

Beyond Lifelong Learning and Learning to Learn: What More Could Be Achieved through Education Reform in Hong Kong?

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The current Hong Kong education reform for lifelong learning and learning to learn is put in the perspective of two contrasting approaches to education, learning for performance and learning for understanding. It is contended that genuine understanding will not come about if we continue to accept rote, ritualized, and conventionalized performances, to sanction a single correct way to competence, and to ignore the importance of creativity. The notion of learning constraints and the dialectical relation among intelligence, creativity, and wisdom open up new possibilities for conceptualizing the fusion of the skills orientation and the atmosphere of creative discovery. Thus, in promoting lifelong learning and learning to learn, students should not only learn what to do and how to do it, but also how variably or differently to continue doing it.

Key words: performance; understanding; creativity; education reform

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At the turn of the century, many educators in Hong Kong are contemplating how best to restructure our education system and our schools to meet the needs of our society as well as to prepare our students for productive lives and a global understanding in the new millennium. While there is much discussion and debate about problems, there is much less agreement about solutions. Nonetheless, directions for changes generated through such discussion have been codified in the report of the Education Commission (2000) and in the consultation document by the Curriculum Development Council (2000). The first document entitled “Learning for life — learning through life: Reform proposals for the education system in Hong Kong” has the focus on reforming the education system of Hong Kong. The second document entitled “Learning to learn: The way forward in curriculum development,” developed in parallel to the first, focuses on curriculum changes. While these documents have slightly different target priority areas for reform, they do serve to facilitate the coordination of aims in education reform efforts directed to the common but central theme of learning.

Lifelong Learning and Learning to Learn

Thus, in the Education Commission’s five guiding principles for reform, learning takes central stage. According to the first “student-focused” principle, all reform measures should serve the best interests of learners, promoting the opportunities and abilities of learners to “enjoy learning, enhance their effectiveness in communication and develop their creativity and sense of commitment” (Education Commission, 2000, p.4). The second “no-loser” principle suggests that all learners should be provided with appropriate learning opportunities at different life stages, and barriers or obstacles to learning opportunities in the system should be removed. The third principle is concerned with “quality.” All learners are to learn “the basics,” and such basic competence in knowledge and skills would lay the foundation for all-round or whole-person development of all learners, allowing at the same time able students to pursue and achieve excellence.

The fourth principle of “life-wide learning” prescribes that all learners should be able to engage in learning activities beyond academic subjects and examinations to allow the development of multiple and diverse potentials. Finally, the fifth principle of “society-wide mobilization” recognizes that learning beyond classrooms cannot be fully achieved without the contribution of all sectors of the society and the endorsement of lifelong learning by learners. Advocating lifelong learning in school and the community would in turn help build Hong Kong as a learning society.

Narrowing the focus to curriculum reform, the Curriculum Development Council (2000) elaborates on these guiding principles with reference to curriculum and the learning experiences of learners as well as corresponding changes in assessment of student learning outcomes. Specifically, it is recognized that a broad and balanced curriculum that is open to adaptation and flexible changes would contribute to a learning environment that is more conducive to meeting the diverse learning needs of learners. In addition, to promote lifelong learning, learners need to learn not only what to learn but how to learn it. Thus, a reformed curriculum would include learning experiences that encompass the teaching and learning of knowledge and concepts in eight defined key learning areas, nine generic skills, and corresponding positive values and attitudes. Consequently, when students achieve learning to learn, “students not only learn what they are expected to learn well, but they become better at learning new things in the future” (p. 3).

Taken together, the two documents reflect the pervasive sentiment that Hong Kong needs to think collectively and seriously about its future and the education of its future citizens who have to confront and adapt to a fast-changing world of advanced technology and globalized economy. To maintain competitive internationally and to sustain its standard of living, Hong Kong urgently needs to revolutionize its education system to provide an environment to cultivate its future generation of citizens who have to learn how to flexibly adapt to the changing world through making learning a lifelong endeavor beyond school learning, and to build a learning society through lifelong learning.

Assuming that learning is central, and lifelong learning and learning to learn are the keys to the course that Hong Kong wishes to take, serious discussion on different educational philosophies as well as the problems and constraints of learning might help sharpen and ultimately illuminate some of the central debates on pragmatics of implementation of these aims, as we grope for the ideal education system and curriculum, the best way to set up a school, and the optimal manner in which academic disciplines could be presented to students of different abilities and potentials at different points of their development.

