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Learning Global Citizenship Skills in a Democratic Setting: An Analysis of the Efficacy of a Moral Development Method Applied in China

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Abstract: To reduce the limitations of current measures of morality, and to focus on an effective approach to moral development among university students, the researchers adopted the Konstanz Method of Dilemma Discussion, to probe whether this type of method can also be applied among Chinese students, regarding the development of moral competence. 'Moral Competence', also known as 'moral-democratic' competence, is a concept developed by German psychologist, Professor Georg Lind. It is built upon the theories of Kohlberg, yet focuses on moral judgment and democratic decision-making competence. Lind designed a scale based on his dual-aspect theory, and suggested a follow-up method for building up moral competence. KMDD has been used in Germany and other countries for many years and has achieved positive results when applied. The initial application of this type of method in China started in 2012. After more than two years' of planning and research, we used this method with different groups of Chinese

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university students and tested its efficacy. Participants were set as the control and experiment groups. After analysing the pre-and-post-test data from all the participants, the result shows that the intervention effect with experiment groups was very significant with a noticeable Absolute Effect Size of C-score, while the competence score of control group regressed sharply due to reasons to be identified. Data from the experiment were analysed and intervention results were compared, to examine the efficacy of the method and to evaluate further application and research of KMDD in China.

Keywords: moral competence, moral development, intervention experiment, university students, moral cognition, democratic communication

1. Raise of the issue

Although currently only 7.2% of total labour force in China has received higher education¹, university graduates as the tertiary level of human capital, play a critical role not only in promoting social development, but also in their impact on the moral development of the entire workforce in China. To think and act morally is one of the essential skills for becoming a global citizen. Previous studies on moral development of university undergraduates in China showed a generally positive development in the focus group; yet, there are apparent problems as well. Some scholars concluded that the main problems in the moral development of university undergraduates were: learning without knowing, knowing without believing and believing without doing.² The gap between *moral cognition* and *moral action* makes us reflect upon the relationship between university education and students' individual moral development, and try to find more effective ways to enhance that relationship.

¹ See report „Trend and Evaluation of Chinese Labour Changes”, China Population and Development Research Centre (CPDRC), 2010; available at <http://news.sina.com.cn/c/2010-05-20/014917535675s.shtm>. Accessed on 2012-06-12.

² Rongding Ban, *Being University – Theories and Practices in Fostering Morality of Students at Universities*, People's Press, Beijing 2009.

1.1. The importance of developing moral competence

The internationally recognized course, *Justice: What is the Right thing to Do?*, offered by Michael J. Sandel³ is widely regarded as one of the most popular courses ever in Harvard University. Great interest has been aroused by Sandel's inspiring lectures. His way of teaching and discussing ethics and morality is simple, direct and appealing. However, will those interesting lectures actually promote audience's moral development, foster their ability in making moral judgments and taking action accordingly? Although interest and passion are provoked, we still cannot assess the efficacy of the impact of these lectures on moral development.

Moral psychologists believe that moral behaviour is closely related to moral cognition, and higher level of moral cognition will increase the likelihood of occurrence of moral behaviour. Addressed as 'moral judgment' by Lawrence Kohlberg, moral cognition ability, i.e. the ability to make moral judgments and take action accordingly, is seen as inseparable from individual's ability in democratic decision-making and communication, by German psychologist Georg Lind. Therefore, Lind developed the concept of 'moral-democratic competence', or 'moral competence', in short.

The development of one's moral competence is life-long. Though moral cognition is of vital importance during childhood and adolescent years, the moral development in the young adult period, or even in the mature adult period, reveals more significance in understanding the complexity and diversity of moral development. The more complicated life contexts and work contexts faced by adults are more difficult to assess and tackle; therefore, they need competence in moral reasoning and judging (decision-making), as well as in handling disputes and conflicts (democratic communicating). Hopefully, the ability to make moral judgments and communicate these, democratically, will have been developed through one's childhood, adolescence and young adult periods; however, this competence does not cease to develop after the cognitive foundation;

³ Michael J. Sandel, *Justice: what's the right thing to do?*, China Citic Press, Beijing 2011.

