

Education Without Consideration of Human Inquiry: Flaws in Arguments on Competencies

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Abstract

Since the end of the twentieth century in many countries around the world, education has sought to foster competencies, including those referred to by the MEXT in Japan as “the three pillars of qualities and abilities.” This presentation will indicate some serious flaws inherent in the usual arguments on competencies. At the heart of my presentation are the questions: where and in what way do competencies exist? How can they be learned? Current mainstream educational theory and practice is based on frameworks such as “thinking consists of knowledge, skills, and character,” or “learning is divided into passive learning and active learning.” What I attempt here, however, is to present another view on thinking, inquiry, and learning in a way that follows a new scientific-philosophical trend, which has an affinity with the ontology or knowledge theory of phenomenology, hermeneutics, and pragmatism. Based on the view that criticizes the reductionist idea that considers knowing and thinking to be the inner workings of the mind and brain, and claims the idea to recognize action, perception, and thinking as one continuous whole, education, which seeks to foster competencies without taking into account the inherent character of human inquiry, may have serious limitations and deficiencies.

Keywords

Competencies, Inquiry, Learning, Pathos (Passion), Preunderstanding

Introduction

In a globalizing society, the future is everywhere increasingly unforeseeable, uncertain, and complicated. It is expected that labor, which a knowledge-based economy needs and AI (artificial intelligence) cannot defeat, will be required further and that unknown social problems will arise one after another from now on. Responding to such

near-future situations in a rapidly changing world is forcing the vision and principles of education to be revised. In Japan, education aims to foster competencies referred to by the MEXT (Ministry of Education, Culture, Sports, Science and Technology) as “the three pillars of qualities and abilities (Shishitsu / Nōryoku)” : “working ‘knowledge and skills’,” “ability to think / make decisions / express oneself and so on,” and “ability geared toward learning / human nature.” Furthermore, the way to achieve such aims of education is called “proactive, interactive, and deep learning.” It goes without saying that since the end of the twentieth century, educational policies to foster competencies have been introduced in countries around the world, including Japan.

There is some room for doubt in such education; for example, there is the possibility of placing an excessive burden and hardship on the individual. Although, we admit here that in the future people who can manage and solve unknown problems will be needed more than ever before. However, even if we recognize the need for education to place high importance on inquiry, creation, dialog, collaboration, and knowledge, we cannot but say that arguments regarding competencies such as “qualities and abilities” have many serious flaws. In this presentation I focus on the issues considered to be the most essential among such flaws and, in particular, those related to philosophical arguments.

1. Competencies and Learning as Global Standard

At the heart of my presentation are the questions: where and in what way do the “qualities and abilities” of competencies exist? How can they be learned? Researches to elucidate the characteristics of human ability, thinking, knowing, and learning have recently been advanced by cognitive science, psychology, brain science, robotics, biology, anthropology, etc. And philosophy also plays an important role in advancing those researches. However, as the researches have just begun and are only now in progress, there are many issues still in the midst of controversies. Reflecting on the restrictions which stem from these controversies, it appears that arguments on educational policies at a global level are trying to incorporate only the minimal flame of the most common achievements of these researches, but this seemingly neutral stance can cause serious problems.

The frameworks of competencies proposed by the OECD, etc., on which arguments on “qualities and abilities” are based, consist of the components of human abilities and character considered necessary for achieving the goals demanded by a future society. Those components are usually divided into three parts such as “knowledge, skills, and character,” or “knowledge, (cognitive and social emotional) skills, and attitudes and

values,” whose parts roughly correspond to each of “the three pillars of ‘qualities and abilities’.” Moreover, each component is divided into subcomponents, including communication skills, creativity, collaboration, metacognitive skills, resilience, and so on. Thus, in the “OECD 2030 Framework,” competencies are regarded as the whole of the interaction or the interrelationship between these components (although how these components or subcomponents are to be understood depends on each responsible agent of education). What is knowledge or character? What kinds of communication skills are required? These are open questions for each responsible agent of education or educational practitioner. At the same time, it is assumed that a better practice will be discovered and theory will be revised when we challenge new practices based on a certain learning theory and verify whether they succeed or not based on evidence.