Performance and Understanding

While learning can be generally conceptualized as reflecting students' ability to retain, synthesize, and apply conceptually complex information in meaningful ways, there are different views as regards how best to observe that learning has occurred, which in turn reflects the effectiveness of relevant educational practices especially in the school setting. In this connection, Gardner's (1989, 1991) distinction of two contrasting educational philosophies on learning is illustrative. In one approach, the teacher and the textbook are regarded as the unquestioned repositories of knowledge. Students are said to have learned when they memorize information and feed back on subsequent occasions the information presented to or modeled for them. In this "mimetic" approach, the emphasis is on the cultivation of basic skills such as the mastery of literacy or the learning of rituals. In the second approach described as the "transformative" approach, the teacher inspires the student and attempts to elicit certain qualities in the student by engaging the student actively in the learning process, posing questions and directing attention to new applications for the student's enhanced understanding. In this approach, the emphasis is on the stimulation of the student's expressive, creative, and knowing powers.

Further, Gardner (1989), in his review of arts education in China, viewed the predominant approach of learning and education in China to come close

to that of the “mimetic” approach with its emphasis on performance and one correct way to do things. This emphasis on performance however dates back a long time in Chinese history. One well-known example among Chinese scholars is the portrait of a gentleman. It is said that Confucius laid out carefully how a gentleman should behave, including the procedures for learning, teaching, and comportment. This Confucian tradition of emphasizing the exact dimensions of desirable performance has generally survived over the centuries in Chinese societies including Hong Kong.

In a typical regular classroom in Hong Kong, the teacher very often becomes the center of all activities, and students’ behaviors are directed toward the teacher. The assumption is that all knowledge especially the basics has been established in the past, and the teacher’s job is to transmit that knowledge faithfully. The student’s job in turn is to master the basic skills or basic literacy as early in schooling as possible, and to continue with the mastery of specific content in history, geography, mathematics, science, and other core disciplines. This orientation gives rise to uniform education that mandates the same curriculum for all students, taught in the same way with little variability, and with the same standard tests administered to all students in examinations to evaluate performance. While this description might be somewhat extreme, it helps reflect that our system highlights an education or learning that tends to cultivate rote, ritualistic, or conventionalized performances rather than performances in which students can apply concepts or forms of thinking to novel situations in an unanticipated but appropriate way.

In contrast to the above Chinese “education for performance,” Gardner (1989) described an “education for understanding” that is pursued in some of the best schools of Western countries. In these schools, the primary concern is with facilitating students’ process of learning, and the deepening of understanding. Thus, students are encouraged to take an active role and learn to grasp the meaning, including the underlying meaning, of writings, texts, scientific principles as well as works of art, and students’ activities of exploration and discovery are highlighted. In this regard, the teacher is

seen as a co-explorer or facilitator, rather than as the master of knowledge, and the acquisition of knowledge and skills takes a back seat to the stimulation of the student's creative and imaginative powers. In addition, with no prior commitment to a single way of doing things, students are more likely to be attracted by exploration, innovation, and pragmatism, and to adopt an experimental attitude in every sphere. More specifically, students learn to analyze, criticize, argue, and synthesize, and make attempt to construct new knowledge by themselves. They also learn to embrace a scientific model, where they put forth hypotheses and subject these hypotheses to both logical scrutiny and empirical invalidation.

The contrast between these two extremes epitomized as Chinese and American education by Gardner (1989) is aptly illustrated with his metaphor of racing, which is nothing but enlightening to read and to ponder in the context of the current education reform. In Gardner's own words,

In China, education is considered a race. Students should begin as early as possible and should proceed as quickly as possible along the track which is known and available to all. The education system is judged successful when many individuals have made it to the finish line as soon as possible. (p. 250)

Gardner (1989) further contrasted these collectivistic ideals of Chinese education with its emphasis on the one correct way to do things against the more individualist, libertarian approach of American education.

In America, we recognize the race too, but we feel that the students should have a chance to wander or meander much more, even if in the end not all of them make it to the finish line. As a result of their wandering, some of the participants may have more to offer by the conclusion of the race. (p. 250)

However, Gardner (1989) also recognized that there might be advantages and disadvantages to both approaches. He concluded as follows.

