Significance of Balanced Education in Technical Knowledge and the Heart : Proposal on Adopting Development Education topics in English Education

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Abstract —— Students at the Institute of National Colleges of Technology (hereafter: Kosen) are well reputed for their mastery of high technical knowledge and skills. Nonetheless, there is a lack of important education to be fostered with the instruction of superior technical skills: the ability to ponder global issues and perceive the responsibility that they hold as engineers in society where global problems occur, that is, the qualities needed to be a global citizen. This paper takes a view that balances education in technical knowledge and skills with education of the heart, so that students will learn how to become global citizens in our globalizing world. To this end I would like to introduce development education themes in English classes. Firstly I will look at the genesis and definition of development education, and then analyze the characteristics of Kosen students based on the results of a questionnaire. Next I will show the need for conducting development education, and present reasons for introducing it into English classes. Lastly I will give a prospective observation of the significance and possibilities that development education has in balancing technical education with education of the heart.

Key words: development education, global issues, global citizen, humanity education

1 Introduction

The Kushiro National College of Technology, which has just become an independent academic foundation this spring, put forward its medium-term goal in which the ideal students that the institute intends to turn out is described. The institute considers the training and nurturing of such ideal students as its academic goal, and lists seven specific target objectives for the institute to reach in order to achieve this goal. The very first item cited goes as such: the students are expected to acquire the abilities to cognize the impacts that technology has on society and the environment, and become a responsible member of society, as well as to understand the historical background of human beings and the diversity of cultures and values, and cogitate over social and environmental problems from a global point of view. In my opinion this goal is comparable with what development education aims for.

2 What is Development Education?

2-1 Genesis of Development Education

The very beginning of development education is traced back to fund-raising activities by church-related organizations in the 1950s. Progressing on into the 1960s, a lot of colonies in Asia and Africa sought independence from their master countries. However, those newly independent developing countries could not survive economically on their own. After that, young volunteers of NGOs, including church-related organizations in countries such as Holland, Britain, Sweden and Canada went to once-colonized countries to involve themselves in overseas aid activities.

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In the late 1960s, when they came back to their own home countries after their volunteer work in the developing countries, they became flabbergasted by the fact that people in their own countries did not know at all about the devastating conditions the developing countries were facing. In response those private organizations started public information activities to let people in their own countries know about problems that confronted underdeveloped countries. This was the first phase of the emergence of development education.

2-2 Definition of Development Education

During the 1960s, the NGOs' overseas aid evoked piteous sentiment and a charity mentality among the public, and the purpose of their campaign activities was fund-raising rather than boosting awareness of the plight of people living in underdeveloped countries. The emphasis that the development assistance by the organizations placed on economic progress resulted in a wider gap between poor and rich inside the developing countries because of unequal distribution of the funds they received.

The failure of the previous decade's development education called for the redefinition of development education in the 1970s. Additionally, the oil crisis happened in 1973, which made industrialized nations realize that countries of the world were interdependent on one another, and the roots of the underdevelopment of the third world countries were partly blamed on industrial countries. This awakening built further momentum to review and amend the definition of development education: from the cramming of knowledge and information on developmental issues that were occurring on *their* side to an understanding of the structures and causes of the underdevelopment, and to the nurturing of an attitude to actively participate in solving those issues by regarding them as problems on *our* side as well.

In the mid-80s, development education began to assume a new phase as global issues such as population explosion, declining natural resources and the further advancement of world-scale environmental destruction were becoming more apparent. Development education has changed its content again, this time to aim at sustainable development for the future earth, where the members of the global community seek fairness and justice in a concerted effort to co-exist in unity on the same planet.

To sum up, development education is an educational activity which intends to make people learn about various problems involving development, realize how they are linked with those problems, think about what is desirable development and participate in creating fairness and justice in a global community where we can live together.

