Review Paper / Derleme Makalesi

Curriculum Theory in the Context of Two Cultures

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Abstract

In the book Two Cultures, two cultures and the Scientific Revolution, C. P. Snow's (1959) is the first episode of the popular speech conference. He argued that sciences and humanities had been separated into "two cultures" in "the intellectual history of Western civilization" and that this separation became a significant handicap both in addressing the problems of today's World. This criticism can be understood in the context of mechanistic view and cartesian philosophy. The idea had found a very strong foundation for finding a position for itself, not only in the natural sciences, but also in the Social Sciences. For instance, in the early 1800s, philosopher Auguste Comte formulated the name 'Social Physics' with the hope that a mechanistic science could help to break down the complexities of society. Curriculum theory was also begun by such views based on the principles of the Fordist production system. However, scientists find that the rules of classical physics and mechanistic view do not necessarily extend to the beginning of the 20th century. Today, we confront a similar paradigm shift in the curriculum theory from the cartesian perspective toward a more holistic view in curriculum theory combining two cultures. Therefore, the main aim of this article is to discuss curriculum theory in the context of such a paradigm shift. In this respect, curriculum theory is taken as the transdisciplinary study of educational experience in which the main focus is ideas.

Key Words: Two Cultures, Epistemology, Curriculum Theory

İki Kültür Bağlamında Eğitim Programı Teorisi

Öz

İki Kültür, İki Kültür ve Bilimsel Devrim adlı kitapta, C. P. Snow'un (1959) popüler konuşma konferansının ilk bölümüdür. Temel argüman, fen ve sosyal bilimlerin Batı medeniyetinin entelektüel tarihinde "iki kültüre" ayrılmış olduğu ve bu ayrılığın hem günümüz dünyasının sorunlarını ele almada önemli bir engel haline geldiği yönündedir ki bu ayrılık, hem günümüz dünyasının sorunlarının ele alınmasında önemli bir engel haline gelmesi mekanik görüş ve kartezyen felsefe bağlamında anlaşılabilir. Fikir, yalnızca doğa bilimlerinde değil, aynı zamanda sosyal bilimlerde de kendine bir konum bulmak konusunda çok güçlü bir temel bulmuştu. Örneğin, 1800'lerin başlarında filozof Auguste Comte, bir mekanik bilimin toplumun karmaşıklıklarını ortadan kaldırmaya yardımcı olabileceği ümidi ile 'Sosyal Fizik' kavramını formüle etmişti. Eğitim programı teorisi, Fordist üretim sisteminin ilkelerine dayanan bu tür görüşlerle de başlatıldı. Ancak bilim adamları, klasik fiziğin kurallarının ve mekanik anlayışın 20. yüzyılın başların da yeterli olmadığını keşfettiler. Bugün, eğitim programı teorisindeki kartezyen perspektiften eğitim programlarında iki kültürü birleştiren daha bütüncül bir bakış açısına doğru benzer paradigma kaymasıyla karşı karşıyayız. Bu nedenle, bu makalenin temel amacı, bu tür bir paradigma kayması bağlamında eğitim programı teorisini tartışmaktır. Bu bağlamda, eğitim programı teorisi, ana odağın fikirler olduğu, eğitim deneyiminin disiplinler-üstü bir çalışması olarak ele alınmıştır.

Anahtar Kelimeler: İki Kültür, Epistemoloji, Eğitim Programı Teorisi

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Introduction

The Two Cultures is the first part of the 1959 popular speech lecture by C. P. Snow, written as a book in the Two Cultures and Scientific Revolution the same year. His argument was that sciences and humanities had been separated into "two cultures" in "the intellectual history of Western civilization" and that this separation became a significant handicap both in addressing the problems of today's World. This criticism can be understood in the context of mechanistic view and cartesian philosophy viewing objects something like billiard balls in which the interaction occurs without any outside observer effect. Such a view is analytical and analyzes the subject based on particular dimensions. For example, Newtonian free-body diagrams can be given as a good example of this. A free-body diagram (FBD) in the field of Physics is a diagram that displays the powers, moments, and reactions of the body under a certain state. They represent a body or associated bodies with all the forces, moments, and reactions that affect the body(s). The frame may be made of many internal components. To solve complex problems, a variety of free bodies and other diagrams can be needed. Hence, the mechanistic nature of the body can be easily depicted based on cartesian analytic principles. The idea was so pervasive finding itself a position is not only natural science but also in social sciences. For instance, in the early 1800s, philosopher Auguste Comte formulated the name 'Social Physics' with the hope that a mechanistic science could help to break down the complexities of society. Curriculum theory was also begun by such views based on the principles of the Fordist production system. However, scientists find that the rules of classical physics do not necessarily extend to the beginning of the 20th century (Jaeger, 2018: 3). As indicated by Bohm (2005, p. 2-3), to a degree the human being, in his reasoning, always had to break and isolate things in order to minimize the complications to a manageable extent; for obviously if we sought to contend with the entirety of reality in our technical practical works. In certain cases, it then was an important step forward to establish specific areas of research and separate labor. Much earlier, man's first discovery that he was not identical with nature was a vital phase since this allowed a sort of autonomy in his thought, enabling his mind, first of all in his imagination and lastly in his practical work, to go beyond the immediate limits of existence. Nonetheless, this kind of human ability to isolate himself from his surroundings and to divide and conquer things lead eventually to a broad spectrum of negative and harmful effects. Today, we confront the similar paradigm shift in the curriculum theory from the cartesian perspective toward a more holistic view in curriculum theory combining two cultures. Therefore, the main aim of this article is to discuss curriculum theory in the context of such a paradigm shift.