what's more, it will continue to progress or regress, depending on context, subject to specific situations. Any newness emerging from breath-taking technological advances, tectonic cultural and political shifts, and vigorous economic competition, may lead to a series of unprecedented moral controversies, which require human beings to possess enough competence to judge and act with awareness of moral affect. Joshua Greene⁴ uses the concept of meta-morality to describe the approach to solving disputes and realizing co-existence/co-prosperity among groups with different or even conflicting moral principles and ideals. In his book *Moral Tribes*, he pointed out that moral affect or principles turned 'me' into 'us', and then distinguished 'us' from 'them'. How to consistently make moral reasoning under powerfully emotional conditions, and make decisions which satisfice all groups through democratic communication is exactly the kind of moral competence that mankind need to continuously develop and improve.

1.2. The deficiency of morality measures and the proposal of dual-aspect theory

As statistical measurements became prevalent in mainstream psychology after 1930s, researchers in morality tended to define morality as an attitude, i.e. morality is seen as an attitude statement regarding certain moral dilemmas. Filling in a Likert scale in a self-reporting manner, subjects are required to answer questions on certain moral issues, or state levels of their acceptance to or disagreement on certain moral judgments in an attitude survey, and the aggregation of scores from different dimensions of the scale will lead to the different levels of an individual's moral development. However, Lind argued that once the emphasis has been laid too much on the development of the measurement method, the overuse of some premature research methods would lead to invalid research.⁵ Rapid devising of research

⁴ Joshua Greene, *Moral Tribes: Emotion, Reason and the Gap Between Us and Them*, Atlantic Books, London 2013.

⁵ Georg Lind, "Experimental Questionnaire: A New Approach to Personality Research", in: Adolf Kossakowski, Kazimierz Obuchowski (eds.), *Progress in Psychology of Personality*, Deutscher Verlag, Berlin 1980, pp. 4-23.

methods has overtaken the importance of theoretical studies, which is putting the cart in front of the horse. In a method-leading research field, the real issues in moral studies will not be properly understood or solved.

Both Piaget and Kohlberg believed that there are two distinctive yet inseparable aspects in all moral behaviour, i.e. moral cognition and moral affect. Lind pointed out that Kohlberg and his team had to compromise with the mainstream research preference towards experiment and measurement, so that the method of measuring morality by this team had defects.⁶ Lind furthered his research in finding a more objective measurement to replace the subjective moral measurement tools developed by Kohlberg and his team.⁷ Therefore, based on previous research results, Lind proposed his Dual-Aspect Theory, which includes four basic proposals, analysed in depth by Shaogang Yang.⁸ (1) First, the description of one's morality consists of both aspects of cognition and affect. Once a certain behaviour is regarded as moral, it is not because such behaviour simply meets one's moral orientation, values, attitudes or moral principles, but also because such behaviour is underpinned by certain competence to sort, integrate and implement moral principles into actual behaviour. (2) Second, moral cognition and moral affect cannot be measured separately and should be measured by one integrated tool. (3) Third, the affective and cognitive aspects of moral behaviour ought to and could be developed by different methods. Indocctrination of moral knowledge may have some impact on changing moral attitudes, but cannot promote the development of cognitive competence. (4) Fourth, the development

⁶ Ibidem.

⁷ See Georg Lind, *Can Morality be Taught? Research Findings from Modern Moral Psychology*, Logos Verlag, Berlin 2002; Georg Lind, "Moral Dilemma Discussion Revisited-The Konstanz method", *European Journal of Psychology*, Vol. 1, No. 1, 2005; Georg Lind, "The Meaning and Measurement of Moral Judgment Competence Revisited – A dual-aspect model", in: Daniel Fasko, Jr., Wayne Willis (eds.), *Contemporary Philosophical and Psychological Perspectives on Moral Development and Education*, NJ: Hampton Press, New York 2008, pp.185-220.

⁸ Shaogang Yang, *New Development of Moral Psychology*, Shanghai Education Press, Shanghai 2007.

of moral affect and moral cognition is parallel to each other. The two can be separated in logic but are related in experience. Unless one has moral cognitive competence, moral attitude and affect will not be converted into moral behaviour automatically.

