

Analysis of the Relation among Moral Judgment, Information Ethics Judgment and Internet Ethics Consciousness of Undergraduate Students for Developing the Model of Information Ethics Education

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Abstract

Problems caused by the side effects of information society created a big pressure for more effective education for ethics of the knowledge society, even though the information ethical education has been practiced nationwide more than ever. In this thesis, I analyzed the relationship among the three major elements related to ethics for undergraduate students (moral judgement, the information ethics judgement and the internet ethics consciousness) for developing the model of information ethics education.

With the subject of 150 undergraduates, standardized tests of the self-diagnose about the moral judgement, the information ethics judgement, and the internet ethics consciousness of the undergraduates were conducted. Analysis of the data showed that the level of the moral judgement, the information ethics judgement, and the internet ethics consciousness of the undergraduates were not so related, which means the high moral judgement ability does'n not necessarily guarantees the high level of internet ethics consciousness while those two are assumed to be strongly related. This result suggests there is a need to develop the education program for improvement in the morality and internet ethics education. The relationship between the moral judgement and the information ethics judgement showed very weak static correlation, and there was no significant correlation between the correlation of what and the internet ethics consciousness. This means that there was little correlation between the reality and the cyber space and no correlation between the action and the consciousness.

I proposed the information ethics education model based on the analysis of the previous researches as follows. First, diagnose the consciousness, the morality, and the precedent knowledge and then conduct the education of the customized learning contents individually on line based on the diagnosis. Next, I practice self-directed, active, and practical learning offline. In this time, throughout all the learning procedure we have to implement the learning based on the Flipped Instruction Model, Authentic Learning and Convergence Learning.

key words : Information Ethics Education Model, Moral Judgement, Information Ethics Judgement,

INTRODUCTION

In the rapidly changing digital environment where new media has appeared, to develop the IT advanced cultural civil consciousness and to construct information culture, Korean government has been implementing specialized information ethics education to each subject such as adolescent, teachers, parents, officials, and so on from 2002 as a policy for protecting the citizen from the information pollution such as junk mail, swearing, advertisement for adult contents and so on (Ministry of Security and Public Administration, 2012). Also, by implementing the information ethics education to the citizen, digital citizenship such as prevention of dysfunction of the information oriented society, understanding of information oriented society phenomenon, study for creative application of information, and so on has been implemented through information culture and information ethics education (Ministry of Education, 2011).

Also, in the cyber space, people show aggressive tendencies and deviant behaviors, complex and flexible identity, and disinhibition effect (The ethics Council on Internet, 2011). Will the morality in real life be equal to that in cyber space? It has not been proved how much it is different, if it isn't so. Also, to prevent the dysfunction of the information, it is necessary to educate the ethics stronger than the existing ethics education and differently based on the understanding of the cyber space and information technology. In addition to the information education that studies the information technology till now, it is necessary to conduct the education of humanism that is needed for the citizen in the information oriented society.

To keep up with this, in the information education curriculum, there has been added the information ethics and the information protection for the adolescents since 7th educational curriculum revision in 2007 and also there have been a lot of researches about it (Ministry of Education & Human Resources Development, 2007).

However, even though college students have been spending more time using the Internet, and also doing a lot of activities on the internet, they have not been received the information ethics education. So this is the time to research how to educate them.

In this paper, to improve the effectiveness of the information ethics education, the learner's characteristics among education factors must be analyzed first. The information ethics education must be learned by experience, education of attitude, and induced to the change of behavior. The learner's characteristics for the effectiveness of the information ethics education is the integrated moral virtues related to the behavior rather than prior knowledge. The integrated moral virtues have a high mutual relatedness of cognitive domain, affective domain, and conductive domain (Thomas L., 1991). So we need to analyze the level of cognition and conducting and their relatedness of the college students.

Based on the necessity of the information ethics education, in this paper we evaluated the moral judgment and the information ethics judgment as the conductive domain of the college students and predicted the behaviors in the real world and in the cyber space. Also, as the cognitive domain, diagnosing the internet ethics and researching the morality of the information ethics, we are going to emphasize the necessity of the information ethics education and analyze their relationships.

