New Paradigm of Borderless Education:
Challenges, Strategies, and Implications for Effective Education through Localization and Internationalization

Yin Cheong CHENG

Centre for Research and International Collaboration
Asia-Pacific Centre for Education Leadership and School Quality
Hong Kong Institute of Education
Tai Po, NT, HONG KONG

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Abstract

The fast and huge transformations due to globalization and information technology are creating great impacts on the future of nearly every society, community, institution and individual in different parts of the world. Responding to the serious challenges from all these impacts and transformations, our education inevitably has to change fundamentally towards a new paradigm in order to pursue a new future for our new generations as well as our society in such a new era of globalization and transformation.

Foreseeing the macro trends of development, my keynote speech will present *a new paradigm of borderless education* that is completely different from the traditional site-bounded paradigm. The new paradigm aims to develop students' contextualized multiple intelligence (CMI) and creativity and create unlimited opportunity for students' life-long learning through individualization, localization, and globalization in the educational process. My presentation will explain the strategies and examples of localization and globalization to pool up the various resources and intellectual assets from multiple local and international sources to support borderless education. A self-learning theory in a networked human and technological environment will be highlighted.

Particularly, my speech will propose a new *Platform Theory* to illustrate why and how school-based platform and central education platform should be necessarily developed to provide an intelligence-intensive, knowledge-intensive and technology-intensive platform to consolidate the efforts, intellectual assets and resources from localization and globalization. The platform will provide unlimited networks and opportunities for every student and teacher to maximize their potential and performance in borderless learning and teaching. These platforms for learning will be nationally strategic for each society's long-term development in a context of international competitions.

With the implications from the new paradigm of learning and the platform theory, my speech will illustrate by examples how teachers can change their roles and teaching styles from teacher-centred to student-centred in the educational process and how the curriculum can be changed from the subject knowledge-based to intelligence-based in a practical way.

Finally, my speech will urge educational reforms focusing on paradigm shift in learning and teaching with aims to maximize opportunities for students' effective life-long learning and their pursuit of a new future in the new century.

Introduction

The challenges of the new millennium such as the rapid globalization, the tremendous impacts of information technology, the international transformation towards knowledge-driven economy, the strong demands for societal developments, and the international and regional competitions have driven numerous educational changes in the different parts of the world (Cheng & Townsend, 2000). Policy-makers and educators in each country have to think how to reform education for preparing their young leaders to more effectively cope with the challenges in the new era (Armstrong, Thompson, & Brown, 1997; EURYDICE European Unit, 2000; Hirsch & Weber, 1999; Kogan & Hanney, 2000; Lick, 1999; Mauch & Sabloff, 1995; Mingle, 2000). In facing the fast changing environment, many policy-makers and educators get confused with uncertainties and ambiguities and lose their directions in the rapid globalization. There is urgent need of a comprehensive framework for understanding the impacts of rapid developments and advancing implications for innovations in education.

In response to this need, my previous work Cheng (2000) has pointed the necessity of paradigm shift in education and reforms to meet the challenges in both local and international communities in the new millennium. Adapted from the key theories in this work, my paper

aims to illustrate how education can be transformed from a traditional site-bounded paradigm towards a new triplization paradigm for borderless education. In the new education, the development of Contextualized Multiple Intelligence (CMI) of students and the processes of globalization, localization, and individualization in education will be the core to create unlimited opportunities for teaching and learning and to develop a new generation of CMI leaders and citizens in both local society and global village. It is hoped that the proposed new paradigm of borderless education will provide innovative ideas and possibilities for reforming education in different parts of the world to meet the challenges for the future.

Challenges from the Rapid Local and Global Transformations

As mentioned above, the serious challenges in the new millennium include the rapid globalization, the tremendous impacts of information technology, the international transformation towards knowledge-driven economy, the strong demands for societal developments, and the international and regional competitions. All these are in fact the challenges to the traditional thinking about the nature and developments of the world, the society and the human being, and asking for a new thinking about the future.

Challenges to the Traditional Thinking about the World, Human Nature, and Development

As shown in Table 1, the traditional thinking perceives that the world has limited if not none globalization, mainly in the economic and social aspects. All the nations in different parts of the world are loosely related, if not isolated, in only some limited areas especially in the economic aspect. Countries have serious competitions and conflicts more than sharing and collaboration. As a whole, they are loosely coupled with some limited international collaborations and interflows (Beare & Slaughter 1993; Naisbitt, 1984).

Traditionally, the human nature in such a context is mainly assumed as an economic person or a social person in an industrial or business society. Both individuals and the society pursue narrowed developments, mainly on some aspects such as economic, social, or political developments. School or vocational education is assumed necessary to providing the needed manpower for certain developments of a society at some stages (Cheng, Ng & Mok, 2002; Cheng, 1995). Therefore, the need for life-long learning or for a learning society may not be so important. The society is an industrial or agricultural society emphasizing on some types of intelligence or knowledge related to the existing stage of development of a society. Individuals are expected to be a citizen with bounded type of knowledge or skill that meet the need of society at a certain stage of development.

But in the emerging new thinking (Cheng, 2000), it assumes that the world is in multiple globalization including technological, economic, social, political, cultural, and learning globalizations. Also, these globalizations are increasingly interacting in the whole world. The world is moving very fast to become a global village, in which different parts of the world are rapidly networked and globalized through internet and different types of IT, communications, and transportation (Albrow, 1990; Naisbitt, & Aburdence, 1991). All countries and areas have more and more common concerns and sharing. Also, the interactions between nations and people become boundless, multi-dimensional, multi-level, fast, and frequent. They become more and more mutually dependent with international collaborations, exchanges, and interflows.

In the new thinking, the human nature in a social context of the new millennium is assumed to be multiple, as a technological person, economic person, social person, political person, cultural person, and learning person in a global village of information, high technology, and multi-cultures. Both individuals and the society need multiple developments in the technological, economic, social, political, cultural, and learning aspects. Life-long learning individuals and a learning society are necessary to sustain the continuous multiple developments of individuals and the society in a fast changing era (Drucker, 1993, 1995). The society has to become towards a multiple intelligence society that can provide the necessary knowledge and intelligence base and driving force to support the multiple developments. And the individuals have to become towards a multiple intelligence citizen who can contribute to the development of a multiple intelligence society.

Table 1: Challenges to the Traditional Thinking about
The World, Human Nature, Development of Individuals and the Society

New Thinking	Traditional Thinking
About the World	
• **Multiple Globalization**: including technological, economic, social, political, cultural, and learning aspects • **Global Village** • **Boundless Multi-dimensional and Multi-level Interactions** • **Mutual Dependent**	• **Limited Globalization**: mainly in economic and social aspects • **Multi-Nations loosely related** • **Limited Interactions** • **Loosely Coupled**
About the Human Nature	
• **Multiple Person:** as technological person, economic person, social person, political person, cultural person, and learning person	• **Mainly as Economic Person or Social Person** in an industrial or business society
About the Development of Individual and Society	
• **Multiple Developments:** technological, economic, social, political, cultural, and learning • **Life-long learning individuals and a learning society** are necessary to sustain the continuous developments of technological, economic, social, political, and cultural aspects of individuals and the society • **Towards a multiple intelligence society** that can provide the necessary knowledge base and driving force to support the multiple developments • **Towards a multiple intelligence individual** who can contribute to the development of a multiple intelligence society	• **Narrowed Developments:** mainly focus on some aspects such as economic, social, or political • **School or vocational education** is necessary to provide the needed manpower for certain developments of a society at some stages; the need for life-long learning or for a learning society may not be so important • **Being an industrial society** emphasizing on some types of intelligence or knowledge related to the stage of development of a society • **Being a person with bounded knowledge,** who has the type of knowledge or skill that meet the need of society at a certain stage of development

Challenges to the Traditional Thinking About the Education Environment and Aims of Education

As shown in Table 2, the traditional thinking assumes that the education environment is mainly characterized by the needs of local community, of which is slowly changing with moderate uncertainties and complexity. Thus, the boundaries of schools and the education system are assumed to be relatively stable and certain. Teachers and students rarely interact with the "real world" in their teaching and learning. Students enter the 'real world' only after graduation or leaving schools. Educational reforms are often limited and superficial mainly as a reaction to the raised public accountability and local concern. From this paradigm, the aim of education is to equip students with the necessary skills and knowledge to survive in a local community or to support the development of a society particularly in the economic and social aspects at a certain stage.

But according to the new thinking about the world and development, there is different thinking about education. The education environment is very fast changing and becoming very complicated and full of uncertainties and ambiguities. The boundaries of schools as well as the education system become unclear and disappearing. Students and teachers often interact frequently and intensively with the "real world" in learning and teaching (Townsend, 1999). Continuous educational reforms and developments are inevitable due to various local and global challenges emerging from this changing education environment.

In such a context, the aim of education is to support students to become contextualized multiple intelligence (CMI) citizens who will be engaged in life-long learning and will creatively contribute to the building up of a multiple intelligence society and a multiple intelligence global village.