To support his theory, Lind developed his Moral Competence Test (MCT hereafter) in 1976. The MCT is a kind of experimental questionnaire, which combines psychological experiment and measurement into a dynamic structure to assess morality. Because individual moral development not only differs in moral orientation, attitude and values, but also in cognitive structure, this MCT can measure moral cognition and moral affect at the same time. The score from the test, which is called C-score, is the main indicator for participant's moral competence, representing the cognitive score. Meanwhile, the 6-level moral development model by Kohlberg is also incorporated into the test, so the acceptance and preference to the 6 levels of moral judgment principles can also be tested, representing 'affective' score.

In Greene's metaphor, the human brain has a similar function as the dual-mode camera⁹, i.e. auto settings and manual settings: the auto settings are optimized for typical situations, hence are highly efficient, but not flexible, and the reverse is true of the manual mode. The auto settings, established gradually through biological evolution, cultural institutionalization and convention of individual experiences, are like intuitive feelings and reflexive reasoning ability of human beings. However, Greene holds that it is such quick and automatic affective function that eventually separates 'us' and 'them', leading to hasty and arbitrary moral judgment. Moral judgments are more than intuitions and they involve concepts about different groups, social relationships, perspectives on society, and distinctions between when rights should be applied and when they should be denied. In Elliot Turiel's criticism of Damasio et.al¹⁰,

⁹ Joshua Greene, *Moral Tribes: Emotion, Reason and the Gap Between Us and Them*, op. cit., p. 133.

¹⁰ Elliot Turiel, "Thought, Emotions and Social Interactional Processes in Moral Development", in: Melanie Killen, Judith G. Smetana (eds.), *Handbook of Moral Development*, Lawrence Erlbaum Associates, Mahwah, New Jersey, 2006, p. 20.

he tried, in addition, to clarify that even though intuitive feelings are evitable in humans' moral judgment processes, we still need to acquire a competence which may assist us, in situations full of 'hot buttons' activating certain moral affects, to reduce the control of the 'automatic mode' and make more reasonable judgments and behaviour, through multiple social interactions and reciprocity. This competence, like a facility with manual settings, is the ability to deliberately work through complex, novel problems. We have to decide for ourselves, understanding how our minds work may help us decide more wisely, both as individuals and as 'herders trying to live together on the new pastures'.¹¹

1.3. KMDD as a method of developing moral competence

Though the MCT can be used in measuring moral development levels and assessing the efficacy of certain moral development or intervention methods, our discussion of moral education should not just remain at the descriptive statement of status quo. Instead, we need to explore more effective ways of developing both cognitive and affective aspects of human morality.

We believe one of the ultimate purposes of moral education is to enable people to build up mental and psychological preparations so as to think and act morally once they have to face unexpected challenges in certain unpredictable settings. Such competence cannot be simply replaced by parodying any ready-made tactics, or memorizing abstract moral philosophy, or training decision-making skills.¹² Moral education cannot teach morally correct behaviours because trainers per se may not make moral judgments nor take moral actions in the place of learners in any real, complex and even conflicting situations. It is every individual's own task to choose appropriate moral principles then make the best possible decisions. Under circumstances when it is difficult to tell right from wrong, individuals especially need

¹¹ Joshua Greene, *Moral Tribes: Emotion, Reason and the Gap Between Us and Them*, op. cit., p. 143.

¹² Chuanbao Tan, *Principles of Moral Education*, Beijing Normal University Press, Beijing 2007.

to develop a competence in compromising and making the most “satisficing” decisions. Therefore, apart from its function in analysing moral judgment levels and assessing the effect of certain moral education methods, the MCT has been included into the Konstanz Method of Dilemma Discussion (KMDD) as a main measurement tool by Lind and his team. The KMDD is a moral development method specializing in the moral-democratic competence by using ‘dilemma discussions’.

Following a strictly structured procedure, the KMDD has its established standards for every step, ranging from writing up dilemma stories, to the presentation of dilemmas, and to organizing discussions and reflection. Authentic dilemmas from daily life involving controversies and conflicts in values may be edited into educative dilemma stories for the KMDD. All KMDD teachers need to receive sufficient training before they are awarded the certificate to conduct any KMDD sessions.

Two years ago, we began our research project with Chinese university undergraduates in order to try out the KMDD and test its effect in developing moral competence.

