the mean scores Chinese accounting students earned for resolving the environmental and human right issues are presented in Table 5.

The independent samples t-test of Table 5 shows no statistically significant difference between the mean score for Chinese accounting students who were provided with the ECRP framework and who were not provided with the ECRP framework. (framework M=5.55, SD=2.417, no framework M=5.66, SD=2.496, t=0.189, p>0.05). These results are confirmed by Mann-Whitney U test. The result held for true for both environment issue (with ECRP M=2.7, SD=1.47, no ECRP M=2.86, SD=1.56, t=-0.449, p>0.05) and human right issue (with ECRP M=2.85, SD=1.42, no ECRP M=2.8, SD=1.47, t=0.149, p>0.05).

For the purpose of investigating the practical significance of giving ECRP framework on Chinese accounting students’ ethical judgment, the research compares the pass and failure rates of students with and without ECRP framework.

Students who got equal or more than 50% of 8 were regarded as pass. Students who got less than 50% of 8 were regarded as failures. Table 6 indicates the pass and fail rate of students in different situations.

**TABLE 5**  
**Difference between Pre-test With ECRP and Pre-test No ECRP Scores for Ethical Judgment (Continued on next page)**

**TABLE 5 (continued)**

<b>Ethical Issue</b>	<b>Mean score with ECRP</b>	<b>Mean score no ECRP</b>	<b>Difference (pre with ECRP-pre no ECRP)</b>	<b>Significance (2-tailed t test)</b>	<b>Significance (Mann-Whitney U)</b>
Resolve environmental	2.7	2.86	-0.16	0.66	0.54
Resolve human rights	2.85	2.80	0.05	0.88	0.91
Total scores	5.55	2.66	-0.11	0.85	0.78

Table 6 shows that there is no significant difference between the students who were provided without ECRP and the students provided with ECRP for the pass and fail rate. In contrast, there is a big difference between the fail rate of pre-test and the fail rate of post-test. Furthermore, the fail rate of no ECRP group increased more rapidly from 17.14% to 43.94% when compare to the with ECRP group.

**TABLE 6**  
**The Pass and Fail Rates Pre-test With ECRP and Pre-test No ECRP for Ethical Judgment**

	<b>Pre-test</b>		<b>Post-test</b>	
	<b>Fail</b>	<b>Pass</b>	<b>Fail</b>	<b>Pass</b>
No ECRP	6 17.14%	29 82.86%	29 43.94%	37 56.06%
With ECRP	7 17.50%	33 82.50%	16 26.67%	44 73.33%

Table 7 also shows the influence of integrated ethics classes on Chinese accounting students' ethical judgment (pre-test versus post-test data). Differences between determinations made by Chinese accounting students for an appropriate course of action and justifications for environmental issue and human right issue are presented in Table 7.

The result of Table 7 shows when the Chinese accounting students were provided with ECRP there is a statistically differences between the mean scores of pre-test and post-test in Environmental issue (pre-test M=2.7, SD=1.47, post-test M=1.8, SD=1.31, t=3.2, p<0.05) and the human right issue (pre-test M=2.85, SD=1.42, post-test M=2.3, SD=1.32, t=-1.97, p<0.05) and for the total score with ECRP (pre-test M=5.55, SD=2.42, post-test M=4.1, SD=1.90, t=-3.36, p<0.05). In addition, the students who were not provided with ECRP at pre-test stage are decreased more in mean scores for both environment issue (pre-test M=2.85, SD=1.56, post-test M=1.88, SD=1.52, t=3.05, p<0.05), human right issue (pre-test M=2.80, SD=1.47, post-test M=1.97, SD=1.63, t=-2.51, p<0.05) and total scores no ECRP (pre-test M=5.66, SD=2.50, post-test M=3.85, SD=2.41, t=-3.54, p<0.05). Furthermore, there is also a significant difference between students' mean scores of pre-test and post-test for both environmental issue (pre-test M=2.77, SD=1.84, post-test M=1.84, SD=1.42, t=-4.40, p<0.05) human right issue (pre-test

M=2.83, SD=1.44, post-test M=2.12, SD=1.49,  $t=-3.26$ ,  $p<0.05$ ) and total scores (pre-test M=5.6, SD=2.44, post-test M=3.97, SD=2.18,  $t=-4.91$ ,  $p<0.05$ ). Wilcoxon signed rank test confirm the results except for the environmental with ECRP.

**TABLE 7**

**Difference between Pre-test and Post-test Scores for Ethical Judgment**

<b>Ethical Issue</b>	<b>Pre-test mean score</b>	<b>Post-test mean score</b>	<b>Difference mean score</b>	<b>Significance (2-tailed t test)</b>	<b>Significance (Wilcoxon test)</b>
Environmental with ECRP	2.7	1.80	-0.90	0.00*	0.09
Environmental no ECRP	2.86	1.88	-0.98	0.00*	0.00*
Environmental total	2.77	1.84	-0.93	0.00*	0.00*
Human right with ECRP	2.85	2.30	-0.55	0.05*	0.01*
Human right no ECRP	2.80	1.97	-0.83	0.01*	0.01*
Human right total	2.83	2.13	-0.70	0.00*	0.00*
Total sample with ECRP	5.55	4.10	-1.45	0.00*	0.01*
Total sample no ECRP	5.66	3.85	-1.81	0.00*	0.00*
Total sample	5.60	3.97	-1.63	0.00*	0.00*

\* Denotes two-tailed statistical significance at the 5 percent level.