**Table 2: Challenges to The Traditional Thinking about
The Education Environment and Aims of Education**

New Thinking	Traditional Thinking
Assumptions about the Education Environment	
• **Triplization**: Education environment is characterized by globalization, localization, and individualization	• **Local Needs**: Education environment is mainly characterized by the needs of local community
• **Fast Changing**: Complex, full of uncertainties, and changing very fast	• **Slowly Changing**: Moderately uncertain and changing slowly
• **Disappearing Boundary**: Unclear and disappearing school boundary; Students and teachers often interact with the' real world' in learning and teaching	• **Stable Boundary**: Still stable and certain within school boundary; Students enter the ' real world' only after graduation or leaving schools
• **Continuous Development**: Continuous educational reform and development are inevitable due to various local and global challenges	• **Limited Reform**: Limited and superficial educational reforms due to the public accountability and local concern
Assumptions about the Aim of Education	
• **Develop Multiple Intelligence Citizen**: To support students to become a contextualized multiple intelligence (CMI) citizen who will be engaged in life long learning and will creatively contribute to building up a multiple intelligence society and a multiple intelligence global village	• **Equip Citizen with Knowledge and Skills**: To equip students with the necessary skills and knowledge to survive in a local community or to support the development of a society particularly in the economic and social aspects at a certain stage

Contextualized Multiple Intelligences & Education

The challenges in current local and global transformations ask for new education for the future of our next generations. This new education emphasizes on development of multiple intelligence.

Howard Gardner (1993) suggested that there are seven human intelligences, including musical intelligence, bodily-kinesthetic intelligence, logical-mathematical intelligence, linguistic intelligence, spatial intelligence, interpersonal intelligence, and intrapersonal intelligence. This biological perspective of multiple intelligences may be useful to understand individual's cognitive competence in terms of a set of basic abilities or "intelligences" (Gardner, 1993). When we want to develop a new generation of leaders to lead the community in a context of complicated technological, economic, social, political, and cultural environments, this perspective may be too "basic" and limited and does not have a strong relevance to education. Comparatively, this biological typology of multiple intelligence may be useful to design curriculum and pedagogy for early children education or lower primary education to develop their basic abilities, but it is not so sophisticated enough for education that should be highly contextualized to the social, economic, political, cultural, and technological developments (Berman, 1995; Guild & Chock-Eng, 1998; Guloff, 1996; Mettetal & Jordan, 1997; Teele, 1995).

According to Cheng (2000), the human intelligence can be contextualized and categorized into the following six *Contextualized Multiple Intelligences* (CMI), including *Technological Intelligence, Economic Intelligence, Social Intelligence, Political Intelligence, Cultural Intelligence,* and *Learning Intelligence.*

The definitions of these contextualized multiple intelligences can be summarized as shown in Table 3. It is assumed that human nature in the complicated contexts can be classified as technological person, social person, economic person, political person, cultural person, learning person, and even contextualized multiple person. To different persons, they may have different strengths in their contextualized intelligences because of different reasons such as their previous education, personal innate characteristics, family backgrounds, community culture, etc. Some persons are stronger in technological intelligence or economic intelligence but the other may be stronger in social intelligence or cultural intelligence. Given the societal and global contexts are so complicated, diverse, multiple, fluid, and challenging, it is quite reasonable to expect that the new generations should have at least some of the contextualized multiple intelligences to meet the diverse challenges in such complicated contexts in the new millennium. It means that education in this new era of globalization, diversity and information technology should develop students as CMI leaders and citizens to lead the new society and the new world, even though they may still have one or two specializations in their future career.

Table 3:
Contextualized Multiple Intelligences and Expected Outcomes of Education

Human Nature in Social Contexts	Contextualized Multiple Intelligence	Definition of the Contextualized Multiple Intelligence	Expected Outcomes of Education
• **Technological Person**	• **Technological Intelligence**	• It refers to the ability to think, act and manage technologically and maximize the benefits of various types of technology	• **A technologically intelligent leader and citizen** who can contribute to the technological development of the society
• **Economic Person**	• **Economic Intelligence**	• It refers to the ability to think, act and manage economically and to optimize the use of various resources	• **A economically intelligent leader and citizen** who can contribute to the economic development of the society
• **Social Person**	• **Social Intelligence**	• It refers to the ability to think, act and manage socially and to effectively develop harmonious interpersonal relationship	• **A socially intelligent leader and citizen** who can contribute to the social development of the society
• **Political Person**	• **Political Intelligence**	• It refers to the ability to think, act and manage politically and to enhance win-win outcomes in situations of competing resources and interests	• **A politically intelligent leader and citizen** who can contribute to the political development of the society
• **Cultural Person**	• **Cultural Intelligence**	• It refers to the ability to think, act, and manage culturally, to optimize the use of multi-cultural assets and to create new values	• **A culturally intelligent leader and citizen** who can contribute to the cultural development of the society
• **Learning Person**	• **Learning Intelligence**	• It refers to the ability to learn and think creatively and critically and to optimize the use of biological/ physiological abilities	• **A continuously earning leader and citizen** who can contribute to the learning development of the society
• **Contextualized Multiple People**	• **Contextualized Multiple Intelligences (CMI)**	• It refers to the comprehensive ability including technological, economic, social, political, cultural and learning intelligences as well as intelligence transfer and creation	• **A CMI leader and citizen** who can creatively contribute to the technological, economic, social, political, cultural and learning developments of the society

Traditionally, education in many parts of the world emphasizes on development of specialists with focus only on one or two types of intelligence such as technological intelligence, economic intelligence or social intelligence, but ignoring the other. It is often assumed that most education graduates will have only one to three careers in the same area during their whole life such that other types of intelligences or knowledge may not be necessary and relevant to their future development. This kind of thinking sets a very tight limit to the development of graduates in such a fast changing environment involving huge transformations in economy, manpower structure and social infra-structure. We can expect that frequent change in career tends to be necessary in the future life of our new generations. Therefore, the traditional education with focus narrowly on one to two types of intelligence will not meet the challenges and needs of the future anymore.

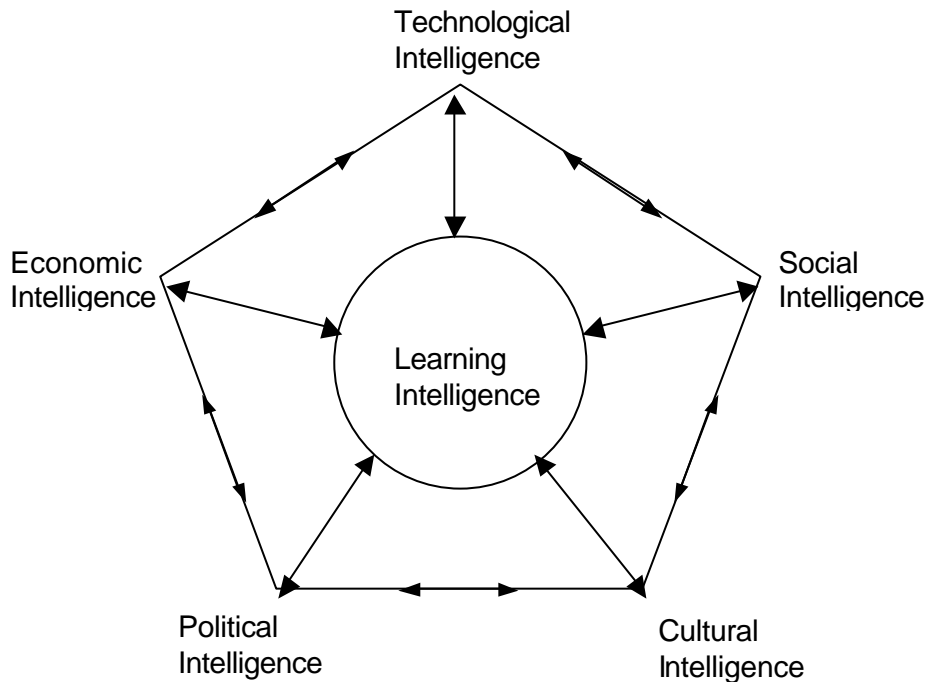In the new century, graduates from education should not be limited to be technicians or

expects in certain areas but also be intelligent leaders and citizens for development of the society in different areas. They will be technologically intelligent citizens, economically intelligent citizens, socially intelligent citizens, politically intelligent citizens, culturally intelligent citizens or continuously learning citizens. In other words, they have not only professional skills and knowledge but also higher-level intelligence and creativity for further development and innovation. Particularly, they have the potential to become contextualized multiple intelligent citizens to creatively and wisely lead the development of the whole society or the global village in facing up challenges in the new century. How can we develop such CMI leaders and citizens from education? It is really a crucial question we will explore in this paper.

Pentagon Theory of CMI in Education

Based on the above contextualized multiple intelligences, a Pentagon Theory of CMIs development proposed by Cheng (2000) can be used to reconceptualize education, as depicted in Figure 1 - as follows:

1. **Development of CMI.** The development of students' contextualized multiple intelligences is the core condition for developing a new generation of leaders and citizens for the future of a society in the technological, economical, social, political, cultural and learning aspects. Therefore, education should be reformed with clear relevance and concrete linkages with the development of CMI.

2. **Encouraging CMI Interactions**: The relationships among these six CMI are interactive and mutually reinforcing with the Learning Intelligence at the central as shown by a pentagon as in Figure 1. The design of education should encourage and facilitate such interactions and reinforcements among CMI if we want to have citizens with a broad mind sets or multiple intelligences to deal with the diverse challenges in the new era.

3. **Facilitating Intelligence Transfer & Creativity:** Intelligence transfer from one type to other types (e.g., from economic intelligence to political intelligence or social intelligence) should be encouraged and facilitated to achieve a higher level of intelligence or meta-thinking in one area or other. The transfer itself can represent a type of intellectual creativity and generalization. The more the students can transfer their intelligence from one type to other, the more creative they will be no matter in the original area or other areas. To a great extent, intelligence transfer represents the potential of creativity that is the crucial asset in the emerging knowledge-driven economy. If students can have achieved contextualized multiple intelligences, they have higher potential to make intelligence transfer from one type to other type, than those strong only in one type of intelligence. It means that they have a higher potential of creativity. Therefore, education should encourage achievement of CMI as well as intelligence transfer and creativity. This will be very important to the development of innovative knowledge-based economy and the creation of a high level thinking society and an intelligent global village.