2. Research method

We used the MCT to find out the overall moral-democratic competence and the level of moral development among Chinese university students at the outset, and then implemented a series of KMDD sessions with experiment groups. After the KMDD sessions, we re-assessed the moral-democratic competence of each experiment group as a whole, by using the MCT again.

2.1. Sample selection

From February 2012 to June 2014, we conducted five rounds of the KMDD sessions during five semesters, and invited five groups of participants to undertake comparative studies. The respondents came from first-year, second-year and third-year university students. For each semester, the researchers chose one group as the experiment group and another group from the same grade and the same course

program as the control group. In the past two and half years, we sent out 524 Moral Competence Tests and had 512 respondents. From the group, we invited 248 students to participate in the KMDD discussions, and collected 231 valid pre-and-post MCTs; in addition, 216 students were invited as the control groups and 195 valid MCTs in total were collected afterwards.

2.2 Method and procedure

While a more common application of the MCT is to measure levels of moral development and the overall moral-democratic competence, the key part of our research, however, is not simply a descriptive study of the status quo, but a study on the efficacy of the KMDD intervention with Chinese students. Therefore, as well as applying the MCT, we also had to design our intervention experiment.

2.2.1. Experimental questionnaire

The standard MCT includes two moral dilemma stories and the whole experiment requires a multivariate design for each participant, i.e. 6 phasic-factors for moral stages x 2 task-factors for either supporting or opposing stances x 2 dilemma stories. Independent variables from these three areas were set for an orthogonal rotation in order to represent all the factors related to moral tasks. Meanwhile, all these factors remain independent so that each of them can be clearly defined thus reducing the uncertainty. The statistical analysis then leads to the main data of the test, i.e. C-score, which reflects participants' competence in judging the moral quality of every argument in the test. The main difference between the MCT and other measures for morality is that C-score measures the pattern of participants' actual moral judgment or decision-making behaviour, rather than the scale of their acceptance (attitudes) toward each opinion. Based on Jacob Cohen's suggestion on behavioural studies¹³ (1988), C-score may range from 1 to 100, with grades as follows: 1-9 (low), 10-29 (medium), 30-49 (high), 50 and above (very high).

¹³ Jacob Cohen, *Statistical Power. Analysis for the Behavioral Sciences*, Lawrence Erlbaum Associates, New York 1969¹/1988².

2.2.2. Intervention design

Our intervention experiment consists of two parts: first, the main body of the experiment is the KMDD discussion. One dilemma story came from Lind's well-tested collection and the rest from cases constructed by the researchers themselves. These self-constructed stories were designed to cover various moral issues and to provide substantial moral challenge to participants, and were written up after going through the required procedures. In every dilemma discussion participants need to go through steps such as a dilemma clarification, opinion expressing, perspective taking, acknowledging and reflecting; secondly, an auxiliary exercise is designed to enhance the follow-up reflection by the students. After each session of dilemma discussion we asked participants to reflect upon any learning process, for instance, reflect on the theme, the procedure, the view-exchanging experience and teacher's guidance, etc.

2.2.3. Intervention implementation

Before starting the experiment, we invited students from both experiment groups and control groups to complete the MCT separately, and calculated pre-test C-scores of the two groups respectively. Next, the experiment group would follow the structured procedures of the KMDD and conduct a 90-minute discussion of one selected dilemma story. Each experiment group would participate in three rounds of the KMDD sessions. After the intervention, we used the same MCT with the experiment group and the control group, collected their post-test data and conducted the comparative analysis of all the data collected.

3. Findings

After designing and implementing the experiments in five semesters, we conducted statistical analysis of all the data collected. First of all, we did a descriptive study of the overall pre-test C-score of all the groups, which represented the status quo of participants' moral-democratic competence before the KMDD intervention. The mean of the C-score of all the participants is 25.2 (N=512). Secondly, we compared five

pairs of the pre-and-post C-scores separately with the five experiment groups (figure 1, N=231) and the five control groups (figure 2, N=195)

