

Restructuring School Education in The Pursuit of Creativity

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SCHOOL EDUCATION BIASED AGAINST CREATIVITY

Education professors, writers, scientists and public leaders in Korea have recently raised their unanimous voice for the needs for changes in school education. They poignantly criticize that the current school education demands conformity and rote memorization. Deflated in this milieu is the students creative thinking. Teachers, they also note, are pressured with entrance examination preparations and cannot afford sparing extra attention for nurturing the students' creativity. Even if they can, they often do not see much importance in emphasizing creativity which is not significantly counted in entrance examinations.¹

As to the depreciated value of creativity in school education, one may lay blame on the schools and universities for their lack of reward, in terms of grades and acknowledgment, for the students' creative achievements. That criticism is not ungrounded: many gifted and potentially creative students drop out of schools and universities, because they find the school education not only uninteresting and dull, but also inhibiting and even oppressing their free-wheeling creative mind.

Moon-Yul Lee, the best known Korean creative novelist, for example, found his first year university failing to satisfy his literary interests and motivations: he felt being forced to the normative frame of knowledge system of the university. Refused to be socialized to a structure unable to meeting his needs, he dropped out of the university and pursued his interests in non-academic environment, only to become the best reputed

novelist.

Eun Ko, one of the great Korean poets of the modern time, is another example. He discovered the normative, rigid and conformity-dogmatic nature of our school education early at the secondary level and quitted his formal education that point. His inquisitive minds led him to various experiences of life hood, which all became the pivotal sources of his literary work. He recently looked back on his life and said if-had stayed at the school setting throughout to university, he might have become a plain school teacher, but not certainly a poet of his present status.

It is true that our school education is certainly not for creative minds. But in making such criticisms, one should understand that schools and universities are by definition public units dedicated to transmitting and perpetuating confirmed knowledge and traditions of a given society. In many countries, they serve an institutional instrument in pursuing national goals. Implied is that schools and universities are, by nature, resistant to innovative changes and can tolerates only the least amount of deviation from the mainstream ideologies and practices. In a nutshell, educational institutions are structured to decapitate nurturing individuals| creative minds.

Ironically, however, the very educational process of helping students acquire the skills for unlimited creation of knowledge and information is supposed to be the most significant creative process. Through school education, individuals become capable of accomplishing things of their own; school education creates in the students' mind and behavior what was not there before they enter school. Teachers are, potentially, creators of the future; the curricula are the contents to be noused in the minds of the future inventors, scientists or artists. What can be a more serious creative performance than nurturing creativity in the minds of the students?

Our task here is clear. We have to restructure the school education environment - teachers, curriculum, evaluation and the general school atmosphere -- and attempt to help the schools and universities resume their constitutional role of creation. What I intend to present in the following discussions are some of the specific hindrances that come in conflict with our pursuit of creativity in school education. They may

suggest the points of departure for all of us urged with the challenging needs to restructure our school education.

TEXTBOOK-CENTERED SCHOOL EDUCATION

The amount and depth of knowledge taught in Korean school curriculum and textbooks are far more and deeper than those in any other countries. Japan comes close to Korea; but when it comes to the level of mathematical knowledge taught and learned at the post secondary level, Korea excels Japan.

Korea is considered one of those countries in which the weekly class hours for individual subjects are great. When it comes to the class hours allocated to such subjects as Korean Language, Mathematics, and English at the secondary levels, no other countries can be compared with Korea. The number of subjects for the Korean students to learn is also more than in other countries: 8-9 subjects in elementary school, 13 subjects in middle school, and 19-21 in high school. The extent and level of knowledge in mathematics and Korean Language for the Korean high school students are comparable to those of the first or secondary year university in other countries.

Overloaded with this enormous amount of knowledge to acquire, the Korean students cannot be expected to spare additional attention and motivation to concern themselves with other creative activities. Even the classroom learning they are heavily involved with are carried in a textbook-bound manner, hardly construing an environment conducive to creative thinking and learning. Teachers transmit facts provided in the textbooks; students have to memorize them to get good grades in examination.

