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Creating Better Education System, Building Stronger Human Capital: A Creative Industries Perspective

Sonny Rustiadi^{a,b*}

^a*Institute for Creative & Cultural Entrepreneurship, Goldsmiths University of London. UK.*

^b*School of Business and Management, Institut Teknologi Bandung, Jl. Ganesha 10, Bandung 40132, Indonesia*

Abstract

Education is seen all over the world as the key to enable individuals and nations to meet rapid economic and social changes. This paper will discuss the findings from the research field work conducted regarding the development of creative industries in the city of Bandung, particularly regarding issues in education system. Using a mix of research tools, which mainly consist of desk study and interviews, the research selected sixteen industry practitioners to conduct the interview. The research then explore three important school of thoughts regarding education system as a way to explore how the same issue found is addressed in different context. We look at other contexts to learn their experiences and apply whenever appropriate within the Bandung context. On a practical level the research is also expected to contribute ideas and recommendations to various stakeholders, in particular the local government to develop strategies in improving and developing the education system.

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* Corresponding author.

E-mail address: sonny_r@sbm-itb.ac.id

1. Introduction

The development of the industries needs to be integrated collectively to ensure the sustainability of not only economic development but also local culture and identity. The idea is a market economy built on a competitive market economy principle where everyone is free to participate in their chosen economic field. A framework that ensures the actualization of achievement and progress of society is needed in order to drive synergy between all stakeholders.

The structure of the economy is changing rapidly with economic growth, from natural resources based economy to the human resource based economy. There are several things that must be considered in discussing and analyzing issues of creative industries. First, the industry itself, which is associated with the rotation of the economy and market transactions. Secondly, the organization, communication and/or cooperation between various stakeholders and the policies that govern the interaction. Third, data and statistics needed as way of measuring progress. It is also used as a reference to create a basis for policy and further programs. A foundation based on human resources as the main asset is a characteristic of almost all sub-sectors of industries.

2. Problem Statement and Research Methodology

Education is seen all over the world as the key to enable individuals and nations to meet rapid economic and social changes. However, there has always been a belief that education is a dilemma of mutually exclusive choices i.e. between sciences and arts, achieving academic standard and releasing creativity, authority and freedom in learning. When in fact, it would require all of these ingredients to be able to nurture the capacities of the youth and improve standards of accomplishment. This paper will discuss the findings from the research field work conducted regarding the development of creative industries in the city of Bandung, particularly regarding issues in education system. The research identified 2 problem statements which are

1. What is the current condition of education system, particularly in the city of Bandung?
2. What best way or approaches to address the issues within the education system?

After objectives of the study are properly identified, consideration goes to the means by which they are to be accomplished. The research will have a mix of research tools, which mainly consist of desk study and in-depth interviews. In the desk study, a review of the literature is conducted to understand the theoretical foundation. It also prepares for the next important step which is deep interviews. The desk study involves the significant reading and analysis of theories, researches, and other international examples in the sense of how the same issue is addressed in different context. We look at other contexts to learn their experiences and apply whenever appropriate within the Bandung context. This includes the potential tools created or used, or the approaches taken that have been effective. It also helps to reveal problems others have come across.

Qualitative research is central to the research design as a way to get deeper into the issue which includes face-to-face, open-ended interviews and a dialogue approach to data collection, providing the respondent with the opportunity of giving candid assessments and information. The objective is to comprehend the understanding that respondents made of their knowledge and experiences regarding the creative industries in the city of Bandung. With a qualitative research approach, information that was not previously expected can be gathered. Thus, the resulting data is likely to be richer, more descriptive, and more accurate according to the perspectives of the respondents chosen. This ultimately will give an authentic account of the field of study. Eighteen industry practitioners were selected for in-depth interview and focus group discussion from approximately 49 people/institutions that completed the initial questionnaire regarding their businesses. The respondents have been selected by taking into account the availability and accuracy of information contributed to the research, while at the same time addressing the affordability and timeliness of the research itself. Representation from each of the key sectors was acquired from these interviewees, in that each respondents representing a key sector and/or a key group of people and a different stage of development. While it was recognized that more interviews would have been desirable, this is what was possible within the interview time. It is also important to reach creative businesses from all around the city in the respondent selections; there were each six respondents from the center, from the suburbs, and from the border areas of Bandung. All of this correlates with infrastructures available to them.