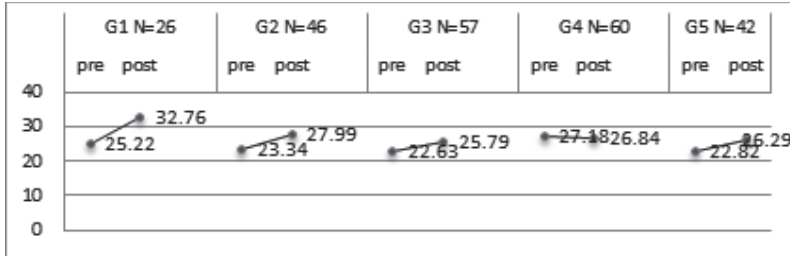


Figure 1: Differences of pre-and-post C-scores with the experiment groups (N=231)

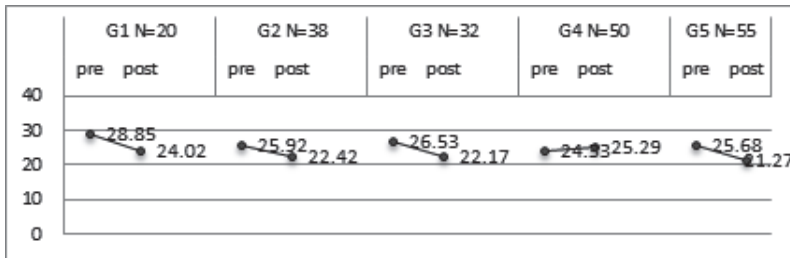


Figure 2: Differences of pre-and-post C-scores with the control groups (N=195)

After *T*-test of related samples, the differences between pre-and-post C-scores with the experiment groups showed that after a series of the KMDD interventions, the C-score of the experiment groups had a noticeable increase compared to the C-score of the same groups before the dilemma discussions ($p=0.008<0.01$), whereas the pre-and-post results from all the five control groups showed a general decline of C-scores ($p=0.025<0.05$). From these data, we could find the difference of C-scores among all the students coming from both the experiment groups and the control groups (table 1 and 2).

Table 1: Variance analysis of C-score of the experiment group (N=231)

	M	SD	T
Pre-test C-score	24.28	13.91	-2.655**
Post-test C-score	27.38	13.41	

Table 2: Variance analysis of C-score of the control group (N=195)

	M	SD	T
Pre-test C-score	25.97	13.78	2.204*
Post-test C-score	22.92	13.41	

We then conducted a comparison of the mean of C-scores from both the experiment groups and the control groups (figure 3). After the *T*-test with independent samples, we could find a very significant difference of the post C-scores between the experiment and the control groups ($p=0.001<0.01$).

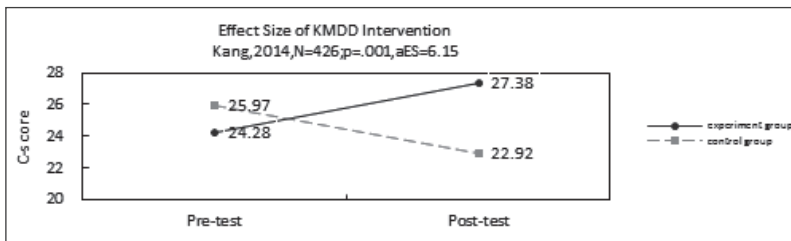


Figure 3: The Absolute Effect Size of KMDD intervention

Significance analysis, as a basic requirement of empirical studies, yet has certain limitations on intervention experiments, which have relatively smaller samples. In order to avoid such statistical constraints brought about by the small size of samples, we need to study the effect size of the variance¹⁴. Though the effect size of the mean variance from the two groups have been significant ($d=0.4, d>0.2$ is considered effective). However, the effect size still relies too much on the standard deviation. As Cohen¹⁵ originally pointed out, and as subsequently supported by Zheng *et.al.*,¹⁶ for certain very specific studies, even a very small effect size may also be very significant. Therefore, we also refer to the concept of *absolute Effect Size* (aES) proposed by Lind, and regard it as a very important referent for the study of the effect size of our intervention. By so doing,

¹⁴ Mark W. Lipsey, David B. Wilson, *Practical Meta-analysis*, Sage Publications, Thousand Oaks, CA.2001.

¹⁵ Jacob Cohen, *Statistical Power. Analysis for the Behavioral Sciences*, Lawrence Erlbaum Associates, New York 1969¹/1988².