4. **Taking Learning Intelligence at the Central**. To accelerate the development of all other CMI, the development of Learning Intelligence can play a central role (Figure 1). Instead of teaching and learning huge volume of information and factual materials, the content of education should put emphasis on developing students' ability to persistently learn how to learn systematically, creatively, and critically. This may partly reflect why the current educational reforms in different parts of the world emphasize the ability and attitude to life-long learning (Education Commission, 1999; Townsend & Cheng, 2000).

Technological
Intelligence

Social
Intelligence

Economic
Intelligence

Learning
Intelligence

Political
Intelligence

Cultural
Intelligence

5. **Globalization, Localization, and Individualization of Education:** In order to maximize the opportunities for development of CMI for students, globalization, localization, and individualization in teaching and learning are important and necessary. The following paragraphs will highlight their conceptions and implications for education reforms.

Triplization in Education

Rapid globalization is the one of the most salient aspects of the new millennium particularly since the fast development of information technology in the last two decades (Brown, 1999). To different observers, different types of globalization can be identified even though most of the attention is in the areas of economy, technology, and culture (Brown & Lauder, 1996; Waters, 1995). According to Cheng (2000), there should be multiple globalization, including *Technological Globalization, Economic Globalization, Social Globalization, Political Globalization, Cultural Globalization, and Learning Globalization* in the new millennium (Figure 2).

Inevitably, how education should be responsive to the trends and challenges of globalization has become a major concern in policy making in these years (Ayyar, 1996; Brown & Lauder, 1996; Fowler, 1994; Green, 1999; Henry, Lingard, Rizvi, & Taylor, 1999; Jones, 1999; Little, 1996; McGinn, 1996; Pratt & Poole, 2000; Curriculum Development

Council, 1999). Cheng (2000) argued that not only globalization but also localization and individualization are necessary in ongoing educational reforms. All of these processes as a whole can be taken as a _Triplization Process_ (i.e., triple + izations) that can be used to discuss educational reforms and formulate the new pedagogic methods and environment to implement new curriculum for enhancing CMI of students. The implications of globalization, localization, and individualization are summarized as shown in Table 4 and Figure 2.

Globalization: It refers to the transfer, adaptation, and development of values, knowledge, technology, and behavioral norms across countries and societies in different parts of the world. The typical phenomena and characteristics associated with globalization include growth of global networking (e.g. internet, world wide e-communication, and transportation), global transfer and interflow in technological, economic, social, political, cultural, and learning aspects, international alliances and competitions, international collaboration and exchange, global village, multi-cultural integration, and use of international standards and benchmarks. Implications of globalization for education should include maximizing the education relevance to global development and pooling up the best intellectual resources, support and initiatives from different parts of the world for learning, teaching and research (Daun, 1997; Holmes, 1999).

Some ongoing examples and common evidences of globalization in education are web-based learning; use of the Internet in learning and research; international visit/immersion programs; international exchange programs; international partnership in teaching and learning at the group, class, and individual levels; interactions and sharing through video-conferencing across countries, communities, institutions, and individuals (Holmes, 1999; Jung & Rha, 2001; Van Dusen, 1997; Lick, 1999; Klor de Alva, 2000). Many such examples of initiatives can be found in Hong Kong, Europe, Australia and USA. Further, the development of new curriculum content on technological, economic, social, political, cultural, and learning globalization is also important and necessary in new education.

Figure 2:

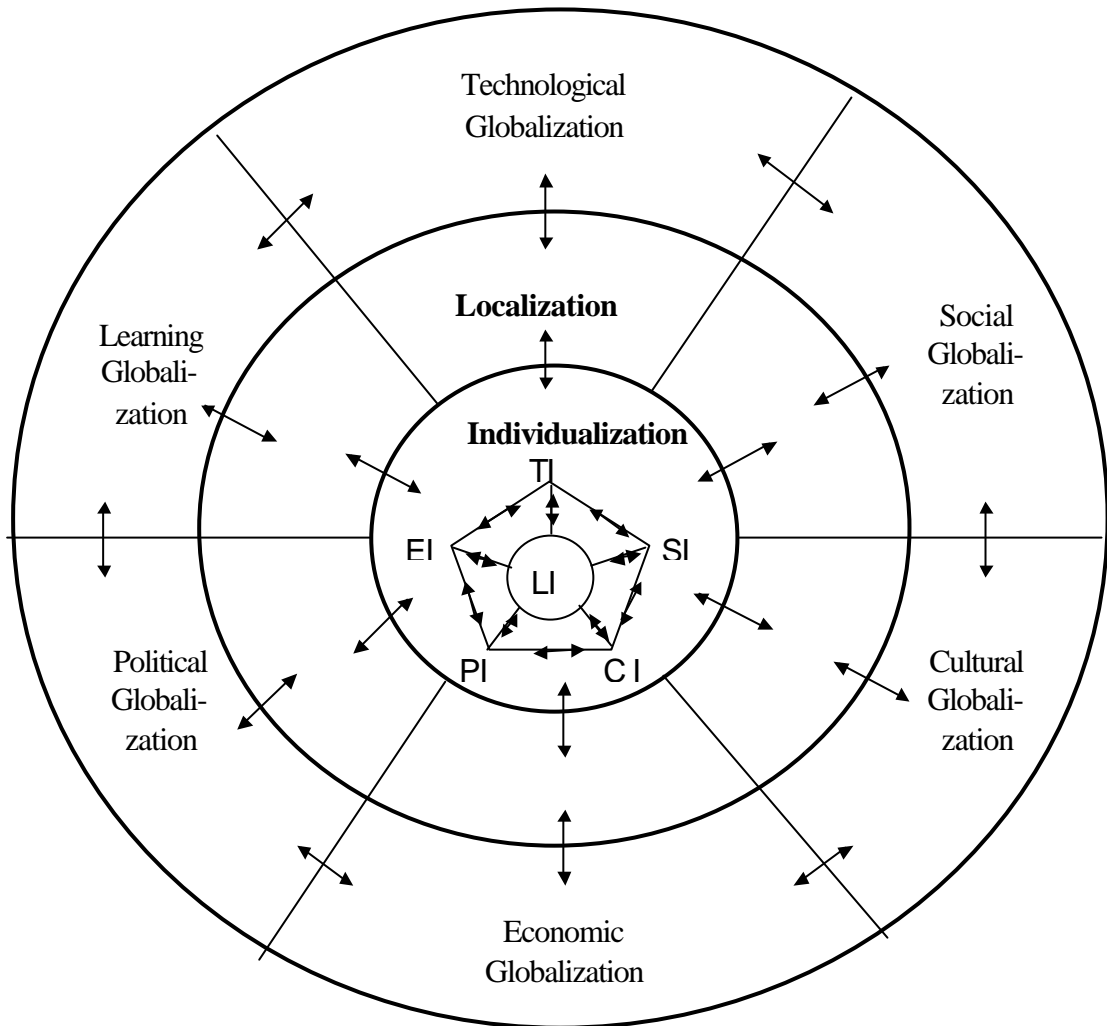**Globalization, Localization, and Individualization**

Technological Globalization

Localization

Learning Globali-zation

Social Globali-zation

Individualization

TI

EI

LI

SI

Political Globali-zation

PI

C I

Cultural Globali-zation

Economic Globalization

Table 4: Implications of Triplization for Education

Triplization	Conceptions and Characteristics	Implications for Education
Globalization	Transfer, adaptation, and development of values, knowledge, technology and behavioral norms across countries and societies in different parts of the world: • Global Networking • Technological, Economic, Social, Political, Cultural, and Learning Globalization • Global Growth of Internet • International Alliances and Competitions • International Collaboration & Exchange • Global Village • Multi-cultural Integration • International Standards and Benchmarks	**To maximize the education relevance to global development and pool up best intellectual resources, support, and initiatives from different parts of the world for learning, teaching and research: e.g.** • Web-based Learning • International Visit/Immersion Program • International Exchange Program • Learning from Internet • International Partnership in Teaching and Learning at group, class, and individual levels • Interactions and Sharing through Video-Conferencing across Countries, Communities, Institutions, and Individuals • Curriculum Content on Technological, Economic, Social, Political, Cultural, and Learning Globalization
Localization	Transfer, adaptation, and development of related values, knowledge, technology, and behavioral norms from/to the local contexts: • Local Networking • Technological, Economic, Social, Political, Cultural, and Learning Localization • Decentralization to the Local Site Level • Indigenous Culture • Community Needs and Expectations • Local Involvement, Collaboration and Support • Local Relevance and Legitimacy • Community-based Needs and Characteristics • Social Norms and Ethos	**To maximize the education relevance to local developments and bring in community support and resources, local partnership, and collaboration in learning, teaching and research: e.g.** • Community Involvement • Public- Institutional Collaboration • Institutional-based Management &Accountability/ School-based Management • Inter-institutional Collaboration • Community-related Curriculum • Curriculum Content on Technological, Economic, Social, Political, Cultural, and Learning Localization
Individualization	Transfer, adaptation, and development of related external values, knowledge, technology, and behavioral norms to meet the individual needs and characteristics: • Individualized Services • Development of Human Potential in Technological, Economic, Social, Political, Cultural and Learning Aspects • Human Initiative and Creativity • Self-actualization • Self-managing and Self-governing • Special Needs	**To maximize motivation, human initiative, and creativity in learning, teaching and research**: e.g. • Individualized Educational Programs • Individualized Learning Targets, Methods, and Progress Schedules • Self Life-long Learning, Self Actualizing, and Self Initiative • Self Managing Students and Teachers • Meeting Special Needs • Development of Contextualized Multiple Intelligences

Localization: It refers to the transfer, adaptation, and development of related values, knowledge, technology, and behavioral norms from/to the local contexts. Some characteristics and examples of localization are as follows: local networking; adaptation of external technological, economic, social, political, cultural, and learning initiatives to local communities; decentralization to the community or site level; development of indigenous culture; meeting community needs and expectations; local involvement, inter-institutional collaboration, and community support; local relevance and legitimacy; and concern for community-based needs and characteristics and social norms and ethos (Kim, 1999).