The purpose of this paper is to research moral judgment, information ethics judgment, and the level of internet ethics of the college students, to analyze the relationships among the moral judgment, information ethics judgment, and internet ethics, and to suggest the developing method of the information ethics education model through literature analysis. That is, through studying the relationship between the learner's behavior and recognition, we intend to utilize it in the information ethics education and then help the students to get the values and the behaviors in the cyber space.

Research Issues

Research issue 1. How is the level of the moral judgment, the information ethics judgment, internet ethics of the college students?

Research issue 2. How is the relationship between the moral judgment, the information ethics judgment, internet ethics of the college students?

Research issue 3. What are the suggestions for developing the information ethics education model?

THEORETICAL BACKGROUND

Analysis of the relationship between the moral judgment, the information ethics judgment, and internet ethics

Excellent personality is explained that it is achieved to integrate knowing, desiring, and practicing the goodness, and also each component such as cognition, emotion, behavior influences it with relationship mutually (Park. et al, 1998). Ryu(2009) said that the integrated morality education is implemented only when the cognitive side is transferred into emotion and carried into action.

The final goal or direction of the research and the education for all the morality or ethics is representing the moral behavior (National Youth Policy Institute, 2011). However, it is impossible to observe all the behaviors of the students. Therefore, to infer ethical behavior level, the moral judgment which represents the ability of determining the ethical behavior is estimated in a certain situation. If the moral judgment becomes higher, it is expected to enhance the behavioral level (Kim, 2011).

According to Kohlberg's Theory of Moral Development, the moral standard is different depending on the age as in Table 1. The moral judgment means the proportion of the post conventional moral level, 5th or 6th level, and it is used to find out the personal moral level the most (Hong, 2004). Also, it means decision ability for what is the most moral among feasible behaviors and it is possible to expect the ethical behavior practice level (translated by Moon, 2004).

<Table 1> Kohlberg's Theory of Moral Development (Anne Colby et al., 1983)

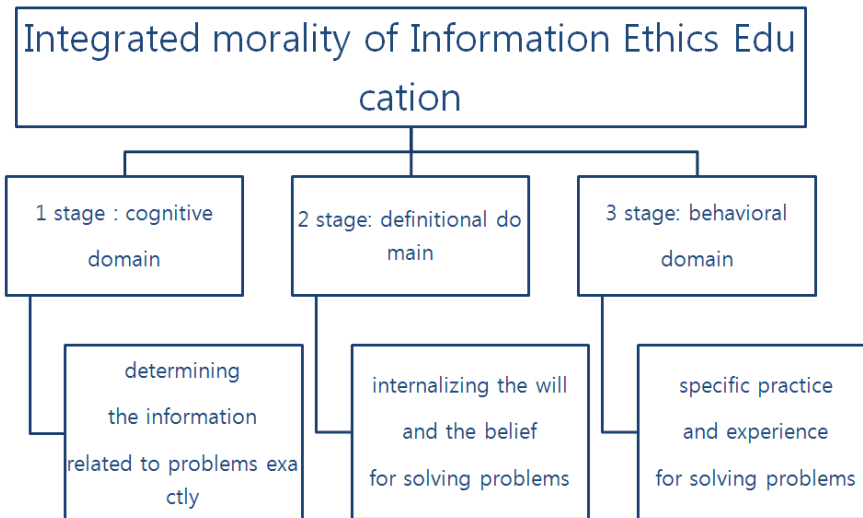
Level	Stage	Kohlberg's Moral Development
Pre conventional level	1	Avoiding punishment . Obedience
	2	Satisfaction of needs . Dealing
Conventional level	3	Considering good kid reputation
	4	Considering law and order
Post conventional level	5	Social contract
	6	Universal ethics

Kim(2005) developed the information ethics judgment based on the theory about the moral judgment. Internet ethics consciousness is defined as the ethical value and behavior pattern that Internet user must carry, and it is also composed of autonomy, respect, responsibility, and participation and estimates the overall consciousness (Choo, 2009).