Next, thinking is supposed to be a manipulation of symbols using certain skills, accompanied by ideas of two-step learning consisting of both passive learning (acceptance of knowledge) and active learning (utilization and creation of knowledge), which are based on the dichotomy between knowledge and skill. Thinking is regarded as utilizing existing knowledge or creating new knowledge by combining symbolized representations and data appropriately, while making full use of generic skills, driven and promoted by character or attitudes, and directed by values.

In cognitive science or AI research in recent years, however, a trend of thought is emerging that rejects modern Western mainstream frameworks such as “thinking consists of knowledge, skills and character” or “learning is divided into passive learning and active learning.” It is a trend that has an affinity with the ontology or knowledge theory of phenomenology, hermeneutics, and pragmatism¹. What I attempt in this presentation is to present another view on thinking, inquiry, and learning in a way that follows a new scientific-philosophical trend to criticize the reductionist idea that regards knowing and thinking as the inner workings of the mind and the brain, namely, to recognize action, perception, and thinking as one continuous whole. The issues I discuss here are limited to the basic frameworks and ideas of human abilities, thinking, inquiry, and learning. However, if the view I present is correct, education based on arguments on competencies, including the idea of “qualities and abilities” may have serious limitations and deficiencies.

¹ For some examples of this recent trend of thought derived from the ideas of James J. Gibson and / or Francisco Varela, and so on, see below. Clark, A., *Being There: Putting Brain, Body, and World Together Again*, A Bradford Book, 1997. Noë, A., *Action in Perception*, MIT Press, 2004. Barrett, L., *Beyond the Brain: How Body and Environment Shape Animal and Human Minds*, Princeton University Press, 2011. Dreyfus, H. and Taylor, C., *Retrieving Realism*, Harvard University Press, 2015.

2. Inquiry Embedded in Preunderstanding

How do human beings think and inquire? We can summarize the characteristics of human inquiry as follows, which is closely connected with what lies at the base of human life and is different from a search conducted by AI.

Much of human daily life is automated by following routines or habits. Lives that follow them are in a steady flow of things. A human being who gets accustomed to a given environment usually lives in a constant rhythm and tempo in such a flow, maintaining balance, without thinking of “what should I do?” or “I am the agent of action.” The world around her moves by itself.

When this steady flow is disturbed and interrupted and you realize that you are being pulled apart from the world, you are forced to stop and think. It is an occurrence of situations to which you cannot respond by following existing expectations or prospects about the world. Then, encountering *the unfamiliar* or *the other* obstructs the steady flow of life, shakes up your existing anticipations and prospects, and inspires “pathos (passion).” When you aim to mitigate or settle the “pathos” (wonder, resentment, pain, sorrow, joy, and so on) in a convincing manner while responding to the environment, a question arises and an inquiry is triggered. What is needed to deepen the question and develop the inquiry is nothing but a thought as reflection that involves symbolic manipulation and information processing.

When the flow of your life is steady and stable, you acquire some expectations or prospects, namely, an outlook or perspective about the future of the state of things you confront. In general, these are tied to certain concepts or symbolized representations, but these expectations or prospects emerge as implicit or tacit knowledge; *in their original form* they are not the knowledge connected with a certain concept or representation. Since they are knowledge which is *brought about* by collaboration between the body-brain and the environment, and not knowledge *about* the environment, it is possible for expectations or prospects of the environment not to require any concepts or representations. Here I refer to this kind of understanding, which does not necessarily require concepts or representations as “preunderstanding” (Vorverständnis)² by using the term hermeneutics.