Even teaching a subject like science, for which a process-focused teaching is most important, is confined to transmitting facts and information, with no attention given to the students' exploration activities. Teaching mathematics consists of teaching the knowledge system of mathematics; teaching chemistry, similarly, focuses on teaching the knowledge system of chemistry. The current curriculum overtly states and recognizes the importance of the students' first-hand experiences with

empirical, scientific methods; but the textbook contents are organized lopsidedly to transmit facts and theories for the students to memorize. ⁵

The knowledge dealt with textbooks are, by nature, a closed or self-contained knowledge, permitting no room for the students to entertain and project their own ideas and perspectives. Textbook knowledge leads to a convergent mode of thinking in the students; it deprives the students' yet-to-be molded thinking potentials of an opportunity to unfold themselves. A number of studies have repeatedly shown that simple rote knowledge is in fact one of the obstacles to creativity development. Cramming and conforming to the existing knowledge system impede the development of creative or divergent mode of thinking by sapping the students' potentials for creative thinking. ^{2,3}

The textbook-centered teaching and learning have dominated Korean school education for the last decades. Teachings are based and confined to the contents described in textbooks; for school administrators, textbooks are the basic unit for school education, management and operation; evaluations of students' achievement are strictly textbook-bound; and most importantly, the university entrance examinations do not go beyond the scope of the contents in textbooks.

Textbook-bound educational practices have been pervasively ingrained in Korean school education to the point that one cannot conceive of school education without textbooks. Education professors, writers, scientists, public leaders in Korea have all spoken for the detrimental effects of the textbook-centered school education to the development of creativity; but few have been successful in challenging the current system in favor of abolishing the status quo of our school education.

Getting over the old tradition would requires a barrage of encouragement and ideas, strong and innovative enough to nullify the long-gone very history of the educational practices in this country. Old habits die hard, nor come easily the determination to establish a new system. We should, however, start somewhere to pick up our crippled school education. First of all, -the number of subjects to cover in each school level should be reduced drastically and lessen the amount of closed knowledge-forced upon the students to memorize. Efforts should be made to increase activity-centered programs for the students to choose from according to their needs and

interest. Activities that emphasizes processes, not products, should be further encouraged.

These arguments are not new ones, of course; people have long put forward the needs for such process-activity-focused school education. One of the reasons that every time the ideas fizzled without an apparent success is that the textbook writers and curriculum developers failed to break from the convention and to set their task orientations anew to the visions emerged.⁷ If they become truly convinced themselves with the very need for pro-creativity" and "open-ended" school education, and determined to bring changes to meet such need, the current "creativity-inhibiting" school education can be successfully tackled.

Since the 1980s, efforts have been actually made to reduce the number of subjects and some measurable success has been observed in this regard. High school subjects, for example, have been cut from 26 to 21. Presently, the number of requirement subjects for high school is 17-19. This number should be further reduced to 12 and a wider range of elective subjects should be provided. If this measure gets fulfilled, it will help, in part, promote the students' divergent mode of thinking.

KNOWLEDGE-ACQUISITION-BASED EVALUATION

Many Korean teachers and educators believe that what causes the non-creative school education is none other than the creativity-devaluing evaluation system. They reason the university entrance examination system is the culprit that has deprived the Korean secondary education of an opportunity to unfold a pro-creativity school education. Some even argue that creativity will come to reign in its fullest strength while evaluation system is thrown out of windows. University entrance examination system is knowledge-based: it covers and represents facts- and knowledge-bound contents found in the textbooks used in schools. Those who have a thorough understanding of and good memorization of the textbook contents are likely to get high marks and enter a good university.

What contributes in part to the emergence of such a creativity-inhibiting evaluation system are two-fold. Firstly, it is difficult quantifying and measuring objectively the students' abilities to seek and formulate

knowledge. With no sound evaluation method available, such abilities are disregarded in evaluating the students' achievements.

Secondly, creative or divergent thinking has not been rewarded and respected in our school atmosphere. Creativity itself is often associated with queer and eccentric behaviors and thinking, and not well received by both the teachers and the students. Not recognized as one of the mainstream ideologies of education deserving a serious consideration, creativity has drifted further to become the marginal concern in our school education.