3. Research Findings

As one of the leading creative cities in Indonesia, Bandung has a lot of creative potential. However, many of the creative workers interviewed felt that the regional development in Bandung is too focused on investments in physical infrastructure and that there is a lack of investment interest in human capital. This is unfortunate because human resource development is crucial not only as a driver of the economy, but also plays a massive role in maintaining the continuity of the creative economy itself. Creative industries require every creative worker to constantly innovate if they want to continue to grow. Following this point, education institutions are able to support the development of creative economy by offering a variety of academic programs that caters to the need of the growing industries. Graduates should continue to be equipped with entrepreneurial tools because nowadays in Indonesia the availability of employment is not proportional to the number of job seekers. Of course, not everybody wants to be an entrepreneur nor that everyone needs to be one. Society needs all kinds of people for it to function. However, the number of entrepreneurs in Indonesia is still low, only around 0.2% (BPS, 2010). Increasing the number of entrepreneurs is important to further develop the potentials of creative industries.

Unfortunately, the education situation in Indonesia is not encouraging. The creative market requires individuals with developed potential, unique characters, and authenticity. Formal education system that was originally developed in order to nurture the character and potential of individuals is failing because too much concern is placed on standardization and procedures. This is not to say that standardization policy is a bad thing. Having a common curriculum is beneficial as it can guide teachers. However, many educational endeavors are currently dominated by a concern for management rather than teaching. A lot of the teaching done is merely geared toward passing exams and attaining good grades rather than teaching to learn. A lot of the blame was put on how the system ‘forces’ teachers to do this in fear of plummeting school reputations if students are to fail the exam. A negative effect of this system is the widespread cases of cheat sheets leaked ahead of national exam in many cities throughout Indonesia. It happens not only in big cities but also in rural areas, including in Bandung. Many institutions such as The Indonesian Ombudsman Commission, the National Education Board, and the Indonesian Teachers’ Action Forum (Forum Aksi Guru Indonesia – FAGI), who monitors education, has expressed their concerns of the recurring cases of exam leaks.

Another condemning report on the condition of Indonesian education came from PISA 2012 report (PISA, 2012). PISA divides student achievement into six skill levels, from level 1 (lowest) to level 6 (highest) for math and science. The report shows that Indonesia has ranked at the bottom of the list in math and science students’ achievement, and did only a little bit better in reading achievement. 42% of 15 year-old students in Indonesia do not reach the lowest defined level for mathematic achievement. Three out of four students in Indonesia do not reach level 2 in mathematic achievement, which means that they cannot make literal interpretations of simple mathematic data presentation. Just 0.3% of Indonesian students managed to score at level 5, the second highest grade. In science, the performance of Indonesian students has declined compared to three years ago, with almost 25% of Indonesian students failing to reach the bottom level of proficiency in 2012. A further 42% were classified at level 1 achievement and no Indonesian student has managed to score at level 5. In a more positive note, the PISA report noted that Indonesia has more teachers per student than the majority of richer countries. This is possible with an amendment to the constitution that pledges 20 percent of the national budget for education. For the first time in 2012, PISA has incorporated a question on students’ happiness in the survey and the result is a positive note for Indonesia. Over 95% of 15 year olds students in Indonesia say they are happy in school. The report data also mentioned that students in Indonesia is most likely to socialize, with 96% said 'agree' and 'strongly agree' to the statement ‘I make friends easily in school’. This is not good, to say the least, that so many creative workers actually develop themselves outside education institutions in a peer-learning model relying heavily on network and creative community activities. As one of the interviewee explained:

“...there are many people who feel that their creativity was constrained when they were in a formal school environment, but they found ‘freedom’ within their community and network outside of school”.
(Excerpt from interview conducted).

The fact that Indonesian students feel happiest but still failed academically shows that the education system has failed to generate the independent learner. The fundamental issue is the call for a new balance in education,

establishing priorities in composition and organization of curriculum including approach of teaching and assessment, as well as relationships between schools and its stakeholders. If children are taught to be independent, then they will learn – whatever the content, context, or subject. If they are just only introduced to a specific body of knowledge, the most that they can be is a memorizer. The teachers are needed more to facilitate knowledge acquisition and direct students towards self-understanding.