¹⁶ Haomin Zheng, Zhonglin Wen & Yan Wu, "The Appropriate Effect Sizes and Their Calculations in Psychological Research", *The Development of Psychological Science*, Vol. 19, 2011 (pp. 1868-1878).

we could come to a clearer comparison of the intervention result with the experiment groups. After aES calculation, as shown in figure 3, the absolute Effect Size of the intervention reached 6.15, which can be considered much significant (aES>5 is considered significant, >10 is very significant¹⁷).

Besides the above mentioned research findings, we also took a very close look at the data from the participants who have achieved a noticeable increase in their C-scores after the intervention. We examined the constituents of those C-scores at the six moral developmental stages proposed by Lawrence Kohlberg. When Lind developed the MTC and C-score, he has incorporated the measurement of both cognitive and affective sides of morality into the score, so a final C-score can also convey the scores at the six stages in an individual's moral development.

Those data at sequential phases are shown in figure 4, which presents the changes of both pre-and-post C-scores of the experiment groups as a whole at the six stages. The intervention results at six stages have also revealed some features. (1) After the intervention, the post C-score at stage 5 had a very noticeable increase, which means an increased acceptance of the degree of moral principles at stage five by Kohlberg. (2) The acceptance of principles at stage 3 has witnessed a decline. (3) The acceptance of principles at stage 1 and 2 witnessed an increase instead of a decrease, which partly offset the increase of the overall post C-score.

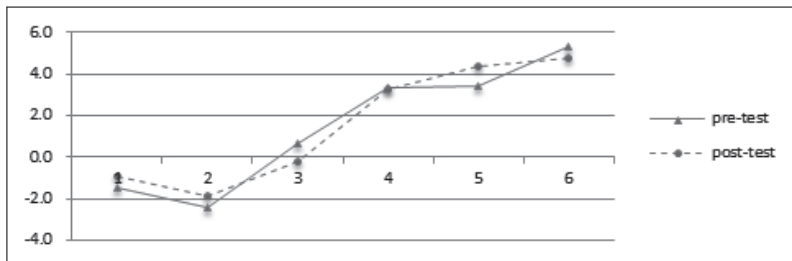


Figure 4: Changes in C-scores with the experiment group

¹⁷ See Georg Lind, *Morality can be Taught-A Handbook for Moral and Democratic Education*, Oldenbourg, Munchen 2009.

4. Discussion

4.1. The analysis of a noticeable increase of C-score in the experiment group

From the above mentioned data analysis, we could see a significant increase of the C-score of the experiment group, which means an increase of moral competence among the participants after a series of the KMDD interventions. The increase represents the effective impact of the KMDD dilemma discussion method on participants' moral judgment and decision-making competence. Both independent and related T-tests in this research have shown the significance of both variances, namely, the variance of C-scores of the experiment group before and after the intervention, and the variance of the post-test C-scores between the control and experiment groups. Nevertheless, there are some features of the data worth further examination. From figure 4, we could find that the participants' moral competence before and after the KMDD discussions vary at the six stages outlined by Kohlberg. After the intervention, participants tend to more readily accept the moral principles at stage 5, accept less the principles at stage 3, while the acceptance to principles at stage 1 and 2 dropped. Although the final C-score witnessed an increase, the scores variations at different stages may offset one from the other. Except the increased acceptance at stage 5 that is expected by the researchers, the other two tendencies did not fall into the expectation of the researchers. Therefore, we need to discuss why unexpected changes may arise.

Based on Kohlberg's moral development theories, our KMDD intervention with students mainly influenced their moral development at the stage 5 where the awareness of self-values and rights symbolizing rationality has surpassed the moral opinions attached to conventional and contractual views. The KMDD discussion increased participants' acceptance of such moral principles, which means that though the students' moral decision-making process is still influenced by the conflict between compliance with the social conventions and the awakening of self-awareness and self-perception, the participants have already showed evidence of consciously putting personal moral judgment principles ahead of social norms in their decision-making. However, at stage 3 which

focuses on the mutual expectation, interpersonal relations and coordination, we witnessed a drop of acceptance of interpersonal relations as moral judgment principles, whereas principles focused on social institution and conscience at stage 4 and principles focused on universal rules at stage 6 both remain the same. Interestingly, the increased acceptance to principles at stage 1 and 2, which may influence the C-score in a different way, reveals a tricky situation: after the KMDD discussion, participants tend to turn more towards the principles of obedience and punishment, which signifies that moral decision-making criteria are related to personal interest and to instrumentality of rewards or punishment. Such an increase of acceptance of principles at pre-conventional moral level led to our reflection of the intervention process: what may result in participant's choice of such simple, reactive and less cognitively developed principles?