## V. DISCUSSION

### Review

The purposes of this research was to investigate the effect of ethical decision-making framework on Chinese accounting students' ethical sensitivity and judgment as well as the effect of ethics education component on Chinese accounting students' ethical sensitivity and judgment.

The expected results of the research indicate that ethical decision-making framework alone can not positively influence the ethical sensitivity and judgment of the Chinese accounting students. The results provide further evidence for the research of Nonna Martinov-Bennie which indicates that ethical decision-making framework do not effect the ethical sensitivity and judgment of the students (Martinov-Bennie et al. 2015).

### Unexpected results

The unexpected result of the research is ethics education component have negative influence on students' ethical sensitivity regarding to the environment issues. There are several possible reasons. The first potential reason is that the Chinese accounting ethics classes are paying more attention on other accounting issues rather than environmental issues. The interviewee said their ethics classes talked more about the incompliance with financial reporting framework, such as Enron scandal and Yin Guangxia case. In that case, Chinese accounting students may be more sensitive about accounting related ethics issues rather than environmental issues. The second reason is that Chinese ethics education of the environmental issues are revolving around the anthropocentrism which means considering the human interests and values as the center to view and evaluate the world (Qin Xiulian 2017). Consequently, the students may consider more about the influence on human beings rather than the environment.

Another unexpected results of the research are the ethics education component has negative influence on Chinese accounting students' ethical judgment. The results are in line with Meng Zhaosu's research. His research indicates that rigid moral education disobey the rule of ethics education. After students accepts ethics education, they did not understand the connotation of the ethics and internalized the ethics belief. Since that, the students will feel confused when they faced with variety of the social phenomenon and make wrong judgment (Meng Zhaosu 2019). Similarly, another research shows that Chinese ethics education classes can generate "Reliability Reversal". An example of reliability reversal is when students see those unethical companies or individuals do not be punished, instead, those ethical individuals and companies are suffering. Therefore, the students may collide with the ethics (Zhou You 2009).

Additionally, based on the study of Zhang Jianxie, the content of the Chinese ethics education is obsolescent which being presented in two aspects, the first one is lack of epochal character and can not catch up the students' eyes, the second one is lack of practical knowledge. Under that circumstance, students don't want to pay attention to the classes (Zhang Jianxie 2008). Moreover, the study of Zhu Dan and Yang Tao shows ethics education courses do not contribute to the ethical level of accounting students (Zhu Dan 2009). The authors argued that nowadays, both business owners and managers are pursuing the maximization of their own interests, so that they want to dress their financial statements (Zhu Dan 2009). In that case, if accountants can meet the needs of management, they can succeed in their career. Since accounting students have less contact with society, as they deepen their professional knowledge and skills, following with the guidance of professional professors, they will gradually discover or realize some social realities (Zhu Dan 2009). Consequently, they will be more realistic under various kind of influence (Zhu Dan 2009).

The unexpected results of this research is against the research of Martinov-Bennie which shows the ethics education component have positive effect on Australian accounting students' ethical sensitivity and judgment (Martinov-Bennie and Mladenovic 2015). Moreover, the unexpected results of this research also different from the research of Mohamed Saat, M which shows that ethics education improve the ethical behaviors of Malaysian accounting students. However, the unexpected results of this paper are in line with the research of Xie Danya which indicates the effects of ethics education are opposed to the original intention of it (Xie Danya 2019). The research of Sun Yuchen suggests that the lack of customized and professional

Chinese accounting ethics education will lead to unethical behavior of Chinese accounting students (Sun Yuchen 2019).

### **Limitation**

The research has several limitations need to be discussed. Firstly, since the questionnaires were collected from online website, and the ethical decision-making framework only provided in the instruction part, the students may not learn as much as the research expected from the ethical decision-making framework. Secondly, the evaluation of students' ethical sensitivity and judgment only comes from the answers of the environment issue and human right issue which may not be comprehensive enough.

The third possible limitation is that the ethics case was translated from English to Chinese by the researcher which may not be preciseness enough. Furthermore, during the investigation of the effect of ECRP on students' ethical sensitivity and judgment at pre-test stage, there is a control group (no ECRP group), however, there is no control group when investigate the effect of the ethics education component on students' ethical sensitivity and judgment. Additionally, the correct answers were concluded from the report of real case and the wrong answers were set by the researcher which may not be critical enough.

Finally, this paper doesn't consider the effect of other variables on Chinese accounting students' ethical sensitivity and judgment. Actually, some research found out the unfairness of the society will influence the ethical sensitivity and judgment of students, since they are easy to get information about social injustice from internet and social media (Zhou Mingjie 2019). When investigate the effect of ethical education component, students are not usually exposed to the same information environment, they may get in touch with different kind of information and influence their ethical level.