Amidst this creativity-depreciated school atmosphere, a new university entrance examination system named University Academic Aptitude Test was introduced in 1993. For the first time in Korea, the Test measures the students' abilities to analyze information, make judgments and synthesize observations. The Test purposely avoids measuring the students' rote memorization of textbook knowledge. With an introduction of the new university entrance examination, notable changes are taking place in secondary schools. For instance, apart from the conventional instruction method in which the teachers infuse ready-to-memorize information to the students, the teachers direct the students to do more readings and discussions in the classroom, and encourage more of students' participation in their learning process.⁴

The high school students came to show great interest in divergent thinking and attempt to sharpen their critical thinking abilities, rather than memorizing power. The teachers, too, start to be aware of their new role. Previously their predominant function was to provide complete, self-contained information for the students; now they begin to put themselves on a new attitude as an assistant providing the students with basic data for them to think over on their own and helping them with classroom discussions and their development of divergent thinking. All this sudden surge of changes attests to the fact that the university entrance examination system is the key factor determining the cores of Korean school education.

Those changes, however, are not sufficient to eradicate the chronic malaise plaguing Korean school education, namely anticreativity educational practices. Although the school teachers and university professor all alike feel the need for a procreativity change in school education, they have not

yet shown significant changes in their own educational practice; they tend to cling or coil back to the old anti-creativity, knowledge-based educational evaluations.

In addition to the implementation of new examination system, it thus seems essential to specify evaluation methods and develop standardized tests that recognize the importance of and actually assess the students' creative and divergent thinking. A serious problem we face is not an absence of such instruments, but the resistance from the educational authorities against such nonconventional methods of evaluation. Teachers, who are so accustomed to knowledge-based evaluation methods, view the pro-creativity evaluation methods as simply "non-authoritative," or somewhat "illegitimate" methods of evaluation.

What might have contributed to the development of such a biased view of pro-creativity evaluation methods and creativity per se among educational practitioners is the lack of teacher's knowledge and understanding of creativity. This, in turn, has to do with the scarce opportunities for the teachers to expose themselves to the subject of creativity and learn about it. Those who do research on creativity must share the responsibility for the limited circulation of information on creativity.

Findings researchers obtain from a creativity research may interest themselves and other concerned academicians, but not, obviously, the educational practitioners responsible for the students' daily learning process in schools. In any fields, to be a serious and socially responsible researcher, he/she should make the additional efforts to publicize his/her research findings to the concerned general public, and see to the practical and social utility of their findings. Creativity researchers cannot be exempted from this primary function of their status.

Given that the lack of teachers and other educational authorities' understanding of creativity comes to hamper a successful implementation of pro-creativity measures, it is all the more critical to offer serious education to the teachers and other educational authorities concerning the nature and, most of all, the importance of developing and nurturing creativity in the students. Not only publicizing concluded results, but also in designing the research itself, should the researchers be concerned with the practical

implications of their research in advancing correct understandings on creativity.

LACK OF TEACHER'S ATTITUDE FOR CREATIVITY

The saying goes: The quality of education is the quality of the teachers. The same observation applies to creativity education. As shown numerously in researches, the attitudes and convictions of the teachers and principals shed undeniably significant impacts on the students' development of creativity.⁶ Before one expects a generation of creative students, there should be a pool of creative teachers.

Teachers in Korea go through a training process that has least to do with creativity education. Teachers are trained to be a specialist in a particular subject. To become a certain subject's specialist, they have to adopt the concerned knowledge system. A prospective mathematics teachers, for example, must adopt the existing knowledge system of mathematics and limit his teaching practice to that framework of mathematical knowledge.⁵ Like their students, they are deprived of an opportunity to develop their creative and divergent thinking in through their own educational process.

The meek appreciation for creativity education they have barely developed through their anti-creativity educational experiences gets coupled with time pressure factor when the teachers come to teach students. Teachers complain that the current school education system is such that there is hardly room for teachers to entertain creativity elements in their teaching. Neither trained to appreciate the value of creativity education, nor determined to implement it in their teaching, teachers are it likely to return to the normative teaching practice based on knowledge-based existing ideology.

It is a truism that the school system itself is structurally flawed to demote creativity education. But if the human agents, including teachers and principals, are determined to bring changes to this anti-creativity school system, there is a light at the end of the tunnel. In order word, the point of departure for the blooming of creativity education in schools must first involve the heightened awareness among teachers and principals of the

necessity and importance of creativity education for the welfare of the nation and the individual students.