The implications of localization to education reform are to maximize the education relevance to local development and bring in community support and resources, local partnership, and collaboration in learning, teaching and research. Some examples for practice of localization include community involvement in education; privatization in education; public-institutional collaboration; assurance of institutional accountability; implementation of institutional autonomy, school-based management and community-based curriculum (Wang, 2000; Altbach, 1999; James, 1994). More and more such examples can be found not only in developed countries like USA, UK and European countries but also in many developing areas in the Asia-Pacific Region (Cheng & Townsend, 2000). The development of new curriculum content related to localization in technological, economic, social, political, cultural, and learning aspects of the society is also receiving growing attention.

Individualization: It refers to the transfer, adaptation, and development of related external values, knowledge, technology, and behavioral norms to meet the individual needs and characteristics. The importance of individualization to human development and performance is based on the concerns and theories of human motivation and needs (e.g. Maslow, 1970; Manz, 1986; Manz & Sims, 1990; Alderfer, 1972). Some examples of individualization are the provision of individualized services; emphasis of human potentials; promotion of human initiative and creativity; encouragement of self-actualization; self-managing and self-governing; and concern for special needs. The major implication of individualization in education is to maximize motivation, initiative, and creativity of students and teachers in learning, teaching, and research through such measures as implementing individualized educational programs; designing and using individualized learning targets, methods, and progress schedules; encouraging students to be self learning, self actualizing, and self initiating; meeting individual special needs; and developing students' contextualized multiple intelligences.

Students, teachers, and education institutions are "triplized" (i.e. *globalized, localized,* and *individualized) during the process of triplization*.

New Paradigm of Borderless Education

With these concepts of contextualized multiple intelligences and triplization in education, a paradigm shift of education for the new millennium can be initiated from *the traditional site-bounded paradigm* to *the new paradigm of borderless education*.

New Paradigm of Borderless Learning. In the new paradigm, learning should be borderless and characterized by individualization, localization, and globalization. (Table 5)

Individualized Learning: Student is the centre of education. Students' learning should be facilitated to meet their needs and personal characteristics, and develop their potentials particularly CMI in an optimal way. Individualized and tailor-made programs (including targets, content, methods, and schedules) for different students is necessary and feasible. Students can be self-motivated and self-learning with appropriate guidance and facilitation, and learning is a self-actualizing, discovering, experiencing, and reflecting process. Since the information and knowledge are accumulated in a unbelievable speed but outdated very quickly, it is nearly impossible to make any sense if education is mainly to deliver skills and knowledge, particularly when students can find the knowledge and information easily with the help of information technology and Internet. Therefore, the focus of learning is on learning how to learn, research, think, and create. In order to sustain learning is life long, learning should be facilitated as enjoyable and self rewarding (Mok & Cheng, 2001).

Localized and Globalized Learning: Students' learning should be facilitated in such a way such that local and global resources, support, and networks can be brought in to maximize the opportunities for their developments during learning process. Through localization and globalization, there are multiple sources of learning. Students can learn from multiple sources inside and outside their higher institutions, locally and globally, not limited to a small number of teachers in their institutions. Participation in local and international learning programs can help them achieve the related community and global outlook and experiences beyond education institutions. Now, more and more examples of such kind of programs can be found in Japan, Hong Kong, France and USA. Also their learning is a type of networked learning. They will be grouped and networked locally and internationally. Learning groups and networks will become a major driving force to sustain the learning climate and multiply the learning effects through mutual sharing and inspiring. We can expect that each student can have a group of life long partner students in different corners of the world to share their learning experiences.

It is expected that learning happens everywhere and is life-long. Education is just the preparation for a high level life-long learning and discovery (Liu, 1997; Mok & Cheng, 2001). Learning opportunities are unlimited. Students can maximize the opportunities for their learning from local and global exposures through Internet, web-based learning, video-conferencing, cross-cultural sharing, and different types of interactive and multi-media materials (Ryan, Scott, Freeman, & Patel, 2000; Education and Manpower Bureau, 1998). Students can learn from world-class teachers, experts, peers, and learning materials from different parts of the world. In other words, their learning can be a world-class learning.

Traditional Paradigm of Site-bounded Learning. In the traditional thinking, students' learning is part of the reproduction and perpetuation process of the existing knowledge and manpower structure to sustain developments of the society, particularly in the social and economic aspects (Cheng, Ng & Mok, 2002; Blackledge & Hunt, 1985; Hinchliffe, 1987; McMahon, 1987). Education is perceived as a process for students and their learning being "reproduced" to meet the needs of manpower structure in the society. The profiles of student and learning are clearly different from those in the new paradigm (see Table 5).

Reproduced Learning: In education, students are the followers of their teachers. They go through standard programs of education, in which students are taught in the same way and same pace even though their ability may be different. Individualized programs seem

to be unfeasible. The learning process is characterized by absorbing certain types of knowledge: students are "students" of their teachers, and they absorb knowledge from their teachers. Learning is a disciplinary, receiving, and socializing process such that close supervision and control on the learning process is necessary. The focus of learning is on how to gain some professional or academic knowledge and skills. Learning is often perceived as hard working to achieve external rewards and avoid punishment.

Site-Bounded Learning: In the traditional paradigm, all learning activities are institution-bounded and teacher-based. Students learn from a limited numbers of institutional teachers and their prepared materials. Therefore, teachers are the major sources of knowledge and learning. Students learn the standard curriculum from their textbooks and related materials assigned by their teachers. Students are often arranged to learn in a separated way and are kept responsible for their individual learning outcomes. They have few opportunities to mutually support and learn. Their learning experiences are mainly institutional experiences alienated from the fast changing local and global communities. Learning happens only in education institution within a given time frame. Graduation tends to be the end of students' learning.

Table 5: Towards New Paradigm of Borderless Learning

New Paradigm of Borderless Learning	Traditional Paradigm of Site-Bounded Learning
Individualized Learning: • Student is the centre of education • Individualized Programs • Self-Learning • Self-Actualizing Process • Focus on How to Learn • Self Rewarding	**Reproduced Learning**: • Student is the follower of teacher • Standard Programs • Absorbing Knowledge • Receiving Process • Focus on How to Gain • External Rewarding
Localized and Globalized Learning: • Multiple Sources of Learning • Networked Learning • Life-long and Everywhere • Unlimited Opportunities • World-Class Learning • Local and International Outlook	**Institution-Bounded Learning:** • Teacher-Based Learning • Separated Learning • Fixed Period and Within Institution • Limited Opportunities • Site-Bounded Learning • Mainly Institution-based Experiences

Effective Learning through Localization and Internationalization:
Self- Learning in A Networked Human and Technological Environment

According to the above new paradigm of borderless education, we should emphasize students' continuous self-learning and development of CMI with the support of localization and globalization through information technology and various types of international and local networking. Mok and Cheng (2001) has proposed a theory of self-learning in a networked human and technology environment to show how students' individualized self-learning can be motivated, sustained and optimized through the wide local and international support from the borderless and networked human and technological environment. The key concepts are summarized as follows:

Self-learning Cycle

The understanding of the nature of self-learning is important in implementing new paradigm of borderless learning. Based on the concepts of action learning (Yuen & Cheng, 1997, 2000; Argyris & Schön, 1974; Argyris, Putnam, & Smith, 1985), Mok and Cheng (2001) conceptualised the process of self-learning as a cyclic process in a networked human and IT environment as shown in Figure 3. It subdivides a learning episode into a sequence of three components such as mental condition (mind-set), action, and outcome, linked by four processes including planning, monitoring, feedback to mental condition and feedback to action. There are two types of feedback from the monitoring process and outcomes to the learner: One to the mind-set and the other one directly to action. The feedback to mind-set will help the learner to reflect on and change his/her own mental models including meta-cognition, thinking methods, meta-volition, and knowledge and then to change the planning process as well as the action of learning. The learning associated with change in mental-set or mental models is often referred as *the second order learning or double-loop learning*.

The feedback directly to action of learning will help the learner to adapt his/her learning behaviors. The learning associated with change in behaviors or actions is often referred to as *the first order of learning or the single loop learning*. Since this type of learning has not changed the mental conditions of the learner, it may not produce long lasting learning effects at a higher level.