### **Theoretical Contribution**

This research offers a contribution to the academic, professional and regulatory communities since the results will provide further evidence for whether ethics education will improve Chinese accounting students' ethical sensitivity and judgment and if so, which method is preferred to use. In addition to that, the research shows that inefficiency of Chinese ethics education classes will lead to a decrease of ethical sensitivity and judgment of Chinese accounting students. Consequentially, the defective ethics education can be the reason of increasing accounting fraud cases. Furthermore, the paper providing a strong evidence for the defectiveness of traditional Chinese accounting ethics education.

### **Reliability and Validity**

Overall, the reliability of the research is confirmed by the Cronbach alpha which shows the reliability of the research is acceptable. In addition, the research methodology is follow the paper of Nonna Martinov-Bennie (2015). In addition, the questionnaires were completed by the accounting students came from all around China. Moreover, the Pearson correlation shows the relation between the total score and the ethics education component are valid.

## **VI. CONCLUSION AND FUTURE RESEARCH**

Taking together, the paper extending a theory to China which shows the relationship among ethics courses, ECRP and Chinese accounting students' ethical sensitivity and judgment. For the first question, the research finds out that ethical decision-making framework alone does not have significant influence on Chinese accounting students' ethical sensitivity and judgment. In that case, colleges may not need to pay more attention on ECRP when they teaching ethics courses.

However, for the second question, this paper found out both integrated ethics courses which include ECRP framework and stand alone ethics courses are contribute to the accounting students' ethical sensitivity and judgment. This research also answers the question which kind of teaching method is better influence the Chinese accounting students' ethical sensitivity and judgment. The most astonishing and interesting thing is ethics courses shows negative influence on Chinese accounting students' ethical sensitivity and judgment. This result shows the defectiveness of Chinese ethics courses and want to facilitate college and society to find out a better way to teach the ethics.

This research also has some limitations, such as only evaluate the ethics level of accounting students based on the environmental issue and human right issue, the translation of ethics cases may have some problems and doesn't consider other variables may influence the ethics level of students.

For the future researcher, since this research only adapted Chinese ethics decision-making framework and Chinese accounting ethics courses, the future research can focus on other ethical decision-making framework and ethics classes. Additionally, the study only focus on the ethical judgment and ethical sensitivity when evaluate students' ethical level, the further research can investigate other aspects of the ethical component of Rest's (1986). Moreover, future research can use more ethical issues to test the ethical sensitivity and judgment of the students.

## **APPENDIX**

### **The Ethics Decision-Making Framework of CICPA**

Article 21 When following the basic principles of professional ethics, the CPA should solve the problem of ethical conflicts encountered.

Article 22 When solving the problem of moral conflict, the CPA should consider the following factors:

- (1) Facts related to the issue of moral conflict;
- (2) The ethical issues involved;
- (3) Basic principles of professional ethics involved in moral conflicts
- (4) Procedures for solving ethical conflicts formulated by accounting firms;
- (5) Alternative measures.

After considering the above factors and weighing the consequences of the alternatives, the CPA should determine the appropriate measures. If the issue of ethical conflicts remains unresolved, the CPA should consider consulting with the appropriate personnel within the accounting firm.

Article 23 If there is an ethical conflict with the accounting firm or external entity, the CPA should determine whether to discuss with the accounting firm's leaders or external unit management.

Article 24 A certified public accountant shall consider the issue of ethical conflicts involved, the process of solving the problem, and the relevant decisions made.

Article 25 If a major ethical conflict problem cannot be resolved, the CPA may consider consulting with the Institute of Certified Public Accountants or legal counsel.

Article 26 If all possible measures fail to resolve the issue of moral conflict, the CPA must no longer be involved in matters that create ethical conflicts. In this case, the CPA should determine whether to withdraw from the project team or no longer undertake related tasks, or to resign to the accounting firm.

### **Ethical Case Questionnaire**

Since 1985, investment companies A, B and C have been building toxic and hazardous waste treatment facilities in a community in the United States, but in the past incinerator operations, incinerators have caused air, water and noise pollution. The community has approximately 44,000 residents, most of whom are African-American and have lower incomes. The community currently has four toxic and hazardous waste treatment facilities that residents claim is the root cause of their health problems. However, the community collects fees from investment companies to build communities ever year. In addition, the collected fees solve the fiscal problem in the community. The state government responded by claiming that cause-and-effect relationship has not yet been determined, and the Department of Environmental Protection (DEP) continues to grant permits to build more hazardous waste facilities in the community.

The community's cumulative risk assessment study found that the community had the highest proportion of low birth weight children, twice the county rate, and the mortality and

lung cancer rates were 60% higher than in other regions. The EPA also found that children in the community had the highest levels of lead in their blood relative to children in their area, and the state had the highest infant mortality rate.

- (1) Identify the environmental issue and the human right issue.
- (2) Identify all possible alternative course(s) of action to solve the issues.
- (3) Justify your choice.

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