Our view upon this is as follows. When the participants were participating in the KMDD dilemma discussion, thereby practicing the democratic approach of listening to others and perspective taking, then evaluating different views as social norms, we found this might help participants to develop their 'others-awareness'. The impact of mankind's more primitive moral principles, which nurture self-interest, appeared to be diminished by this process. The progression through moral stages outlined by Kohlberg needs to begin from the full development of the previous stages, i.e. the first and second levels at the pre-conventional stage. That is to say, before the self can be fully expressed and recognized and before the self-interest can be perceived as safe, secure or attainable; one's morality may not move on automatically along the developmental route. The awareness of self-interest and perceived assurance of self-interest are important pivotal points in the chain of individual moral development. When individuals are able to realize that everyone may and can have various diverse or even conflicting interests, and that his own interest, just like many others' self-interest, needs to be acknowledged and respected, then the pre-conventional stage completes its function and allows the individuals to move up to other moral levels. This sense of self is a necessary foundation for the further development of one's morality. Without an adequate acknowledgment

of 'self' and 'self-interest', the awareness and facilitation of 'others' and 'others-interest' would be groundless, or simply reduced to the 'right attitudes' to comply with.

However, moral development based on a full awareness and perception of self is not emphasized in China's typical approach of moral education offered to youngsters. Chinese moral development focuses more on indoctrinating 'morally correct' principles, and emphasizing that self-interest is always inferior to group-interest or others-interest. Therefore, under such social customs and norms for morality, values like suppressing or eradicating one's self-interest for public interest, completely forgetting one's own interest and becoming absolutely altruistic are widely considered as 'being moral'. Not looking for personal interest sometimes becomes the only judging criterion for being moral, or being competent in the workplace, which outweighs other moral principles. That is why 'a good intention' not out of personal interest always sounds plausible despite the hurt or harm brought by such selflessness. The denial of the importance of self-interest may lead to the boomerang effect and a rebounded overemphasis of selfhood in one's future development of morality. Hence, when we conducted the KMDD with Chinese participants, even though the overall C-Score has been increased and the moral-democratic competence of the whole group has been improved, some individual participants might not benefit from the discussion process in terms of the development of self-awareness or metacognition, let alone self-nurturing or self-upgrading. Our doubt lies in whether a moral competence without a fully acknowledged and accepted self can be sustainable and endogenous?

4.2. The analysis of a noticeable decrease of the C-score of the control group

Though the comparison of the results between the experiment groups and the control groups shows that the aES of all the experiment groups is very significant, one important factor contributing to the large aES is the sharp decrease of C-Scores of the control groups. The causes of such decline may include: 1) boredom resulting from the repetition of the test. Since the students in control groups had to fill in the same test paper twice during one semester, they may have lost interest

in repeating the test. It is possible that the lack of interest and commitment may have led to careless completion of the post-test, which then may have had a negative impact on the post C-Score. 2) As the participants progress in their academic study and gain more social experience, university students may have to face significantly more challenges cast by conflicting moral values, the pressures of life or harsh reality. Those challenges (many of them are dilemmas in decision-making), if not properly discussed, reflected or handled, may lead to a decrease in moral judgment. This finding has been supported by previous research, such as the regression of moral competence among medical and business students¹⁸, and the C-score of adults is relatively lower than that of teenagers. However, those research findings are only referent information for our discussion with Chinese participants because the relevant research has all been carried out in countries other than China. Whether the moral competence of Chinese medical or business students, or simply all adults may also regress that remains to be examined.