How to sustain the cyclic process of self-learning by the learners themselves continuously and throughout their life span is really the core issue of current education reforms. According to the literature of learning environment, both human environment and technological environment are important to facilitating and sustaining self-learning (Garrison, 1997; Henderson & Cunningham, 1994). Particularly, how the human and IT environment can be designed, developed and used to facilitate such a continuous lifelong self-learning inevitably becomes an important question to guide the development of self-learning theory for a context of networked human and IT environment. Mok and Cheng (2001) has explained a theory of self-learning in a networked human and IT environment, that can be used to support the new paradigm of borderless education, as follows.
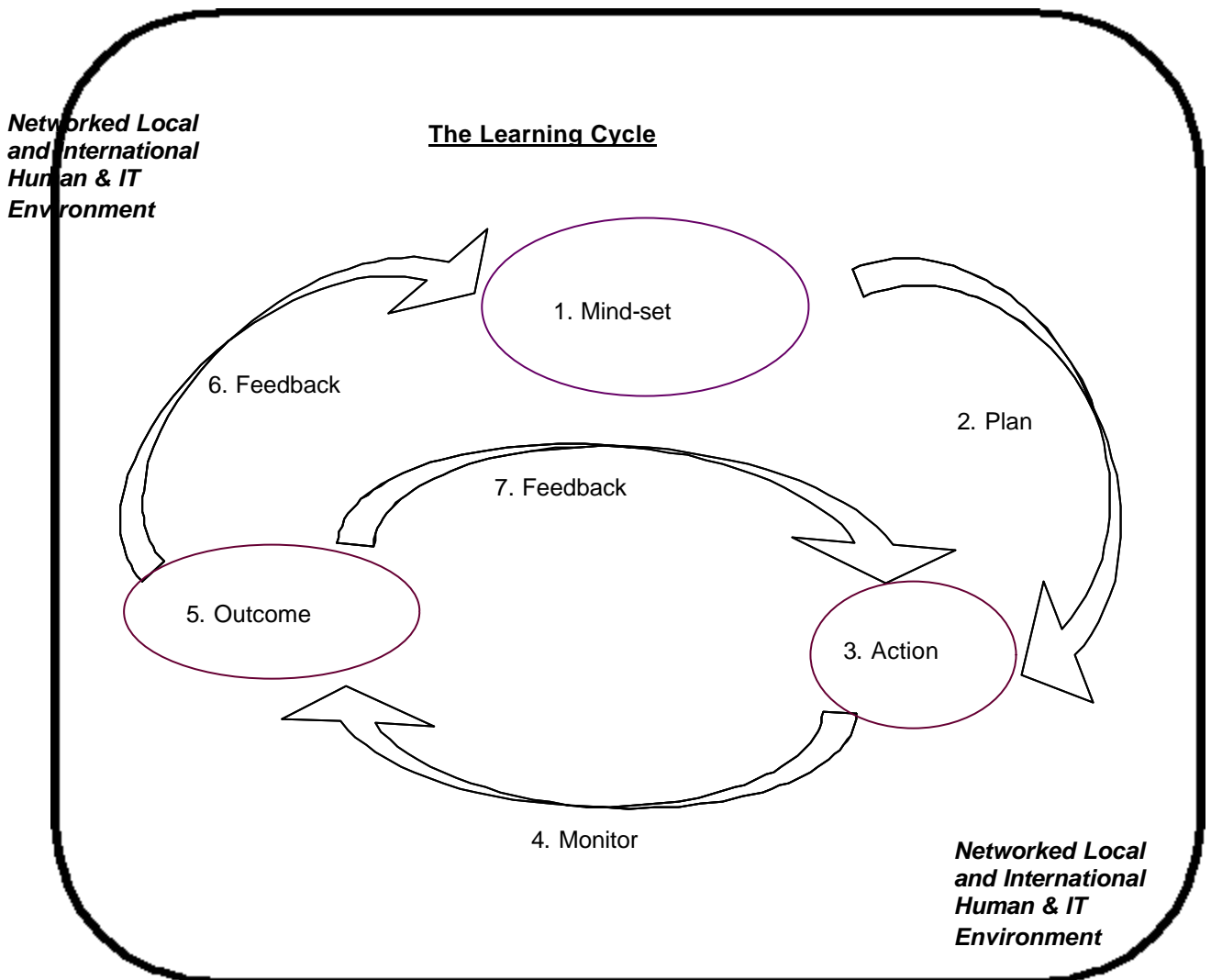
The Learning Cycle

Networked Local and International Human & IT Environment

1. Mind-set

6. Feedback

2. Plan

7. Feedback

5. Outcome

3. Action

4. Monitor

Networked Local and International Human & IT Environment

Figure 3. A Self-learning Cycle in a Networked Borderless Human and IT environment

IT Environment

Due to the tremendous developments in IT, internet, and global networking, recently there has been a great demand for developing an IT environment in order to support paradigm shift in learning and teaching. Computer technology makes it possible for multiple learners to be networked and participate in the learning task, thus greatly enhancing the social interactions, sharing of learning experiences and resources in a very convenient way. Information technology can also facilitate and accelerate the monitoring, assessment, and feedback processes in a very fast and efficient way (Embretson & Hershberger, 1999).

There may be four important aspects in which new technology can contribute to the development of a powerful IT environment that can facilitate the self-learning cycle:

1. Computer technology revolutionalized both the speed and access to information (Hallinger, 1998). Information is interpreted in its broadest sense, including resource materials for the learner as well as feedback concerning how well the learner has learned. With the help of the Internet, learners can access the best quality of web-based learning materials in different parts of the world. Further, because of the high speed of information technology, feedback can be immediately generated for each step of learning tasks and activities as well as for the overall proficiency of learning. The fast feedback to learner's mental conditions and learning behaviors in fact accelerates the speed of learning, including cognitive changes and behavioral changes of the learner;

2. Developments in IT make it possible for the application of measurement theory to assessment tasks during the self-learning process. Technology is now available for real-time scoring (Herl, Baker, & Niemi, 1996), computer adaptive testing (CAT), automated data logging (Chung & Baker, 1997), and computer item construction (Bennett, 1999). The advanced assessment methods can greatly improve the quality and accuracy of monitoring and feedback such that the quality and opportunity of learning can be ensured;

3. Developments in IT enable assessment to move away from the paper-pencil format to rich imagery multimedia task presentation and submission (Bennett, 1999; Chung & Baker, 1997) that can capture richly contextualized performance in the learning process (Bennett, 1999). For example, Chung and Baker (1997) described the scoring of complex concept maps constructed by students, based on information that stored in Web-pages. They were able not only to measure the quality of the finished product, but also to capture, unobtrusively, the process of how students learned. Students' process of learning were monitored, using Web page access log, including information students considered important to the task, the amount of time searching the Web for relevant information, time students spent on each Web page, modification to the concept map under construction, etc. All this information would be powerful to understand the complex nature of learning process and in turn improve learning strategies, activities, and outcomes; and

4. IT environment breaks down distance barriers of access to education and creates connectivity amongst learners (Mok & Cheng, 2000a). When learners, teachers, parents, resource people, and other related experts can be networked through IT, more opportunities will be available for social interactions, experience sharing, and information flow. With this, a networked human environment can be created to sustain and support self-learning of individual learners.

Networked Human Environment

The meaningfulness of learning is often constructed within a human environment that comprises the teacher, peers, parents and other adults and also reflects to a certain extent the education values espoused by the social actors (Garrison, 1997). The human environment plays a significant role in all aspects: pedagogical, psychological and behavioural of self-learning (Schunk, 1998). In particular, Zimmerman (2000) highlighted the interdependent role of social, environmental and self and their bi-directional influences in self-learning.

In education reforms, the human environment itself can be designed to become an important source of pedagogical information. The teacher, as a key actor in the human

environment of learning, helps the learner to develop attitudes and skills for goal-setting, self-management, self-monitoring, and self-evaluation which are essential to the success of self-learning. For example, in this IT age, there is no short of information, but the learner needs to make judgment about the information. Consequently, the learner has to develop critical thinking skills to validate and authenticate the quality of instructional materials, such as those downloadable from the web. Further, the teacher as a proficient adult provides appropriate learning references or guides the learner to these materials. Winne and Perry (2000) identified the unique position held by teachers in judging the quality of the student's self-learning and providing guidance where appropriate. The learner also learns from peers, parents and other adults by observation and emulation (Schunk, 1987; as cited in Schunk, 1998).

Self-learning is a complex process and the endeavour can result in non-accomplishment, frustration or even failure. In such instances, the empathy and social support from the teacher, parents and peers acts as an emotional safety net for the learner. A strong social climate gives strength to the learner to continue engagement in the task, analyse strategies and manage the failure and frustration in a positive way.

It is now possible, with development in IT, to network the learner with the teacher, parents, peers and other adults or professionals in the community such that influence of the human environment on self-learning can be maximised (Mok & Cheng, 2000a).

When individual learners are networked with the support of IT, as shown in figures 4 and 5, there may be multiplying effect on the amount of available information as well as human touches and interactions that will become fruitful stimulus to students' self-learning. The networked individual learners, teachers, parents and other professionals may form a learning system to support students' continuous self-learning. In a learning society, each learner is self-motivated and generates a learning cycle of self-learning and self-evaluation. Learners, teachers and parents are networked to form a learning classroom; classrooms are networked to form a learning school; schools and the community are networked to form a learning society; learning societies are networked across nations (Mok & Cheng, 2000b). IT speeds up the process of providing social messages and informative feedback to the learners and members in the learning system. This speed, coupled with the massive amount of information available via the informative network, not only means that this will be the information-rich era, but also, it implies that a closely networked social environment needs to be in place for promoting and supporting self-learning of individual learners. Self-learning is no longer the acquisition of information of individual learners in an isolated context. Instead, effective self-learning occurs in the human environment that can facilitate higher level of intelligence and motivation of learners as well as other members in the human network in the selection, management, transfer, creation and extension of knowledge (Mok & Cheng, 2000a).