3 Characteristics of the Kosen Students

3-1 Purpose and Contents of the Questionnaire with the Students

When I started teaching at Kushiro Kosen in April, my impression was that the institute was in an ideal situation with a brand new building kept clean by cleaning personnel, classrooms equipped with the latest gadgets and seemingly well-mannered students. However, I gradually began to sense a certain nature in the students through their casual conversations with me and among themselves and their manners in classrooms; that is, a self-centeredness. This made me want to investigate the learning values they consider important and their sense of the need for English knowledge in their future. The subjects of the questionnaire were fifth-year students who are completing their courses toward graduation and attend the course I am teaching. The intention of this questionnaire is to find out their characteristics, measuring

the level of their interest in English and related issues, and to use the findings as reference points in designing lessons. The questionnaire was produced from a standpoint of globalization since it is one of the essentials students are to learn. As for the items involved in the learning values, ten key items were picked up from the listed learning goals to be attained in the institute's educational objectives. They are as follows:

- a mastery of basic knowledge for engineering
- a mastery of technical knowledge
- an understanding of the historical background of human beings and the diversity of cultures and values
- an ability to address social and environmental problems on a global scale
- an ability to perceive the responsibility as engineers in society
- an ability to work in a team
- an ability to adjust oneself to social change
- an ability to analyze and solve technical problems, the attitude to contribute to the development of the global (local) community
- oral and writing communication ability
- visual literacy.

The students polled were supposed to choose three items that they judged the most important to attain as Kosen students. There was also a yes-no question if they are interested in global problems and an open space for them to describe reasons for the answer of their choice. The results are shown below in Table 1.

3-2 Imbalance in Levels of Technical Knowledge with Growth of the Heart — Based on the Analysis of the Results of the Questionnaire

As evidenced in Table 1, the relatively high percentage points given to the mastery of technical knowledge and basic engineering knowledge, both standing at 43.8% and 32%

Table 1 Total Number of Students surveyed: 162

Polling Items	Number of students	%
Linguistic ability	77	47.5%
Technical Knowledge	71	43.8%
Adjustability to social change	66	40.7%
Collective Responsibility	60	37%
Basic engineering knowledge	52	32%
Technical problem solving ability	42	26%
Understanding of cultures and values	41	25.3%
Ability to address global issues	29	18%
Contribution to the global community	21	13%
Visual literacy	20	12.3%

respectively, show the students' strong motivation toward mastering the technical knowledge and skills of their chosen field of specialty. But also, to my happy surprise, the global issue-related items surpassed 30% (18% + 13%), revealing that they have more interest in global affairs than I had expected. However, it became clear from the description given in the open space that a reason for their interest comes arises mainly from pity for those abused (in war-torn Iraq, for example), which is an indication of their lack of understanding of the situation and failure to find the real cause of the problem and ponder how to solve it. Additionally the reasons they cited as to why they are not interested in global issues are as follows: "because Japan is safe and peaceful (so we do not have to worry about them)," "incidents happening overseas are not my concern" and "they are just happening out of my territory." These selfish comments are not few; therefore an egocentric aspect exists in the students.

Among those statements delivered by the students in the space there was an eye-arresting comment of great dismay which goes: "I don't care however much the global environment will be deteriorating as long as

the place and age I live in now are safe and peaceful." I come across such expressions of egocentric thought in their casual conversations and manners at school. This problem of selfish arrogance of youth is not seen at Kosen alone, but schools of all levels. High schools could address this problem from the perspective of guidance to students, or in newly established interdisciplinary classes, which Kosen does not incorporate in its curricula system. Thus it is important for Kosen to think about how to deal with this issue by making use of its unique operational and curricula system.

The polling items of linguistic communication ability and collective responsibility mark high because the students themselves are aware that they are lacking these qualities. Regarding the question of the future necessity of the English language, 98 % answered affirmatively, seeing English as a means of global communication, while a few responded negatively. One student even mentioned English as the language of enemy countries, the UK and the US, which is a real worrisome line of thought.

4 Significance and Need of Introducing Development Education into Kosen

4-1 The Need for Education to Nurture Qualities as a Global Citizen

Today everyone acknowledges that the world is ever more shrinking and consequently we are becoming more interdependent on each other; in other words, we are in the global age where we are required to think of things from a global perspective. We are all members of the global community, which means we are all global citizens. This global community is now metaphorically called "the spaceship Earth". To navigate the ship in steady sail, we global citizens need to share common values and develop attitudes toward the solution of global issues that are occurring all over the world.