Einstein can be regarded as among the first pioneers who made the first step against the cartesian dualistic perspective of the mechanical universe in this regard. Spacetime became part of the unfolding drama rather than just a piece of the unchanging background. The modern physics re-established what was still a tradition within the old physics, but if a silenced or recessive one: the analytical view, most commonly identified with Leibniz. Every occurrence is the sum of all its relations with other activities, according to the view. Spacetime is part of the link grid; it's not the unchanging position (Unger, & Smolin, 2015, p. 50). Furthermore, quantum physics brought many new concepts that are totally unique for classical physics. Quantum theory highlights similar ideas regarding the entanglement of the subject-object-environment by emphasizing the possible features of emergence due to the interaction among subject-object-environment. For example, decoherence theorists claimed that no process can be separated from the environment fully. Decoherence is a product of nearly any physical system's eventual contact with its environment. The idea is that actual quantum systems rarely become completely isolated from their surroundings and that, in fact, a quantum device can easily and seriously intertwine with a number of external degrees of freedom as it communicates with its world. This interlock significantly affects, even if in the conventional context the effect of the world on the system (dissipation, vibrations, noise ...) is negligibly minimal, what can be seen locally in the network (Schlosshauer, 2019). In tandem with increasingly detailed theoretical proof of quantum interest, the discovery of decoherence triggered a significant shift in physicists 'opinions.
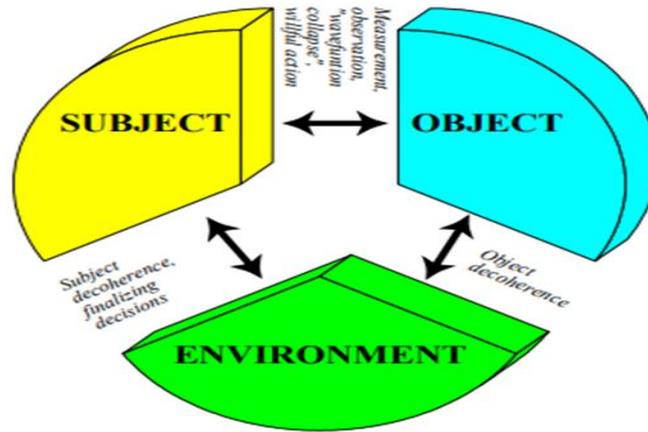
Figure 1. *An observer conveniently splits up the universe into three subsystems. As suggested, there is a qualitatively specific influence of the interactions between these three subsystems, which is why it is always important to analyze them separately (Tegmark, Wheeler, 2001).*

The key explanation that we interpreted probability and not stranger macro superposition is the emergence of the conceptions of chance and wave function crashes. Quantum mechanics, according to Feynman, splits the World into two subsystems, the entity being examined and all the rest (called the environment) (in physics terminology, their "degrees of freedom"). We must have a third component to explain processes including measurement: the topic, the observant's mental condition according to Tegmark Wheeler (2001). As emphasized by Bohm (1987, p. 217), the key thing implied in there is that the mind, life, and matter, whether animal or inanimate, are not completely clearly 'cut,' or split. Each of these can be evaluated in thought as groups with a degree of relative freedom. In general, the mentioned phases of consciousness can be seen as lying somewhere in the "flow" of the generative order. As its origin is approached, the subtle mental side is increasingly significant, while the manifested physical aspect becomes more apparent in the journey "downstream.". Similar ideas can be found in other social science areas such as social psychology which will be discussed in the next section. Hence, it is inevitable to review, bring, and combine these ideas in the context of curriculum theory. In this respect, firstly the observer-observee-task context in two cultures will be reviewed in the next pages and the implications of this in the context of curriculum theory will be discussed subsequently.