When we overview the moral judgment and the relationship between several consciousness in the prior research, there was usually no or little relationship between the moral judgment and several consciousness.

Information ethics education

In the secondary education curriculum, as the curriculum for the information was amended, the information ethics education has been reinforced. Also in the university, even though the importance of the information ethics education has been recognized and proliferated, there lack the professional instructors. Also because the lecture is being practiced by lecture method instruction, it is not efficient to educate the information ethics (Kang, 2012). It is necessary to suggest and develop a new information ethics education model. Also, the education model based on the integrated morality for information ethics is needed, and the components of it are shown on Figure 1(Korea Agency Digital Opportunity and Promotion, 2006).



[Figure 1] The Integrated morality for the information communication ethics education (Korea Agency Digital Opportunity and Promotion, 2006)

METHOD

We carried out the questionnaire for 150 of freshmen Y university in Chugbuk for this research.

KDIT provided by the morality and psychology research center of Seoul University is the revised tool for evaluating the morality, adapted DIT of Rest by Moon (1986). We carried the selective DIT testing among the moral judgment testing tools that Kim (2005) developed. For Self-diagnosis for the internet ethics consciousness we researched using the questionnaire of CBT(computer-based testing) based college students self-diagnosis (<http://www.nethics.kr/intro.jsp>) provided by the internet ethics education information service of Korea Internet and Security Agency.

We used SPSS 8 for the statistical processing for each test factor, calculating mean comparison and correlation analysis.

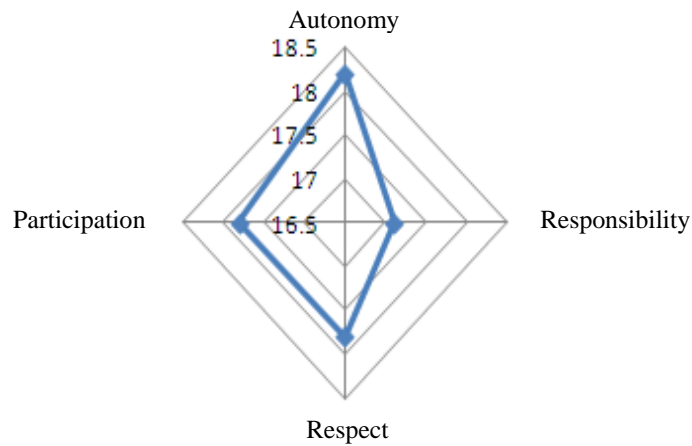
RESULT

As the research results are shown in Table 2, point of Moral judgment(maximum of 95) was 34.2, meaning that it is lower score compared with the mean of points in the prior research. DIT selective information ethics judgment was 12.8. Also the result of internet ethical self-diagnosis had mean of 71.0, and the percentage of 16 type was 79.7%.

<Table 2> Moral judgment, Information Ethics Judgment, Internet Ethics Consciousness Points

Gender	Number	Moral judgment	Information Ethics Judgment	Internet Ethics Consciousness
Total/Mean	148	34.2	12.8	71.0
Maximum		95	18	120

As the internet ethics consciousness is represented into four domains in radar chart in Fig. 2, the domain of autonomy had the highest score of 18.3 and the domain of responsibility had the lowest score of 17.1.



[Figure 2] Score of the internet ethics consciousness in each domain

The correlation of moral judgment, the information ethics judgment, the internet ethics consciousness, and four domains in the lower part is represented in Table 3. First, there is a significant correlation of .233 between the moral judgment and the information ethics judgment. Second, there is no significant correlation between the moral judgment, the information ethics judgment and the internet ethics consciousness. Third, there is a high significant positive correlation in the order of .660 of responsibility, .565 of participation, and .534 of respect between the internet ethics consciousness and four domains. Fourth, in the correlation between the domains of the internet ethics consciousness, the responsibility has the correlation of .248 with participation and .247 with respect, and the respect has a high correlation of .200 with the information ethics judgment. Fifth, though the above analyses have a positive correlation, there is -.351 of negative correlation between autonomy and respect and there is -.287 of negative correlation between autonomy and responsibility.