Facilitating Self-learning Cycle

Building up a strong and direct linkage between each stage of self-learning cycle and networked learning environment should be an important issue in education reforms and in daily educational practice. From the aforementioned nature of learning cycle and networked human and IT environment, we may consider how each stage of the self-learning cycle can be initiated and sustained continuously to achieve effective learning with the support of a networked human and IT environment. For the detail, please see Mok and Cheng (2001).
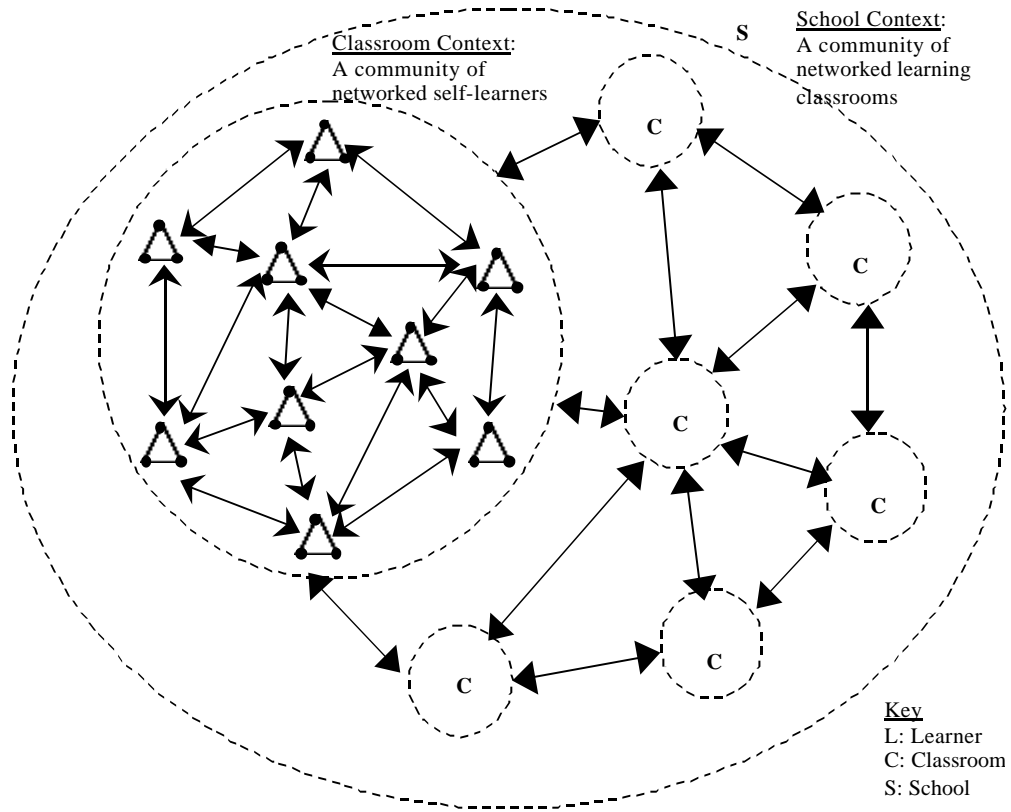
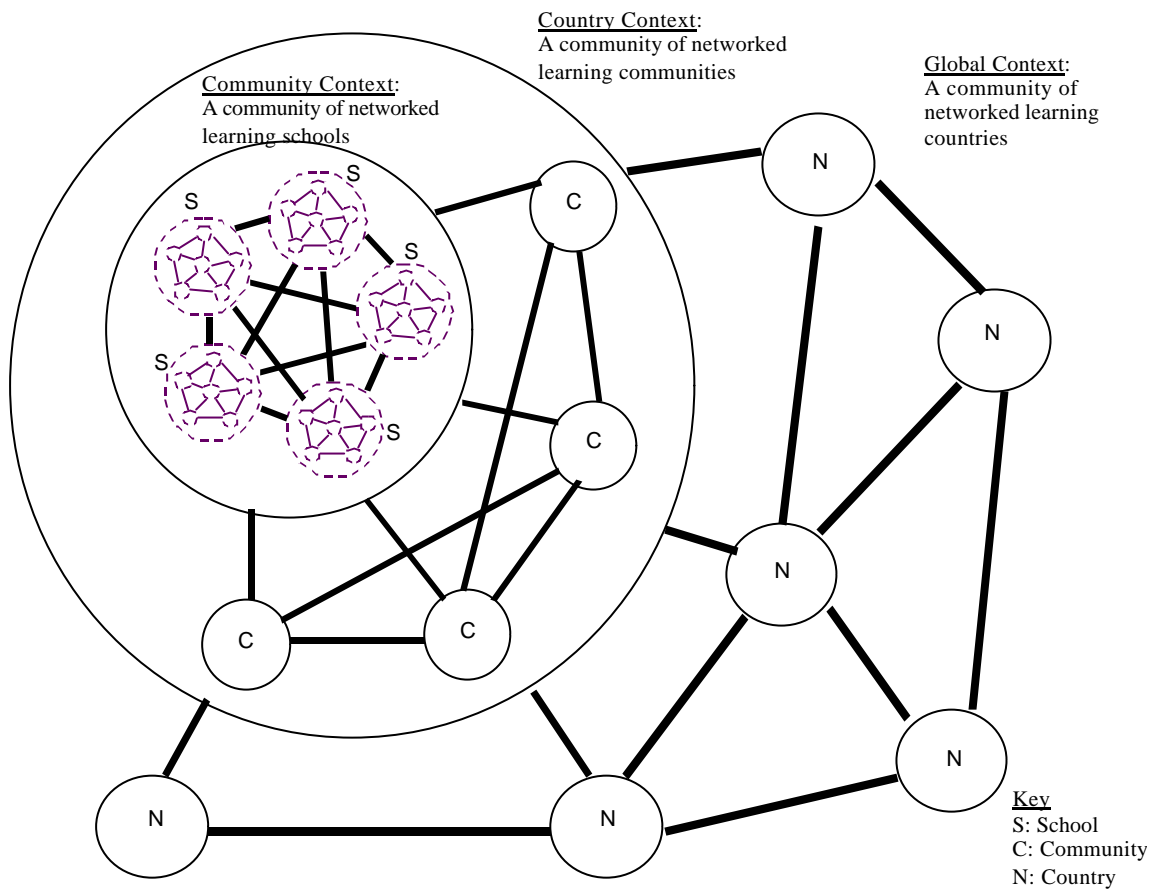Figure 4. Networked human environment: Networked school comprising linked self-learners and classrooms.

Country Context:
A community of networked
learning communities

Global Context:
A community of
networked learning
countries

Community Context:
A community of networked
learning schools

Key
S: School
C: Community
N: Country

Figure 5. Networked human environment: Networked global context comprising linked learning countries and communities.

School-based Platform and Central Platform for Borderless Education: Platform Theory

How to build up such a networked human and technological environment for borderless education is very challenging to both educators and reformers. According to Cheng (2002, 2001a,b), the development of a networked human and technology environment can be supported by the school-based platform and central platform.

Platform is a new powerful concept in conceptualizing and organizing various types of existing resources, technology, knowledge, and even social and cultural capital from local and global sources to form an intelligence-intensive and technology-intensive platform or supporting environment, that can enable and facilitate people to work and perform in a smart and optimal way. Unlike the traditional concept of organizational structure with focus on control and coordination, platform is mainly for supporting people with the necessary knowledge, technology and social environment such that they can have the maximum opportunity to develop themselves and perform at their highest potential in their work.

School-based management or educational decentralization should aim at developing as a ***school-based platform*** that can accumulate, organize and apply the necessary knowledge and technology, useful experiences, networks, various types of internal and external resources, and social support to support educational practice and innovation for effective teaching and learning, facilitate organizational learning, and develop a culture of professionalism within a school. To a great extent, a good school-based platform is a powerful way to pool resources for effective learning through localization and globalization. For the detail of how school-based management can be developed such a platform or mechanism for continuous development and effectiveness, please refer to Cheng (1996).

At the system or regional level, a ***central education platform*** should be formed with the support of information technology and various types of local and global networking. This central platform aims to pool up the most powerful and relevant knowledge, expertise and resources from local and global sources to create a more knowledge-intensive, technology-intensive and intelligence-intensive central base for supporting the development of all types of school-based platform and related initiatives. On this central platform, schools, teachers, and students can work on a higher level of knowledge to develop their school-based initiatives and avoid unnecessary wastage of time, resources and efforts due to repeated "re-inventing a wheel" or "start from scratch". This central platform is also a huge network or learning community for sharing the advanced knowledge, best practices and experiences of success and failure among schools, educators and experts (Mok &Cheng, 2001).