The advantage of the Chinese way is that more of your students become proficient and make it to the goal line. The disadvantage is that they may have less to say or show once they get there. The disadvantage of the American way is that many students never make it to the end or even get close. The advantage is that some who do go "all the way" have very interesting and original things to say when they get there. (p. 250)

In summary, Gardner's apt description and vivid metaphor of the two approaches have brought home an important message and posed an important question for education reformers in Hong Kong. Despite our call for lifelong learning and learning to learn through motivating our students and imparting them with generic skills for learning, if our education system continues to focus on learning or cultivating the rote, ritualized, or conventionalized performances, and continues to recognize only the prescribed or approved performance as the sole accepted criterion for achieving competence, our students might have finished the race without truly knowing why they have won, or whether an alternative path could lead them to new discoveries or get them more speedily to the finish line. In other words, our students might end up unable to execute anything different from the models they have learned to emulate. The important question is whether we would like our students to target the mastery of basic knowledge and skills as the end point and never move beyond the known.

Constraints of Learning

Based on the conceptualization of two contrasting approaches to education or learning and our current knowledge of human development and cognitive science, Gardner (1991) suggested a framework charting the developmental history of learners with corresponding constraints of learning. To achieve genuine understanding, the learner would move from the intuitive understanding of the intuitive learner, to the rote, ritualized, and conventionalized understanding of the scholastic learner, and finally to the disciplinary understanding of the disciplinary expert. This progression might be held back and complicated by the neurobiological and developmental constraints, the institutional and historical constraints, and the disciplinary and epistemological constraints that the learner as the intuitive learner, the scholastic learner, and the disciplinary expert needs to confront respectively at different stages of development.

In this view, effective education should yield greater understanding in

students. The well documented fact at least in Western countries that many students have misconceptions in science, rigid applications of algorithms in mathematics, and stereotypes and simplifications in humanities and arts testifies that genuine understanding cannot come about if we accept ritualized, rote, or conventionalized performances (Gardner, 1991). My own research studies on misconceptions and judgment biases of Hong Kong university undergraduate medical and health sciences students (e.g., Chan, 1986, 1989, 1990, 1992), and of teachers and prospective teachers (e.g., Chan, in press) have also substantiated this conclusion. Thus, the endorsement of “correct-answer compromises” is particularly relevant to the Hong Kong setting where teachers, students, and even parents consider school or education to be a success if students are able to provide in examinations answers that have been sanctioned as correct. While there is the need to develop the basic skills and the core knowledge upon which mature achievements in a field must be based, moving beyond mastery of basic knowledge requires genuine understanding and creativity that need to be fostered in our task of lifelong learning and learning to learn.

If our education reform measures aimed at lifelong learning and learning to learn promote nothing beyond our “education for performance,” we will be no closer to an “education for understanding.” The changes will be on the race track, and the prescribed correct way to reach the finish line, rather than a fundamental change in providing students with rich nourishment but not directing them along one path as opposed to another and allowing them creative options in reaching the goal.

Traditionally, the Hong Kong education system valued skills and performance. Associated with this traditional or skills view were Chinese values that might militate against genuine understanding and creativity, as these values are in conflict with the Western values of innovation, exploration, and problem finding, which are rarely denigrated and at least sometimes esteemed in Western societies. For example, it was believed that a student should be obedient to authority, to those who came before, because they knew best. Further, a student should not make trouble, should keep aber-

rant thoughts to himself or herself, should not try to change things he or she did not like, or if he or she did, changes were expected to be slow, gradual, and unlikely to offend. In general, Chinese cultural values dictated that it was more important to be loyal to the tradition than to strike out on one's own. It should be noted that the notion of learning for performance not only takes root in high school, university undergraduates and graduate students are not immune to this problem in its somewhat different variations, as I frequently encountered students asking whether what was taught would be examined, and commenting that topics not for examinations did not warrant spending time to study. One particular doctoral student complained that he was not taught what need to be learned in my graduate seminar, as he assumed that there should be a defined set of knowledge topics to be covered in lectures. This same student wrote in the course-end evaluation that he learned nothing as he had to self-study. This assumption of one correct way of arriving at competence in learning for performance was also found to be held to a certain extent by a sample of gifted and talented students in one of my recent studies on their preferred learning styles. These students indicated greater preference for discussion and lecture over independent project, as would be expected for motivated and autonomous learners (Chan, 2001).