4. Discussion

Education is not only determined by the effort of the individual student, but also the effort given by the teachers in managing education in schools. This is how the education design is important to prepare or to facilitate the teachers in performing their duties. With the help of a properly planned education design, the teachers can organize and manage the learning process according to the abilities, talents, interests and psychological condition of the student. The education design is important to support the effective transfer of knowledge between teachers and students and the nurturing of a learning culture. The process contains the understanding of the students, formulating learning goals, and planning a treatment using various mediums to help the learning process. Learning how to learn is one of the most important elements in education. The following discussion highlights three important values to have in order for a more proper planning of education design in schools.

To improve the education design, an increasing and widening participation of students need to be encouraged in the new emphasis on learning and on defining the threshold standards for achievement. The system requires an understanding of the local and regional potential of education, which emphasize the importance of more effective staff policies and practices within the framework of a strong relationship between the Government, students, employers and institutions. The need to address issues to improve the quality of education led to reviews of the education design and structures. This need to be balanced with the belief that education is not just about creating workers, but also about developing people. The education system needs to work in the Indonesian context, not just for now but also for the years ahead. The education design being put forward in the following section will address technical teaching and classroom management, as well as the way teachers can better deliver the curriculum.

4.1. A More Balanced Education

A significant problem in Indonesian education is the fact that standards of achievement have been too low and, more importantly, too narrow. An education system that concentrates only on particular types of intelligence undervalues the student's natural capacities and potential – when in fact these resources really are rich and various. Humans perceive the world in diverse manner of the senses. It shows the diversity of human intelligences and various modes in which humans think and communicates. Current education tends to emphasize on verbal and mathematical mode of thought. Utilizing words and numbers are considered as the supreme triumph of human intelligence. Of course, these skills are important to the intellectual growth of students, but they do not reflect the whole of education. If education were limited to these two qualities, human experience would be inexpressible and most of culture would not have appeared.

In the discussion on education, it is important to consider two schools of thought in relation to intelligence as discussed by Gardner (1993). On the one side, there are scholars who believe in a single-general capacity or structure of the mind and of intellect that every human being possesses to a greater or lesser extent. On the contrary, there are also scholars who believe in the view of family of primary large and unconnected mental abilities. In the belief of multifaceted intelligences and that intelligence exist not as physically verifiable utilities Gardner then proposed the Multiple Intelligences theory as a potentially useful scientific construct for this analysis of education. The theory argued of six set of human intelligences which all normal individuals possess to some extent but differ in the degree of skills and in the nature of their combination. The intelligences are (1) Linguistic intelligence, (2) Musical intelligence, (3) Logical-mathematic intelligence, (4) Spatial intelligence, (5) Bodily-kinesthetic intelligence, (6) Intrapersonal intelligence, and (7) Interpersonal intelligence.

A balanced education system necessitates a broad range of opportunities for students to discover and grow in different aspects of intelligences with a stimulating approach to teaching and learning. Talent manifests in many forms and should not be labeled merely by conventional academic measures. An essential function of teachers is to

recognize, identify, and acknowledge students' potentials and to make available the conditions in which these potentials can be nurtured. With proper support, self-confidence and self-esteem will grow and overall performance improves, leading to the discovery of the student's talent. Accordingly the teachers should possess more liberty to draw on their own creative and professional abilities to do this. Greater flexibility in the classroom will encourage creative teaching. Furthermore, the teachers need to be properly trained. This is important to support creative learning as the greatest constraints to success are low self-esteem and lack of motivation.

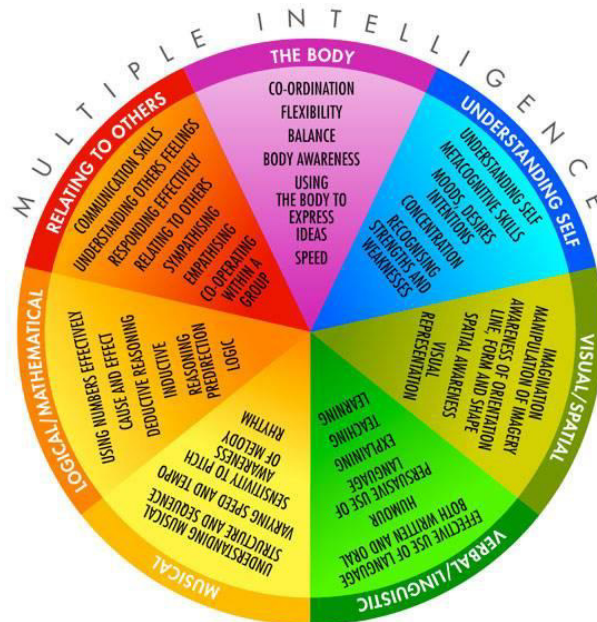


Fig. 1 Multiple Intelligence Theory of Howard Gardner (Source: <http://carneyclassroom.weebly.com/you-the-student.html>)