<Table 3> The correlation between the moral judgment, the information ethics judgment, and the internet ethics consciousness

		moral judgment	information ethics judgment	internet ethics consciousness	autonomy	responsibility	respect	participation
moral judgment								
information ethics judgment	Pearson coefficient	.233**	1					
	Sig.	.004						
internet ethics consciousness	Pearson coefficient	.003	.045	1				
	Sig.	.973	.584					
autonomy	Pearson coefficient	.055	.052	-.107	1			
	Sig.	.504	.527	.4				
responsibility	Pearson coefficient	.045	.053	-.660**	-.351**	1		
	Sig.	.589	.524	.0	.000			
respect	Pearson coefficient	.036	.200*	.534**	-.287**	-.47**	1	
	Sig.							

	Sig.	.660	.015	.0	.000	.02	.0		
participation	Pearson coefficient	.044	.013	.5**	.082	.48**	.2	.022	1
	Sig.	.595	.874	.0	.322	.02	.0	.787	

*p<.05 **p<.01

Suggestions for developing the information ethics education model

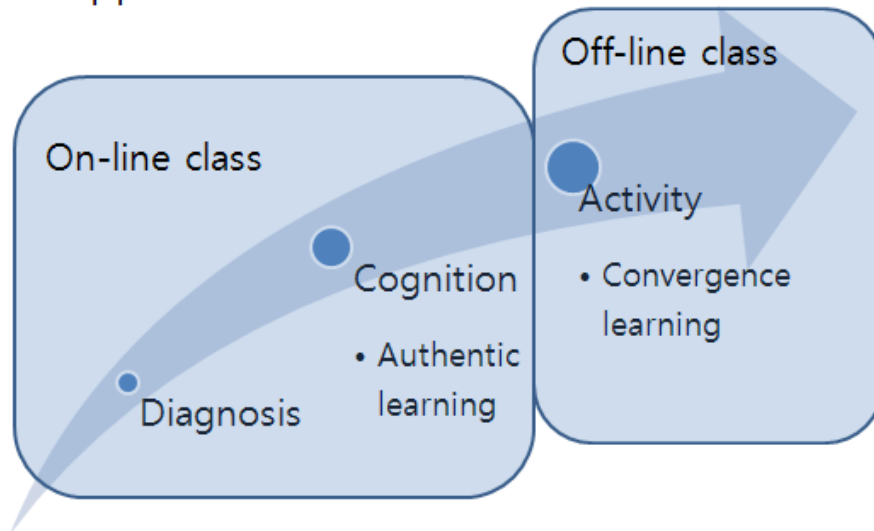
We intend to suggest the direction for developing the information ethics education model through prior research analysis. In this paper, we are going to suggest the information ethics education model composed of three stages, and the overall education strategy is Flipped Instruction Model. First stage diagnoses the learners using the diagnosing tools such as the morality, the information ethics, prerequisite learning on-line and determines learning contents in second stage as diagnosis stage. Second stage gives theory class on-line using OER(Open Educational Resources), OCW(Open Course Ware) and so on through LMS(Learning Management System) as cognitive stage. In this course, class about cognition, activity, assignment, evaluation and so on is carried out with the situation related to real life, applying the authenticity based learning. Third stage processes the learning by experience off-line through discussion and practical activity based on the class of second stage and considers the change of activity as activity stage. The practical activity is the learning activity such as mind map, drawing table and graph, internet search, quiz, game, commenting, introspecting note, practice diary, writing slogan and logo, writing essay, presentation, posting works and so on. To express the activity learning is carried out, considering past behavior, attitude for activity, subjective norm, and cognitive action control. In this course, the convergence learning related to the real life is implemented.