Method

This research is a theoretical review as qualitative research based on document analysis. The purpose of the theoretical review is to concretely examine the corpus of theory that has accumulated regarding an issue, concept, theory, phenomena. Theoretical reviews are particularly useful where the literature is complex, multi-discipline, or contested (Campbell et al., 2014). The theoretical literature review help establish what theories already exist, the relationships between them, to what degree the existing theories have been investigated, and to develop new hypotheses to be tested. Often this method is used to help establish a lack of appropriate theories or reveal that current theories are inadequate for explaining new or emerging research problems. The unit of analysis can focus on a theoretical concept or a whole theory or framework1[2]. Document analysis is a method of a qualitative study in which documents are evaluated by the author to provide voice and context around an analysis theme (Bowen, 2009).

The Observer-Observee-Task Context in Two Cultures

Modern physics has taught us more and more distinctly that some basic features of the atomic universe can not be reconciled either with our ordinary experiences or with Western philosophy's metaphysical structures. Especially key features of the quantum theory given as superposition principle, randomness in behavior dependence of a quantum state on measurement, entanglement challenge the classical views of physics on deeper levels (Jaeger, 2018, p. 4-5).

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[2] https://guides.lib.ua.edu/c.php?g=39963&p=253698 retrieved from: 23.11.2020

The superposition principle points out that quantum entity can simultaneously be in a mixture of different states that would be mutually exclusive in the classical world (Jaeger, 2018, p. 4-5). Subatomic particles show both wave and particle properties. In other words, photons that leave traces like a particle in Young's experimental setup on a screen show the interference pattern on Young's experiment on the screen as time goes on. If we close one of the slits in young's experimental setup, we can say that subatomic particles accumulate on the screen and do not show interference but if we don't make observation we contradictorily see the interference pattern (Susskind, 2008, p. 80-81; Gribbin, 2003, p. 139). One of the famous thought experiments regarding this phenomena is the well-known Schrödinger's cat thought experiment. Accordingly, it can be said that the difference between the measurement and the measured cannot be defined without interaction based on The Copenhagen interpretation. This thought experiment can be given as follows. Suppose it is a single photon throwing machine called S. The state of the photon from this machine will hit the semi-permeable mirror in the w direction or go to the detector in the z-direction and warn the detector and shoot the gun at the tip of the detector and kill the cat. According to the Copenhagen interpretation of quantum mechanics, when the measurement is not made, the photon is done in both cases at the same time, and the measurement compromises the state of the quantum system. In this context, it can be deduced that the quantum state of the cat can be both alive and dead interference, according to the opinion that both cases will be in linear interference (Brown, 2011, p. 22-25; Brown, 1995, p. 23-24; Penrose, 2010, p. 804). Here, the paradox can be summarized as follows. According to a conventional measuring device, the photon hitting the mirror is 50 percent likely to go up and the cat to survive 50 percent to the detector, and the cat to die (Penrose, 2010, p. 805; Gribbin, 2003, p. 19-23). In other words, common sense tells us that the photon will go either upstream or in one of the directions of the cat. The Copenhagen interpretation states that unless observation is made, the photon is present as a probability functions in both directions and physically, after observation that this function collapses and is reduced to a single state. In other words, according to the Copenhagen interpretation, it can be said that two-photon ghosts are waiting in both ways until a conscious observer looks (Gribbin, 2003, p. 19-23). In this context, it can be said that Schrödinger is one of the first to say that if quantum mechanics is to be considered as a universal theory, the existence of parallel realities can be observed not only in the microscopic world but also in the macroscopic world if the microscopic system interacts with the macroscopic system (Lockwood, 2005, p. 306). In this regard superposition principle, therefore, challenges the principle of uniqueness, according to which things are indefinite states (the chair stands in front of the window and not next to the door) (Jaeger, 2018, p. 4-5).