Figure 6:

Platform Theory for Effective Learning, Teaching and Schooling
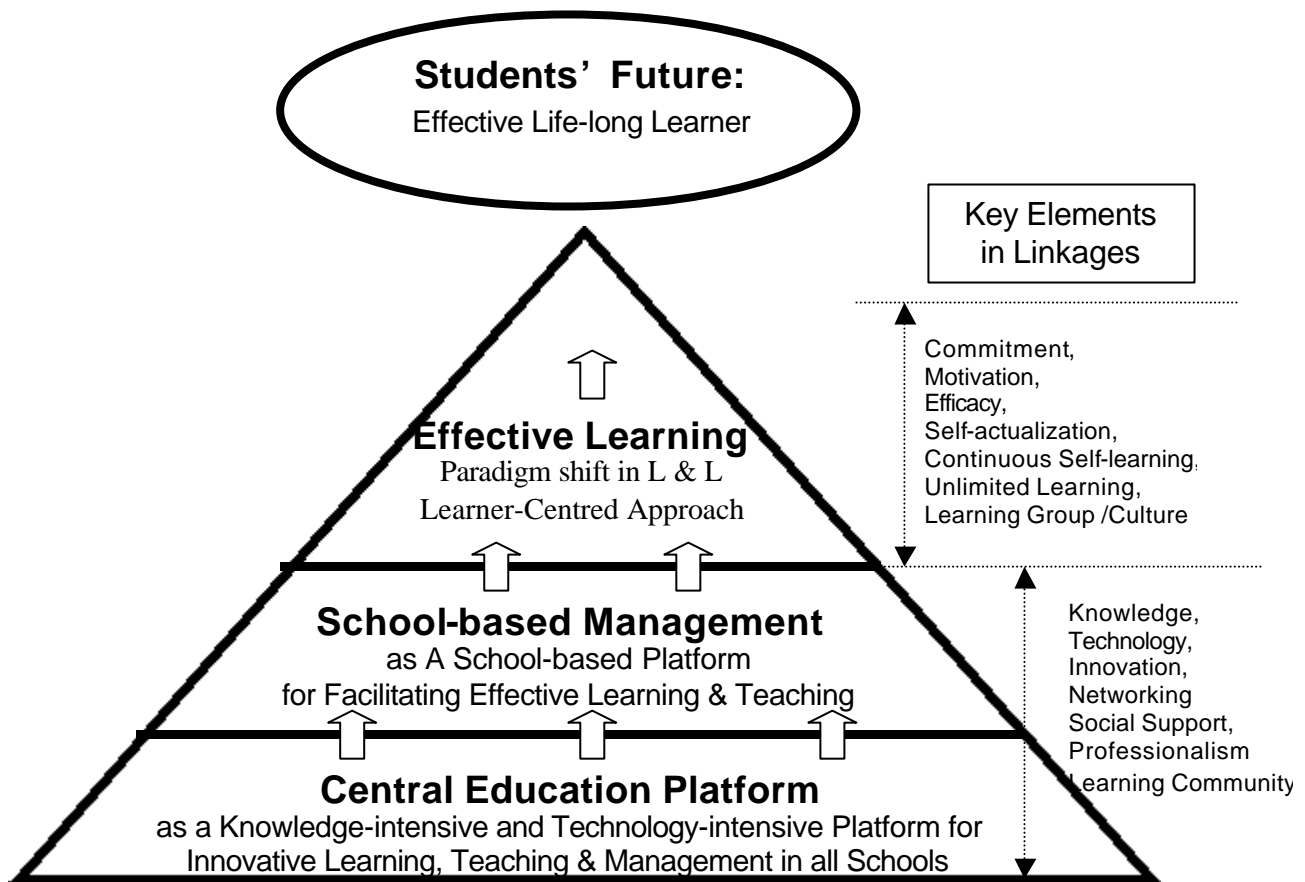
The key elements of the school-based platform and central education platform are accumulation, dissemination, and application of knowledge and technology to promote various types of innovation, networking and social support and develop a culture of professionalism and learning community in education, that can support paradigm shift in education and effective learning, teaching and schooling.

As shown in Figure 6, with the support of the school-based platform as well as the central platform, the key elements in effective learning and teaching are students and teachers' commitment, motivation and efficacy to promote and achieve learning as continuous self-actualization and self-learning and create unlimited opportunity for learning, developing learning groups, and evolving learning culture among students and teachers (Cheng, 2001a,b; Mok & Cheng, 2001).

Implications for Changing Teachers' Role and Teaching Style

The paradigm shift in learning inevitably requires corresponding paradigm shift in teaching and teachers' role. The major changes can be summarized as shown in Table 6.

New Paradigm of Teaching

In the new triplization paradigm, teachers' teaching should be triplized: individualized, localized, and globalized.

Teachers and their teaching are facilitated in a way such that their potentials can be maximized to facilitate students' learning in an optimal way. Teaching is considered a process to initiate, facilitate, and sustain students' self-learning, self-exploration and self actualization; therefore, teachers or teachers should play a role as a facilitator or mentor who support students' learning. The focus of teaching is to arouse students' curiosity and motivation to think, act, and learn. Also, teaching is to share with students the joy of the learning process and outcomes. To teachers themselves, teaching is also a life long learning process involving continuous discovery, experimenting, self actualization, reflection, and professional development. Teachers are CMI teachers who can set a model for students in developing their multiple intelligences. Each teacher has his/her own potential and characteristics, and different teachers can teach in different styles to maximize their own contributions.

Local and global resources, supports and networks can be brought in to maximize the opportunities for teachers' developments in teaching and research and for their contribution to students' learning. Through localization and globalization, there are multiple sources of teaching, for example, self learning programs and packages, web-based learning, outside experts, and community experiental programs, inside and outside their institutions, locally and globally. Teachers can maximize the opportunities to enhance effectiveness of their teaching from local and global networking and exposure through Internet, web-based teaching, video-conferencing, cross-cultural sharing, and different types of interactive and multi-media materials (Holmes, 1999; Ryan, Scott, Freeman, & Patel, 2000; Education and Manpower Bureau, 1998). With their help, students can learn from the world-class materials, experts, peers, and teachers in different parts of the world such that teaching can become world-class teaching. Through participation in local and international development and research programs, teachers can achieve global and regional outlook and experiences beyond institutions.

Furthermore, their teaching is a type of networked teaching. Teachers are grouped and networked locally and globally to develop and sustain a new professional culture and multiply their teaching effects through mutual sharing and inspiring. They become world class and networked teachers through localization and globalization. It is not a surprise that each teacher can have a group of life long partner teachers in other parts of the world to continuously share and discuss their experiences and ideas of professional practice and research.

Table 5: Paradigm Shift in Teaching

New CMI-Triplization Paradigm	Traditional Site-Bounded Paradigm
Individualized Teaching	**Reproduced Teaching**
• Teacher is the facilitator or mentor to support students' learning • Multiple Intelligence Teacher • Individualized Teaching Style • Arousing Curiosity • Facilitating Process • Sharing Joy • As Life-long Learning	• Teacher is the centre of education • Partially Competent Teacher • Standard Teaching Style • Transferring Knowledge • Delivery Process • Achieving Standard • As a Practice of Previous Knowledge
Localized and Globalized Teaching:	**Site-bounded Teaching:**
• Multiple Sources of Teaching • Networked Teaching • World-Class Teaching • Unlimited Opportunities • Local and International Outlook • As World-Class and Networked Teacher	• Site-Bounded in Teaching • Separated Teaching • Bounded Teaching • Limited Opportunities • Mainly Institutional Experiences • As Site-bounded and Separated Teacher

Changing Role of Teacher in the New Paradigm

Different roles teachers play in the teaching process may shape the roles and qualities of students in the learning process that can vary from the very passive way to the active self-learning and self-actualization mode as shown in Table 6 and Figure 7 (Weaver, 1970; Cheng, 2001a).

Table 6: Teachers' Roles and Corresponding Students' Roles and Outcomes

Teacher's Role	Teaching/ Learning Process	Student's Role	Likely Student Quality as Outcome
1. **Appreciator**	As determined by students	1. **Searcher**	Self-Determination
2. **Partner**	Participation	2. **Partner**	Responsibility
3. **Patron**	Making	3. **Designer**	Creativeness
4. **Guide**	Searching	4. **Explorer**	Adventurousness
5. **Questioner**	Experimentation	5. **Searcher**	Investigation Skill
6. **Tutor**	Reflection	6. **Thinker**	Understanding
7. **Counsellor**	Expression of feeling	7. **Client**	Insight
8. **Moulder**	Conditioning	8. **Subject**	Habits
9. **Instructor**	Transfer of information	9. **Memorizer**	Possession of information
10. **Exemplar**	Imitation	10. **Trainee**	Skills

Student Role

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

◄••

Student Self-Initiative (Self Learning)

Student Centered

Teacher Centered

Teacher Direct Instruction

••►
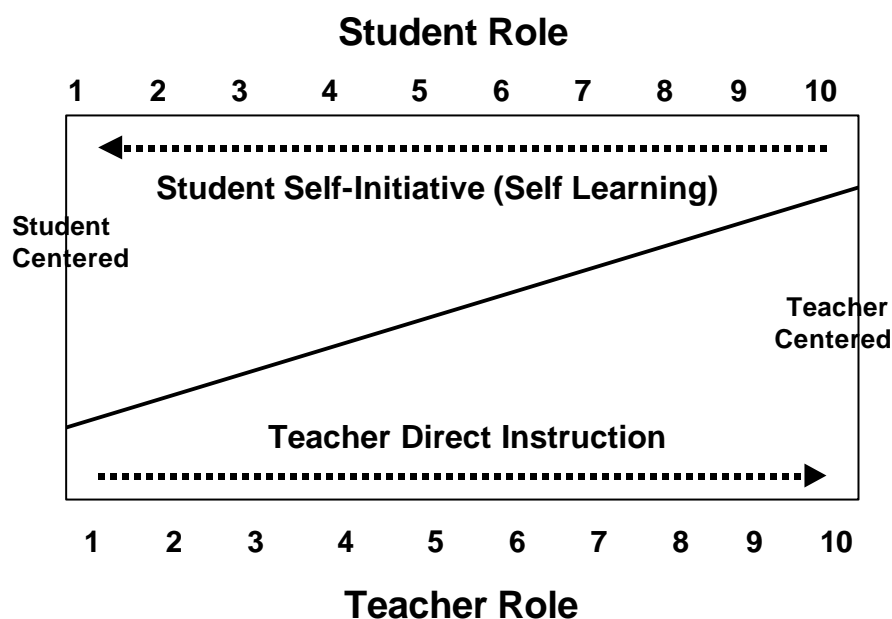
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Teacher Role

Figure 7: The Ecological Relationship Between Roles of Teachers and Students

As shown in Figure 7, there is an ecological relationship between roles of teachers and students. As teachers tend to be more teacher direction instruction (towards roles 8, 9, and 10 as in Table 6), students become more passive in their learning and the qualities tend to be Habits, Possession of Information and Skills. As teachers tend to use student-centre approaching and play roles 1, 2, 3, 4, 5 and 6 in the teaching process, students have more opportunities to be active in self- learning and achieve the higher qualities of learning outcomes such as *Self-Determination, Responsibility, Creativeness, Adventurousness, Investigation Skill,* and *Understanding* that are important in the new paradigm of borderless education and also crucial to the future of students in the new century.