One important recommendation from NACCE (1999) that seems to be suitable to the Indonesian context is to increase the balance of education. It established six principles of a balanced education system which is Breadth (the curriculum should be broad as a whole and deep in its various parts), Balance (each field of the curriculum must comprise sufficient time and resources in order for it to create meaningful contribution, but should not drain other areas), Relevance (the programs should be related to the student's present needs, to the prerequisite of the subsequent stage of education, and to the overall goal of the society), Parity (respect equality between the various elements of the curriculum – at different stage of education, some fields might be more valuable than others), Entitlement (all children have rights to an education in schools and it is not conditional on geographical or social factors), Access (that all children should have adequate access to the experiences, people and resources needed to realize their potential with education).

The balance explained by NACCE is appropriate to be implemented in Indonesia because the educational balance that the government pursues is not in the right context. Students have to deal with 6 different subjects at the start of elementary school and up to 14 different subjects in their grade 12th of the senior high school. Keeping a balance of learning is a challenge for education design. Students need more than access to information and knowledge, they also need a manner of interacting with it, of creating associations, of understanding principles, of relating them to their own experiences, and of becoming familiar with their own sense of identity. It is very important to reach equality between various fields – language and literacy, mathematics and numeracy, science education, arts education, humanities education, physical education, technological education. There is a significant overlap and possible synergy between these various curriculum areas.

On the other hand, creative and cultural education is not merely subjects in the curriculum, nor that it is a supplement that should be added to the work of schools. Instead they are universal values in education. They

correspond to an essential factor in increasing standards and improving the effectiveness and quality of education throughout the curriculum. Creativity, similar to learning, is a very much a personal process. Each individual has different talents and different manners in understanding ideas and interpreting facts. It is important for the education system to accommodate these differences and avoid a single standard method for everyone to conform at the same time in the same way. On the other hand, although creative work entails an expertise of certain required skills, focusing on skills alone may impede interest in any subject. For example, a lot of people despised learning math because they are forced to do tasks that did not stimulate their interest.

Second, teaching for creativity. This is the type of teaching that are designed to build a student's creative behavior, which include encouraging (to assist student to trust their creative potential, to distinguish their sense of possibility, and to give the willingness to try), identifying (facilitate student to discover their own creative power), and fostering (recognizing and familiarizing the creative process in stimulating creative development). Samani (2002) argued that determining the quality of a learning model must be viewed from two aspects, namely processes and products. The processes aspect refers to whether the learning process is able to create a situation of learning and creative thinking. The product aspect refers to whether the learning process is able to achieve the objectives, namely to increase the ability of students according to pre-specified criteria.

Improving creative and cultural education would address systemic issues that affect all elements of the education system, including methods of teaching and assessment, the role of schools and other general aspects of educational management. The core of education is the relationship between teachers and students, as well as the relationships between fellow students. A big issue is that newly qualified teachers have insufficient training in these areas. This happens because they are confronted with a complicated practice of performing for the existing standards, teaching a curriculum consisting of core subjects, and preparing students for school experience in more than half of the course time available. They teach knowledge to pass exams, rather than building a learning culture. Another important consideration is cooperation of the teachers in a school. This is particularly vital in making learning strategies starting from the syllabus, lesson plans, and the form of assessment. If this can be done accurately then the learning can also enhance the cooperation. In addition to improving collaboration, it also increases the urgency for teachers to update and broaden their own knowledge continuously.

4.2. A More Competence-Based Education

According to Samani (2002), in general there are two approaches in the preparation of a curriculum, which is subject-matter based and competency-based. In the subject matter approach, the curriculum is prepared based on conventional study subjects. Therefore the subjects are very similar to the field of science and the content of learning is very similar to the theories or concepts that exist in the respective subjects. This model employs the assumption that if a person has mastered the theory or concept according to its appropriate level, then they will automatically be able to apply those theories or concepts in real life. Thus, the main objective in this model is mastery, whereas the application of the science itself is secondary.