Learning to be Intelligent, Creative, and Wise

Despite that the above constraints impose limits on our learning and even move us further away from learning for genuine understanding, not all constraints need to be viewed negatively. Some constraints preclude us from learning some things but promote us learning other things. Some specific constraints, such as giving the right answer, following the directions, or copying exactly, indeed preclude variability and promote stereotypy. Other constraints may increase variability by precluding repetitive responses and promoting novel and unusual ones. Thus, the judicious use of such constraints might move us closer to our goal of lifelong learning and learning to

learn for enhanced and genuine understanding as well as creative productivity.

Specifically, it has been said that when people can do anything, they do what has been most successful in the past. Successful solutions tend to be predictable and repetitive, but not unusual or novel. But by precluding a currently successful, often repetitive solution to a problem, high levels of variability might be maintained (Stokes, 2001). Creative individuals, Stokes (2001) suggested, might acquire and maintain high levels of variability precisely in this manner by the use of constraints. More specifically, creative individuals learn how to do things and also how differently to do them during skill acquisition. Thus, in promoting lifelong learning and learning to learn, students should not only learn what to do, how to do it, but also learn how variably or differently to continue doing it, which opens up the possibilities of fusing a skills orientation with the atmosphere of creative discovery.

Throughout Chinese history, it is believed that basic knowledge and skills are most important and students should acquire the basics with the emphasis on performance before embarking on any creative work that is dependent on genuine understanding. Thus, as the saying goes, one must walk before one can run. In sharp contrast, Western beliefs suggest that the best way for a student to approach a new area or to learn it is to have ample opportunity to explore it with support and encouragement. Such unstructured exploration is considered the optimal way for a student to come to know and understand the different facets of a problem and to discover his or her competence. Thus, different emphases might lead to different approaches and different answers to the same questions. For example, could our Chinese Nobel laureates, David Ho, Daniel Tsui, or Gao Xingjian win the prize had they not gone abroad to a university that thrives on creativity? Or could they win if they had spent their early years in unstructured exploration instead of disciplined training? While success stories from both approaches serve to dispel the doubts that one approach might be overwhelmingly superior to the other, and suggest that the two might be complementary, whether

skills and discipline should precede exploration, or the reverse, or the two should be promoted in parallel for integration and balance remains a topic of great interest in educational research.

Sternberg's (2001) suggestion of the dialectical relation among intelligence, creativity, and wisdom provides a perspective for conceptualizing the integration or balance of the two approaches in education and learning. Intelligence represents the thesis or the need for stability and continuity in human affairs; creativity represents the antithesis or the need for change; and wisdom represents a synthesis. Wise individuals balance the two, and are more convergent or conservative in thinking style than many creative people, but more divergent or legislative in thinking style than many intelligent people (Sternberg, 1997). When wisdom prevails, some balance and integration of the old and the new is accepted, and the quest for knowledge and understanding will move forward. Thus, our goal of lifelong learning and learning to learn should focus on promoting the learning to be intelligent, creative, and wise.

To continue with and complete Gardner's metaphor, Hong Kong does recognize the race. The track to the finish line, the Peak, is known and available to all. Participants know about the speedy ascent by cable car (peak tram), the meandering scenic drive through the Peak Road, the discovery tracks of Old Peak Road and Chatham Path, and many other tracks waiting to be discovered and explored. When our participants get to the finish line via different paths of their own choice, they have a lot to tell about the Victoria Harbor, the beautiful terrain, and the luxuriant vegetation they come across along the way. They are after all more prepared to scale new heights in other lands.

To conclude along the same line with a metaphor, it is interesting to share the new version of the Greek myth of King Sisyphus who chose to push a boulder uphill instead of immortality in the afterworld (Goswami, 1999). The apparent punishment was that when Sisyphus managed to push the boulder to the top of the hill, the large stone rolled down again, and the task of pushing was a meaningless and repetitive task. Goswami (1999)

reinterpreted that the boulder might roll down the opposite slope, and Sisyphus could push it to a new peak each time. Thus, although it appears to be repetitive, it is reassuring to speculate that our task in education reform might make it to a new peak each time.

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