We understand, the educational aims and processes are complex and the role of teacher should be dynamic and complicated including multiple roles ranging from roles 1 to 10; from total direct instruction to total student self-determination in the daily educational practices. A mix of multiple roles played by teachers in daily educational practices is often a fact of school life. What is important for teachers and educators is to keep in mind what educational aims we want to pursue. If we want to achieve a real new paradigm of education for the future of our students, we should encourage the mix of multiple teacher roles to be more student-centred and less teacher-centred in the whole teaching and learning process.

Implications for Reform of Curriculum and Instruction

As explained previously, the delivery of subject knowledge and skills is the key element in the traditional paradigm of education and teachers are the major source of

knowledge. Inevitably the teacher-centered approach in education is often assumed as the efficient way to deliver subject knowledge and skills to students, and the examination of how much knowledge achieved by students is always the key criterion of effectiveness of education. Therefore, it is not a surprise that the current curriculum and instruction in many countries are characterized by "separated subject knowledge" and "teacher-centred approach" or "examination-centred approach". As shown in Figure 8, the content, scope, and effort of existing curriculum and instruction are mainly in the second quadrant (II) if we take the dichotomy of "teacher-centred/examination centred approach" vs "student-centred approach" instruction as x-axis and the dichotomy of "subject-knowledge-based and separated curriculum" vs "multiple intelligence- based and integrative curriculum" as the y-axis to form four quadrants.
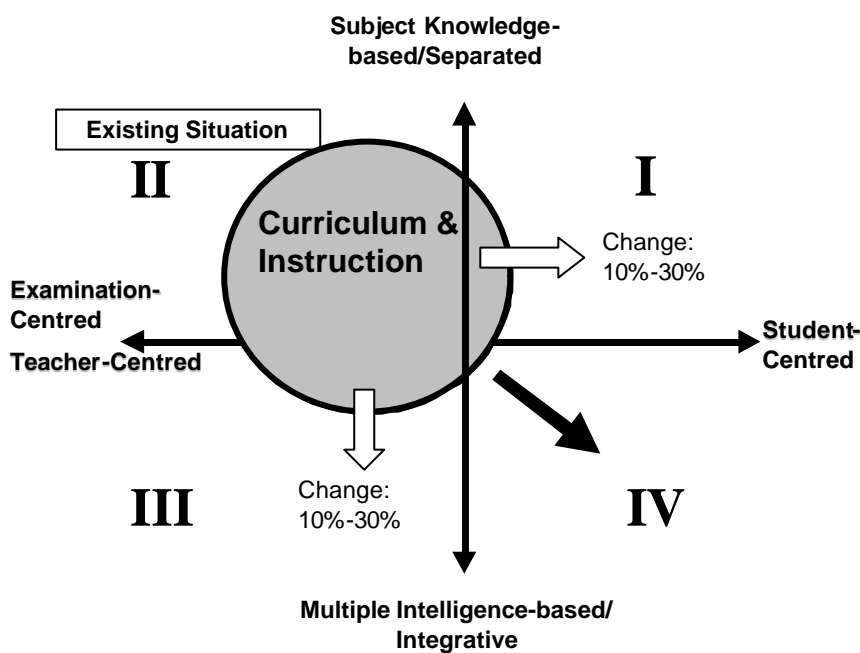

Figure 8: The Existing Situation of Curriculum and Instruction and Implications for Reforms

As illustrated in the new paradigm of borderless education, "student-centred approach" in education and " integrative multiple intelligence-based curriculum" should be strongly emphasized and promoted in order to facilitate students to pursue continuous life long self-learning and development and become contextualized multiple intelligent persons for their future. Therefore, curriculum and instruction should be changed from the traditional quadrant II towards the quadrant IV that emphasizes "student-centred approach" and "multiple intelligence-based curriculum". (see Figure 8)

Depending on the levels of education, the readiness of schools, teachers and students, the local culture and other contextual constraints, there may not need to reform radically and jump directly from quadrant II to quadrant IV. Particularly, we believe at the current stage that subject knowledge are still very important to the development of our society and individuals and teacher-centred approach and examination are still necessary to ensure

delivery of certain types of knowledge and skills in some areas of education. Therefore, we can use incremental approach to implement the reform of curriculum and instruction by changing 10-30% toward the student-centred approach and the multiple intelligence-based curriculum as shown in Figure 8. After 3-5 years of reform, the new situation of curriculum and instruction may be a quite balanced way with considerate proportions in all the four quadrants (I, II, III, & IV) as shown in Figure 9. After that, the educators and reformers may consider whether it is necessary to move further towards quadrant IV.

It is clear that for different groups of students, schools, and even communities, the steps and paces of reform of curriculum and instruction may be different across these four quadrants. But, the tendency towards quadrant IV is inevitable for borderless learning in coming years in an era of globalization and information technology.
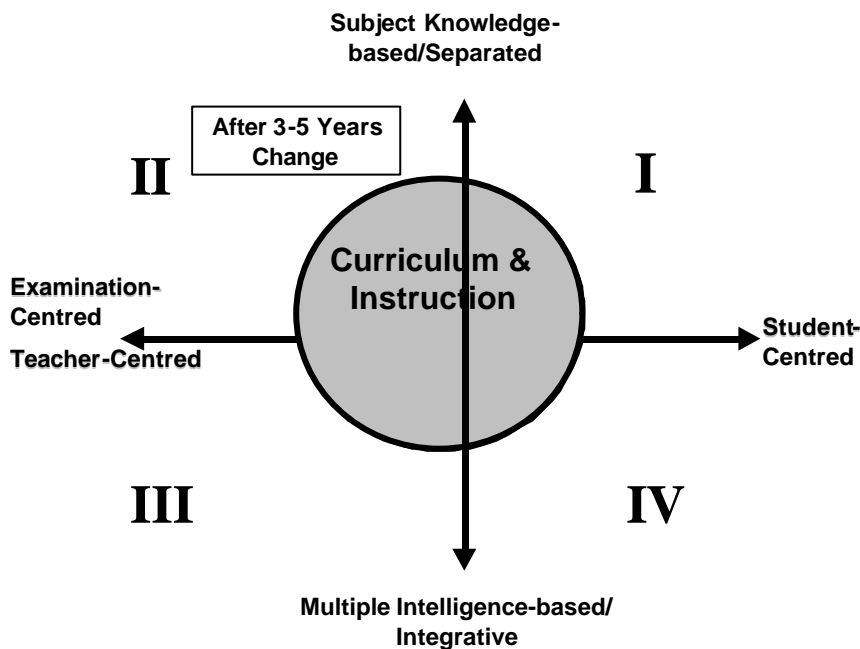
Figure 9: The New Situation After Reform of Curriculum and Instruction in 3-5 Years

Conclusion

The proposed new paradigm of borderless education that is contrastingly different from the traditional thinking, can be used to rethink and re-engineer education.

In the new millennium, our world is moving towards multiple globalizations and becoming a global village with boundless interactions among countries and areas. Our society is becoming more diverse and multiple and moving towards a learning CMI society. Our new generations should be prepared as a CMI person in such a fast changing and interacting local and global environment. The aims of education should be to develop students as CMI leaders and citizens who will creatively contribute to the formation of a CMI society and a CMI global village with multiple developments in technological, economic, social, political, cultural, and learning aspects.

We expect, our education will be triplized in the new century. In fact, the ongoing education reforms in different parts of the world have already provided evidence that many countries are making effort in this direction through various types of initiatives in globalization, localization and individualization. We believe, our learning and teaching will be finally borderless and characterized with globalization, localization, and individualization with the help of the information technology and boundless multiple networking.

We should use a new theory to promote self-learning in a networked borderless human and technology environment. Particularly through localization and globalization, we should build up school-based platform and central platform to pool up local and global sources and intellectual assets and form a networked borderless human and technological environment to support learning and teaching. Through these platforms and the new paradigm of learning, we will create unlimited opportunities and multiple global and local sources for life-long learning and development of both students and teachers. We believe, new education should facilitate the triplized learning and make students' learning process interactive, self-actualizing, discovery, enjoyable, and self-rewarding.

We believe, teachers, as the key actors, will play a very crucial role in the whole process of triplization in education. Their roles and teaching styles will change to facilitate students' self-learning and development of CMI. Reform of curriculum and instruction will be inevitable from "the teacher-centred approach/ examination-centred approach" and "the separated subject knowledge based curriculum" towards " the student-centred approach" and "the multiple intelligence-based curriculum".

Finally, I hope, all our students will become borderless learners with unlimited opportunities for learning and development. They will fully enjoy life-long self-learning and actualization and become CMI leaders and citizens for the new world.

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