Competence based curriculum are oriented on two aspects, according to Samani (2002). First, the impact and the expected results of a learner are attained through a series of meaningful learning experiences. Second, the diversity should be manifested in accordance with what is expected to be learnt, addressed, or illustrated in a gradual and continuous progress to be competent. In the competency-based approach, the curriculum is directed so that students are able to master certain competencies in accordance with the line of future profession or areas of expertise, with a variety of other attributes in its development. In this model, knowledge is not only the framework but also a source of competency. This means that to master the targeted competencies, students need to equip themselves with the necessary theories and concepts. In this way, there is a possibility that there is a limited quantity of concepts or theories that are included in the curriculum, as the remaining is deemed unnecessary. The major concern in the competency-based approach is the required competences of the graduates in order to be able to successfully pursue a profession or expertise and the learning of knowledge are done according to needs.

SBAC (Smarter Balanced Assessment Curriculum) in 2012 has released a framework for competency education which has brought together the growing body of work in the subject. The emphases on customized learning, student-focused and broadening of learning experiences outside the classroom are important foundations to the

implementation of this approach. This framework also offers an appropriate description of the competency approach to education and may serve useful in the context of Indonesia:

- 1) Students advance upon demonstration of mastery of content, skills, and dispositions that prepare them for college and careers.
- 2) Learning standards are explicit, understood by students, and measurable.
- 3) Assessments – formative, interim, and summative – measure and promote learning.
- 4) Demonstration of learning uses a variety of assessment methods including in-depth performance assessments that expect application of learning.
- 5) Instruction is personalized, flexible, and adaptable to student needs – both initially and as required by student learning.
- 6) Students both direct and lead their learning even as they learn from and with others – both within and outside of school.
- 7) Grading is used as a form of communication for students, parents, and teachers – not control or punishment.

Creative abilities, which are an important point in this matter, are built by practical work with the habit of engaging in the practice of creative thinking production. There are particular methods and skills that are specific to different fields and types of work, but there are also various common qualities of creative processes, which can be experienced and understood. The Wallas model (1926) was ground-breaking in its concept of introducing the sub-conscious into the idea-forming process. This model triggers other creative thinking processes. In applying creativity in education, it is helpful to understand the framework which introduced the classical classification of steps in creative thinking, namely, preparation (furnishing an idea with a preliminary form or outline), incubation (withdrawal from thinking about the idea and utilizing unconscious mental processes), illumination (shaping and clarifying the idea in the route of exploring and perfecting details), then verification (critical appraisal to assess logic and relate idea to evidence, practicability, utility and audience response). In this framework, two modes of thought can be identified which is generative and evaluative. Imaginative activity is a generative mode of thought, whereas creativity involves both generative and evaluative modes of thought. At the right time and manner, thorough critical assessment using evaluative mode of thought is necessary. However, at the wrong situation, it can kill an emerging idea. The balance between these modes of thought must be right in incorporating creativity within the design of education.

Creative thinkers are important not only to answer today's problems, but also to discover new problems that people had not thought of. Further opportunities should be provided to young people to identify problems for themselves, in addition to finding answers to prearranged problems. Creative accomplishment requires knowledge, control, and discipline balanced with freedom and confident to experiment. Creative thought often takes place when novel connections are created between ideas or experiences that were not linked before. These take place across and within various fields. Freedom to experiment is crucial for creativity, but skills and knowledge of the fields also plays an important role, as knowledge of the field is required to understand the media and materials involved.

4.3. A More Integrated-Learning Education

Integrated learning as a concept can be considered as a learning approach that involves several areas of study to provide a meaningful experience for the students. It is meaningful because of the integrated teaching approach, where children understand concepts through direct observation and relating it to other concepts previously acquired. In the integrated learning approach, exploration is central to curriculum development. Students are then expected to gain hands-on experience that enable acceptance, storage, and application of the concepts learned. Thus, students are trained to be able to find themselves studying concepts that become meaningful, authentic, and active. The way teachers design their learning experience is very influential not only on how meaningful it is for students, but also how effective the process can be. Learning experiences that involve relationships between various conceptual elements will enhance the effectiveness of the learning process.