It goes without saying that teachers' training programs should be re-directed to foster creativity-mind in the prospective teachers, which will be one of the most challenging tasks in restructuring Korean school education.

POOR SCHOOL ENVIRONMENT

Finally, it is pointed out that the overcrowded school and class environment is another hampering factor against creativity education. In Korea where 70 percentage of the population is concentrated in big cities, schools in most major urban areas have an average of 4000 student enrollments. Average number of students in a class is over 50. In some cities (e.g., Inchon and some cities in Kyunggi Province), the shortage of classroom forces the classes to be managed on shifts: some classes take place in the morning and the other in the afternoon, sharing the same classroom.

When there are more than 50 students in a class, the class can hardly expect a homogenous composition of students' intelligence level, interest, and needs. The students' needs cannot be individually attended to; the class management must be carried in a massive and collective manner. To maintain a minimum level of orderliness, the students' individual inquisitive minds must be regulated and to some extent restricted. Overcrowded classes can hardly construe a pro-creativity environment.

If Korean school education falls behind that of other countries, it is probably because of the overcrowded class size. For the last two decades, the Korean government have invested intensively to reduce the class size. Thirty years ago, some elementary schools had classes with more than 120 students. Such extreme cases are now a record of the past. Currently, the average number of students in classes in urban areas is measured around 50. In rural areas, small classes with around 20 students are found frequently.

The positive correlation between small class size (in terms of the number of students) and its effects on creativity education is still a

controversial issue to be researched; and the optimal number of students for a pro-creativity class environment is yet to be determined. Nevertheless, it does not take one far to figure that a class with more than 50 students is not a characteristically congenial environment to fostering students' creativity. Oversize classes are particularly problematic with teaching such subjects as science and language which requires individual-based teaching approaches more than other subjects.

The general school atmosphere created by the attitudes of the parents and the principal is also a factor to consider. It makes a whole lot of differences depending upon whether or not the parents and the head of the school appreciate and value creative and divergent thinking.⁶ Korean parents and school administrators do not have a positive, let alone an enthusiastic, attitude toward creativity education. They are often observed to express skeptical attitude toward the need for and implementation of creativity education in schools.

CONCLUSIONS

The individual problems mentioned above cannot be treated effectively in separation with one another. There has to be concerted efforts and collaboration from every level of school education and every member of our school education community. The concerns of the textbook writers, evaluation developers, teachers, parents and school administrators should be orchestrated in pursuit of a common goal to innovate our school education to be a more pro-creativity framework. The changes must occur at the entire structural level of our school education; a partial treatment to individual flaws will only help perpetuate the predicament.

In the restructured, pro-creativity, school education, there must be room to heed to those "deviant" students, whose interests and needs are not immediately primed to the normative school practices. There should be eye to differentiate and recognize various levels and types of students' characters, and heart to embrace them as much as and as far as possible. In the newly restructured school environment, a future "Moon-Yul Lee" or "Eun Ko" should feel at home, being accepted. What they had to pursue outside of school must be found within the boundary of school.

The Korean Education Reform Committee declared in 1987 that the governing theme of future Korean education is creative education. Implied is that reform measures to be implement in Korean school education in the future will be all geared to creating pro-creativity education environment. Changes are already beginning to emerge. As long as the concerned educational agents do not lose sight in this new development and hold on to the value and importance of creativity education in our schools, the torch lit will continue to glow.

1. Korean education reform: Towards the 21st century. The Presidential Commission for Educational Reform Seoul: The Ministry of Education, 1987, pp. 35-43.

2. Lytton. H. (1971). Creativity and education. London: Routledge & Kegan Paul

3. Baron, F. (1969). The creative person and the creative process. New York: Holt

4. University Academic Aptitude Test (,KEDI)

5. Han. J. H. (1986). Problems and issues in Korean science education. Presented at XIV World Science Congress Conference, Honolulu, Hawaii, June.

6. Jones, T. P. (1972). Creative learning in perspective. London: University of London Press.

7. Han, J.H. (1986). Nurturing higher mental abilities in science education at the high school level. Presented at KASE SE Annual S on the Development of Scientific Thinking of High School Adolescence (,Korean). Chung Buk University, Chung Ju, August, 1992.