In this presentation, I explain the structure of preunderstanding by using the concept

² Here I got suggestions from Hubert Dreyfuss and Charles Taylor's ideas of “preunderstanding” and “the preconceptual” (Dreyfus, H. and Taylor, C., *Retrieving Realism*, Harvard University Press, 2015) rather than “Vorverständnis” derived from Heideggerian hermeneutics.

of “tacit knowledge” (Michael Polanyi) and “perceptual experience” (Alva Noë) as a clue. According to both, the whole or the invariant can be understood implicitly without representation or judgment. The recognition of wholeness or invariance cannot be attained by the accumulation or combination of parts or elements but *emerges* in an unexpected way from interactions among parts or elements. Namely, according to Polanyi, a “comprehensive entity” emerges from “dwelling in” the relationship of elements³; according to Noë, as a result of moving around with “sensorimotor skills” in the environment, a “sensorimotor profile” of “appearance” or “how things appear” that varies according to movement is obtained, while at the same time, “how things are” that does not vary with movement is “enacted.”⁴

The preunderstanding is, as it were, an understanding of the dynamic relationship between the part and the whole, the specific and the general, or the particular and the universal; so, it allows us to foresee or anticipate the whole from parts. When looking at it from this point of view, we can understand inquiry as an endless process in which the existing preunderstanding becomes unstable when a new part or element is introduced and therefore jumps to another new stable preunderstanding discontinuously through emergence.

If the above explanation is correct, even primordial preunderstanding that does not include any representations or judgments can be regarded as a product of dynamic cognitive activity, which could be called *proto-inquiry*. It can be said that the *proto-matrix* of inquiry is embedded in preunderstanding, where the general is understood directly from the specific processes moving around the environment skillfully; in other words, where new understandings and actions can emerge in an unpredictable way from the interaction between the whole and parts in the environment. By virtue of that type of proto-inquiry, the acquisition of mother language, the understanding of another person’s physical or emotional expressions, the acquisition of various kinds of physical skills / techniques / arts, and so on can be attained.

3. Education That Promotes / Hinders Inquiry

When we turn our eyes onto human inquiry by taking what is *invisible* in human life into consideration, we can see that we actually follow a framework that can be put into the form of “preunderstanding (with the proto-matrix of inquiry) leads to inquiry (with

³ Polanyi, M., *The Tacit Dimension*, Routledge, 1966.

⁴ Noë, *op. cit.*, chapter 3.

thinking) through pathos” instead of that of “thinking consists of knowledge, skills and character,” which is accepted by arguments of competencies worldwide. So, what kind of education is required to promote inquiry (with thinking)? According to the former framework, it is necessary to nurture a fertile preunderstanding before anything else in order to promote inquiry. Nurturing preunderstanding means having the opportunity to move around in the environment freely, namely, to meet various and unknown people, things, and events, and *entrusting* yourself to the emergence of knowledge and skills.

Although it is possible for preunderstanding to not include any representations or judgments, it is necessary to expand the scope and deepen the substance of preunderstanding by connecting it with various kinds of symbols and concepts in order to promote and advance the inquiry. What is necessary for a question to arise is to be shaken into preunderstanding by *encountering unfamiliar* people, things, and events. But then if preunderstanding has richness and profundity a significant question can arise even when you encounter trivial information, and consequently inquiry can endure. In contrast with the case when preunderstanding is shallow and narrow, even an unprecedented experience will only bring *ad hoc* fun or shock instead of enduring questions, and will not lead you to inquiry or investigation. In today’s society, if your preunderstanding lacks broad and profound conceptual understanding, you cannot foresee distant consequences of social occurrences where politics, economics, and science have a great influence while being intertwined with each other. Therefore, due to the lack of expectations or prospects, your passion is not likely to be stirred up easily, and questions about many social issues will seldom arise. It is indispensable to read a wide variety of linguistic texts to acquire knowledge and information in order to advance inquiry and elaborate on the ideas obtained in the inquiry. Furthermore, *walking around* what Ivan Illich called the “vineyard of the text” is important in order to *initiate* as well as deepen the inquiry.

To continue the inquiry it is also essential for the inquirer to keep asking the question by not only thinking of the question as meaningful or significant but also accepting responsibility for others or things. To that end, it is necessary to interact constantly with the environment and participate in the community of inquiry which shares similar interests or questions. In other words, what you need in order to continue the inquiry is to maintain *dialog*, namely a calling-responding relationship with people, things, events, texts, etc. and constantly reflect and correct your understanding. Dialog is not just talking here. Dialog is a symbolic expression of the way in which we face others and things, or the attitude toward the world surrounding an agent.