4.3. Analysis of the insignificant result of intervention with one experiment group

Although the overall intervention results of experiment groups are apparent, we cannot ignore the fact that the post C-score of one group did not change much. Our reflection upon this result is: the congruence between dilemma story and teaching content matters. Whether the dilemma stories can be naturally incorporated into the lecture content (in our case, i.e. business and management courses), may influence the quality of students' thinking and analysing. One important factor emphasized by the KMDD method is a stress-free discussion. Learning could be more effective if it is carried out without too much pressure; however, traditional business courses offered in Chinese universities are teacher-centred and have limited teaching hours. Therefore, if the design of dilemma discussion fails to show any link to the theme of the lecture, or takes up too much lecture time for

¹⁸ See Marcia Schillinger, *Learning Environments and Moral Development: How University Education Fosters Moral Judgment Competence in Brazil and Two German-Speaking Countries*, Shaker Verlag, Aachen 2006.

teachers to finish their teaching plan, the participants may feel confused, stressed or restless, which will have a direct negative impact on the intervention effect. Therefore, the ability of the KMDD teachers, especially the ability to create and select dilemma stories, to organize and facilitate dilemma discussion needs to be developed and assessed before he or she becomes competent to conduct the KMDD sessions independently and responsibly. Besides, the reflection stage during the discussion process is critical to participants' moral cognition development. What caught the researchers' attention was that one group did not show any improvement or decline in its post C-score. To some extent, a moral dilemma discussion may have already functioned as a buffer to mitigate the regression of participants' moral-democratic competence. Carrying out a moral dilemma discussion during business lectures may at least offset possible negative impact on students' moral judgment brought by certain challenging business topics.

5. Conclusion

Started in February 2012, our KMDD intervention program has periodically made some progress. Data collected from experiment groups clearly demonstrated the validity of this type of development method of moral-democratic competence. This method of developing may bring up further research interest among academics and practitioners. Under the guidance of Georg Lind, the KMDD has been gradually introduced and applied to schools, universities, companies and government bodies across many countries. The method has been proved effective with many different cohorts. Yet, in China, although the theoretical discussion of moral development started long ago, the discussion of the efficacy of the implementation of moral development practices has long been ignored. Difficult as it is, the moral development method remains a meaningful research topic for us. We started our research with limited samples, designed and conducted a series of intervention experiments in only two years; nonetheless we could already observe some positive results from the experiment data, supporting the

effectiveness of the KMDD with Chinese participants. We hope our research results may attract more interest in and outside China, to encourage follow-up studies, and to explore more effective ways to help develop morality.

However, this focal research also provokes new research questions for us. First of all, for Chinese university students, or maybe students at all levels, should their overall moral development be based on the full awakening of an individual's self-awareness? If so, we have to admit that the needed emphasis on self-awareness and self-development is not clearly integrated in the design of the KMDD procedures. Therefore, we might have to adopt methods of developing self-cognition, instead of suppressing or ignoring self-perception, before we move on to facilitate participants' competence in understanding and appreciating others' (even opponents') reasoned arguments, and in communicating and coordinating with others. Apart from the possible supplementary function of self-awareness, we still need to find out more exact reasons for the decline of moral competence among the control group. More research could be carried out to collect follow-up data after certain periods of the KMDD intervention and to examine the lasting effect of such interventions, or to collect C-scores at intervals between the same control and experiment groups to see if there is any change. By that stage, we could further study the possible influence of certain business courses upon students' moral competence.

Although this study was constrained by the different curriculum offered to various majors, and we had no effective method to conduct longitudinal studies with the same group of the KMDD participants, this path remains a possible research project (for example, the research team may invite teachers who may teach at different terms or years). In addition, researchers could collect more data related to university students at different levels and conduct cross-sectional studies to find out how moral competence may vary among students across age or major. Finally, we have to reflect on the limitation of this focused research, i.e. the sample size. Though this study has been carried out for more than two years, we have to acknowledge the difficulty in the size and speed of collecting valid data. In order to guarantee the validity of data collected, the smallest possible experiment group

was comprised of 25 participants, while our KMDD groups were usually much bigger ones with up to 60 participants. With too many participants, the discussion effect cannot be easily controlled by less experienced teachers. Every single round of the KMDD takes time and effort in design, execution and data analysis, which requires at least three months to complete the whole process. Therefore, patience, conscientiousness and long-term devotion to the research project are essential for research in moral development and the foundation of any valid research results.

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