To achieve this, we also need to grasp the significance of changing our consciousness. This can be achieved by deepening the consciousness of the importance in building interrelations at the individual level without losing one's own identity, since national boundary lines are virtually vanishing; in heightening the ability to think and act from a human point of view to empathize with the deprived so as to help empower and co-exist with them. These mind changes will eventually help promote education of the heart that develops an attitude to seek fairness and justice in the global society, a concept which Japanese education has long failed to address.

The Japanese Central Education Council, an advisory panel to the Ministry of Education, released in 1996 the first report on the direction of Japan's education for the 21st century. The report included International Understanding Education in a bid to keep pace with the internationalization phenomena in the world and to set forth the need for nurturing students' abilities to live as members of the global society, which actually means becoming the global citizens advocated by UNESCO. The aim of International Understanding Education does not lie solely with equipping students with a high command of English, nor with making them superficially learn about and understand other countries and their people, but encouraging them to realize the linkage of seemingly different and remote-looking countries and cognize their share of responsibility for global problems so that they will live in harmony with their fellow citizens living in other parts of the globe. In this regard development education and International Understanding Education are comparable with each other. It is generally agreed in recent years when bullying and other callous crimes by young students, which used to be inconceivable to happen, that the one-sided education whose focus is on instilling knowledge is being fragmented; therefore

humanity-inclined education should be more valued. As we have seen in the previous section, Kosen students are not an exception and they need to improve their human aspects. We must become aware that we are facing a pressing task of reviewing our education and amending it to accommodate the needs of the time: an education aiming at forming the qualities of global citizens.

4-2 Why Introduce Development Education Themes into English Classes?

As mentioned at the very beginning, the Kushiro National College of Technology manifests as part of its own mid-term goal that they will boost the students' awareness of becoming responsible members of the globalizing society and help them fulfill their role as engineers toward the solution of global problems. This content is precisely comparable with what development education aims for. In other words, we will be able to attain this objective by conducting development education during English classes. English is, I believe, the most appropriate subject to introduce development education at this transitional stage of the organizational change because it is an internationally common language and helps promote the understanding of different cultures and values, which is actually the base of development education. Many reading materials for English studies contain global issue-related stories, such as environmental destruction, war and peace, and human rights. As shown in the previous section, a significant number of Kosen students are interested in global issues, and plus almost all the students consider English as a language to learn as a means of global communication; therefore it is educationally erroneous to disbud their interest. Also the unique system of Kosen allows us to introduce development education into English classes as we can build our own syllabuses. This makes it easier for us to reorganize the content order of lessons carried in textbook material, taking into consideration the simplicity and difficulty levels of grammar, so that students will learn more about global issues without much trouble. All this is sure to steer students toward a more humane-oriented direction and contribute to the nurturing of students' qualities to become global citizens in the Kosen context.

5 Summary

There is a general belief, which is deeply rooted in the education-obsessed Japanese mind, that more academic knowledge and skills do promise a better life. This overemphasis on the academic side of education has left people unaware of the importance of the education of humanity and empathy. As we have learned from the results of the questionnaire, we cannot deny this belief is true of the Kosen students. We should not overlook the students' negative egocentric propensity. High technical specialty knowledge and skills alone do not necessarily promise a good quality of life. It is critical for us to make our students learn how they are linked with and dependent on other people in other parts of the world, and that they are responsible for what is happening on the earth. Our students need to become cognizant of what it takes to live as a respectful citizen of the globe in the 21st century; in short, what they can contribute to the global community as thinking engineers. To complete this task, I suggest development education themes be adopted, especially in the English curriculum, so that the students will acquire English knowledge as a tool of global communication since they feel the need for it, and Kosen will send more students of mature character into the globalizing society as the college itself builds more awareness of the importance of fostering the qualities to become global citizens.

Development education, in essence,

should be taught across school subject boundaries (ideally at home and in the community as well), since development education themes involve all aspects of human life, and help sensitize students to problems which relate directly to them and affect their immediate environment. Considering that the whole system is in the middle of the transitional process, however, English is the subject that stands most suitable at this stage to take up global issues to improve the unfavorable attributes of the students' characters: silo-type thoughts and acts. While the systemic changes are under way, it is hoped that a balanced education in technical specialty-focused knowledge and skills along with matters of the heart be taken into account in line with a true sense of globalization seen from the perspective of humanity education.

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