Turning to the other question: what kind of education hinders or impedes inquiry? It is one that keeps the preunderstanding in an immature or narrow state. Examples we

often find today include: education that is eager to arrange tools or equipment in order to effectively and efficiently lead learners' thinking and behavior to goals, or that reduces learning to information processing or the operation of signs while pursuing the rationality of education and which turns even the *encountering* of the other or the *dialogs* into the manipulation of symbols or information. Under the type of education just cited the learning of concepts and information does not lead to a deepening of preunderstanding, so the ability to foresee the consequences of circumstances and inquire about unknown facts or truths remains poor or premature. The result is that those who lack such abilities are likely to feel anxious about themselves and tend to be afraid of others and unknown society. The more society becomes uncertain, the more the disease of the education that hinders inquiry will become apparent.

4. Perversions and Mistakes of Arguments on Competencies

If we seek to equip learners with competencies without taking account of the inherent character of human inquiry as described so far, we may get to a destination which is completely different to the one we originally aimed at. Scenes of the wrong destination we may arrive at can be summarized as follows.

1. When following the framework of “thinking consists of knowledge, skills and character” or “learning is divided into passive learning and active learning,” on which arguments on competencies including the idea of “qualities and abilities” are based, thinking and learning are likely to be reduced to symbolic manipulation or information processing so as to produce the visible outcome expected by educational administrators. In this case, however, no matter how hard you provide learners the opportunity for the “proactive, interactive and deep learning,” your attempts will turn to the “education that hinders inquiry,” because the learning will lose its substance, preunderstanding will remain shallow, and encounters with the unfamiliar will be eliminated.⁵

2. There is no problem *representing* what you have acquired as a result of constant inquiry *as* the “ability to think / make decisions / express oneself and so on.” The notion that knowledge, skills, and character play important roles in inquiry is not necessarily wrong. However, the notion will fall into false consciousness brought about by the so-

⁵ See also, Matsushita, R., “Shutaiteki / taiwateki de fukai mnabi” no hakarishirenai konnan: Miushinawareta kanōsei wo motomete (The Incredible Difficulties of the “Proactive, Interactive and Deep Learning”; In Search of Lost Possibilities), Group Didactica ed., *Fukai manabi wo tsumugidasu: kyōka to kodomo no siten kara (Spinning out the Deep Learning: From the Viewpoints of School Subjects and Children)*, Tokyo: Keisōshobō, 2019.

called “reification,” when you consider as follows; knowledge, skills and character are the abilities and qualities which belong to an individual and exist separately as they are named; acquiring each can be set as educational objectives respectively, and therefore each objective can be attained rationally through stepwise and effective teaching methods that have been adopted away from the context of inquiry. In other words, the idea of “qualities and abilities” comes to connect with a fictional view of education, which affirms the teaching of what *cannot be learned* in such a way.

3. Competencies including “qualities and abilities” are not representations of what really exist but the symbolized representations of what education should equip children with so that they can be comprehensible and accountable for educators or stakeholders. Nevertheless, if you assume that the learning and teaching of each component and its subcomponents is possible by rational educational methods and attempt to verify success or failure of learning and teaching by means of evidence, you will find the contradiction that the educational objectives as *fiction* are not only *attained* but also *verified*. Education goes beyond *fiction* and turns into *fake*.

4. Moreover, when components and their subcomponents of competencies are regarded as the real entity that exists exactly as named, education can have a serious misunderstanding about the interpretation of those components / subcomponents. For example, regarding “self-control”⁶; when education attempts to equip learners with social and emotional skills by rational methods, it is likely to equip them with the skills of “emotion management,” by which you can purposely conceal your real emotions and forge appropriate expressions for the scene while calculating the effect you will have on others, instead of acquiring the self-discipline necessary for inquiry by practicing inquiry. With such misunderstanding, your pathos (passion) will be pushed beneath your consciousness and questions that lead to inquiry will not arise.

The problems concerning competencies are not limited to what I explained above. Along with a more detailed explanation of human inquiry, I would like to discuss them again on another occasion.

Acknowledgment

This paper was supported by JSPS KAKENHI Grant Number JP15K04216.

⁶ Organization for Economic Co-operation and Development (OECD) ed., *Skills for Social Progress: The Power of Social and Emotional Skills*, 2015, chapter 3.