Adaptation to the environment is done through a process of assimilation and accommodation. According to Slavin (1994) assimilation is the process of interpreting new experiences in relation to possessed patterns of behavior or thinking. Learning depends on the balance between understanding the process of recovery from the

clash between new experiences and possessed knowledge. When balance takes place, the person has the opportunity to grow and develop. The teachers can take advantage by creating situations that are intended to disturb the balance, therefore inducing curiosity in students.

The importance of environments in a learning process is put forward by Jean Piaget (Wood et al., 2001), who believes that social interaction with peers, particularly in argumentation, helps clarify the thinking process, and ultimately making it more logical. This development depends in part on how far a person actively manipulates and interacts with the environment. This indicates that the learning environment will determine the cognitive development of a person. However, there are some implications of Piaget's theory of learning such as the fact that education should focus on the child's thinking process apart from the result. For example, as well as checking students' answers in a test, the teacher must also try to understand the process of arriving at the given answer. Introduction and recognition of the role of children is important in achieving initiative and active involvement within learning activities. Education should also accept individual differences in the developmental progress because although children grow through the same developmental sequences, they do it at their own pace. Thus the teacher should give priority to students in their initiative and active involvement in learning activities. Also, the teacher should avoid spoon-feeding knowledge, and should aim to nurture students to find knowledge through interaction with the environment.

This constructivist approach to teaching intensively implements cooperative learning. It is based on the thinking that students will find it easier to understand difficult concepts when they are discussing issues with friends. Meaningful learning will not be realized simply by listening to a lecture or reading a book about the experiences of others. This approach claims that knowledge is formed by one's own cognitive construction and that experience is the key to meaningful learning.

Integrated learning requires a variety of facilities and infrastructure. The teachers must choose carefully which media is to be used. However, it is possible to use a variety of media, and this approach is actually advisable. To deliver a holistic experience, learners should be given a comprehensive illustration and demonstration of the topic discussed. The teacher is expected to optimize any available resources to achieve learning objectives. In addition to text books, supporting reading materials such as journals, research, magazines, newspapers tapes, or CDs can also be used as resource. The teacher must diligently and creatively collect various resources that can be beneficial for learning. The success of a teacher in implementing this strategy depends on the insight, knowledge, understanding, and creativity in managing the materials. The more thorough and wide-ranging resources are collected, the more effective the learning process can be.

5. Concluding Remarks

Schools are no longer the only provider of education. All members of a society display interest in the quality of education and many other parties are able to contribute from different fields of expertise. Partnerships between schools and its stakeholders become an important part of educational development. Partnerships with external organizations and individuals will enhance and broaden the experiences of students and will support teaching and learning.

The current education system relies heavily on summative assessment. Critics however, argue that summative assessment tends to focus on testing student's recollection of factual knowledge and skills, which is measured comparatively. More often than not, it gives little credit to experimentation, original thinking and innovation. As a result pupils, parents, and teachers develop an appeal to only prepare what the assessment scheme appreciates the most. On the other hand, formative assessment is remarkably valuable in encouraging creative teaching and learning and, if appropriately carried out, has been associated with better student achievement.

The development of learning, the realization of human potential, and the role of education are explored by people from vast range of expertise from all over the world. Governments are now convinced that human growth, accomplishment, and happiness are strongly associated to better educational opportunities for citizens. It is thus necessary for the society to build a formal system in assuring that each individual has access to as many choices as possible, as well as the potential to achieve competence. It must support individuals to be highly skilled in whatever fields are deemed important by the society, and support the general collaborative effort complemented by a belief that it is acceptable not to come up with an answer immediately as long as there is a determination to learn. The

ultimate objective of education should be geared towards encouraging personal growth and preparing skills that individuals can utilize however they aspire to. The education system needs to create a learning person, so there is a lot more self-ownership of learning. As a learning person, the student is trained to learn from different contexts beyond the classroom. The learning person takes interest in whatever subject they encounter and develop themselves. Education is not just about delivering knowledge, but also finding ways to the process in partnership with the students. Accordingly, education can be more valuable if it is customized to the capacity and needs of each individual –although indeed the cost (or the investment, whichever one sees it) may be substantial.

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