The research result shows that the relation between the internet ethics and four domains has a high significant positive correlation in the order of responsibility, participation, and respect. In the correlation between the domains of the internet ethics, responsibility and participation, and responsibility and respect have the correlation, and also respect has a high correlation with the information ethics judgment. Based on the result, we can summarize the contents of the information ethics education. That is, we can emphasize to educate students in the order of responsibility, participation, and respect, then the level of the internet ethics can be improved. To raise the information ethics judgment, we can emphasize to educate the students in respect domain.

<Table 4> Summary of the information ethics education model

Stage	Method	Application Contents and Education Contents	Education Strategy	
1. Diagnosis	Online Diagnosis	Diagnosing tool for the information ethics	Flipped Instruction Model	Authenticity based Learning
2. Cognition	Online Class	<ul style="list-style-type: none"> • Four domains of internet ethics • Discussion 		
3. Behavior	Offline Class	<ul style="list-style-type: none"> • Discussion • Practical Activity • Prior behavior • Attitude for the behavior • Subjective Norm • Cognitive Action Control 		Convergence Learning

Flipped Instruction Model



[Figure 3] Information Ethics Education Model

CONCLUSION AND SUGGESTIONS

First, the level of the moral judgment and the information ethics judgment, and the internet ethics has a remarkably low score compared with the previous research, so it is necessary to educate the information ethics and improve the morality to the students irrespective of their major. It must be considered while the liberal arts curriculum is adopted in the university.

Second, even though the moral judgment and the information ethics judgment have no high correlation, they have significant correlation and also they have an insignificant correlation with the internet ethics. Even though this result runs counter to Kim's research result that the information ethics judgment has a high correlation with the moral judgment(2005), this is the conclusion under the condition that the result of other judgment testing is similar. As in this paper, because the equal subjects are not researched, the result in this paper is more adequate. The conclusion also runs counter to Kim's research result (2011). Because there is no correlation between moral judgment, the information ethics judgment, and the internet ethics consciousness, it is necessary to retain the validity based on the conventional morality and ethics education in the information ethics education till now. Therefore, it is necessary to develop a new education model and teaching material and so on.

Third, the ethical behavior level and the consciousness level are analyzed to have no any correlation. So it is necessary to search for the directions separating the behavioral side from cognitional side while educating the information ethics. Park et. al(1998) insisted that the ethical cognition, emotion, and behavior have the correlation between each constituents, and the moral judgment and the moral emotion can influence to the moral behavior. However it also runs counter on the research result in this paper. Also, Lim(2009) considered it as the cognitive domain of the information ethics education determining whether it is appropriate morally or not, and treating the ability of analyzing and making own decision reasonably. Also he hold that the domain includes the understanding about the characteristics of the internet environment, knowledge about the regulations related to the information crime, and the studies about the ethical theory as the standard of judgment about whether it is right or not. It is easy to be separated between the understanding and the activity. For example, even though we know that illegal downloading is bad behavior, we do downloading illegally because of financial problems, inconvenience, and not knowing how we download the files legally. It means that we need to understand the copyright exactly and urgently.

Fourth, if we intend to do proper behavior on the internet, we need to have high judgment about the information ethics and instill the morality and respect domain with correlation. To solve this problem, we need to educate the respect domain much more among the information ethics educations, and also we have to research the directions about it.

Fifth, we proposed the direction for developing the information ethics education model in the university through analyzing the literature. First stage figures out the learners' consciousness and morality and the level of prerequisite learning as a diagnosing stage. Also second stage implements the theory class on-line according to diagnosing results as cognition stage, and third stage learns by experience off-line through practical activity and considers the change of behavior as behavioral stage. In this course, the overall education model is Flipped Instruction Model, applying the authenticity based learning on-line and the convergence learning off-line.

Sixth, in this paper we analyzed the relationship between the moral judgment, the information ethics education model appropriate for the situation of the university through analyzing the literature. However, the information ethics education model proposed in this paper has not been applied directly, and so it is needed to apply to the practical class and amend and complement the problems through constant research. Despite these limitations, the research result is the education model emphasized on the internal side of the learners with the morality and we expect this research to be the cornerstone for the research about the information ethics education in the future.

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