Randomness in behavior refers that the measurable properties of a quantum system and its temporal development can no longer be determined. It also challenges the principle of causality, according to which every effect must have a cause (if the chair falls over, a force must have acted on it) (Jaeger, 2018, p. 4-5). One of the notorious features of the quantum theory related to this principle of randomness in behavior is the Heisenberg uncertainty principle. In (1927), the German physician Werner Heisenberg claimed that the position and velocity of an entity can not be corrected, even in principle, determined at the same moment, or, at the same time. This principle later results in the opening of many paradoxes so far. That is if the physical properties of the micro-universe can, approximately, be separated into two categories, A and B (particular locations, rates, energies, and angular momentums, etc.), it can be claimed that if the first feature is in the A list and you have all the details in this list, you can not reach the first feature in the B list. Similarly, the second feature information in List A does not enable you to use the second feature information in List B. Likewise; the information for the second feature in the list A prevents you from accessing the information for the second feature in the list B. This continues until the end of the list for each item. For example, the more precisely you determine where a particle is, the less accurate its speed is. Similarly, the more precise you determine the speed of a particle, the less knowledgeable about where the particle is. The quantum theory, therefore, develops its duality: Many of the physical properties of the micro-world will undoubtedly be established, but you exclude the opportunity to decide any certain related properties (Greene, 2010, p. 117-118). Unlike Newton's or even Einstein's framework, which is depicted on the linear velocity of a particle's motion, quantum mechanics says that both of these properties at the micro level may not be known exactly. Moreover, the more precise you are, the less certain you will be with the certainty of the other (Greene, 2008, p. 117-138). 'Heisenberg's uncertainty principle', tells us that there is an absolute limit to how small its spread can be about how closely 'almost' a momentum state it (Penrose, 2010, p. 509; Greene, 2010, p. 110; Heisenberg, 2000, p. 35, 138; Brown, 1995, p. 20-22; Adıvar, 1969, p. 551-553).

The dependence of a quantum state on measurement indicates that the measurements have a direct influence on the measured object In the micro world so that only observation assigns a definite state to a quantum particle. It challenges the principle of objectivity (related to the principle of reality) stating that things have an objective existence independently of our subjective perception of them (the chair is exactly left as we leave the room And if we don't look at them anymore, where it sits and is still there) (Jaeger, 2018, p. 4-5). The quantum theory says that when we measure the photon, the wave function will collapse into a single state and there will be no interference, but if we do not measure it, the waves will behave again and there will be interference. In this context, it can be said that the behavior of light is determined after passing through the slits. The aim is to decide if the experimental device in the double-slit method, by believing a certain condition for the method, still 'senses' light, is not determined, either by the wave or by the atom, or by the indeterminate condition. It can be said that the reason for trying this thought experiment Delayed-Choice Thought Experiment is that we are obliged to decide whether to turn the measuring devices on and off after the light passes through the slits (Gribbin, 2003, p. 139). Wheeler suggested that the cosmic version of this thought experiment could also be done by gravitational lensing as predicted by Einstein's general theory of relativity. Accordingly, he predicted that if the path of light from a quasar intersects with a galaxy, the gravity of the galaxy will bend the photons and the light will have two choices to go from the left and right side of the galaxy. In principle, by taking these two lights, it is possible to establish the interference pattern and prove that the light shows the wave feature or to prove whether the photons have particle structure from the upper experimental setup by means of package cells. The importance of this thought experiment is that the photons leaving around the galaxy cannot interact with one another because the distance and time between them are very large. Despite this, experiments have shown that light behaves as a particle or wave in favor of the quantum theory, that is, according to the chosen mechanism (Gribbin, 2003, p. 143, Wheeler, 1979). Therefore, the Delayed Choice Thought experiment indicates that the universe may be a self-stimulating circuit as a participant in this respect. Thus, Wheeler's universe interpretation becomes a closed explanatory loop, wherein the cosmos constructs itself by self-observation. . As Wheeler depicted in the U diagram: "Starting small (thin U at upper right), it grows (loop of U) and in time gives rise (upper left) to observer-participant – which in turn imparts "tangible reality" [...] to even the earliest days of the universe." (Wheeler 1983, p. 209).
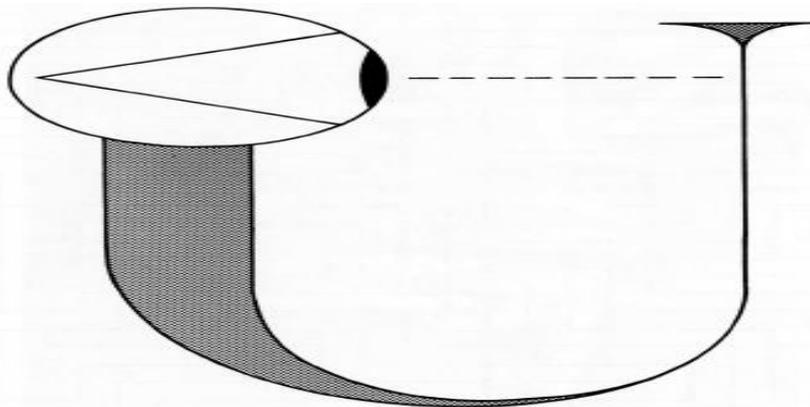

Figure 2. *The Delayed Choice Thought Experiment Indicates That the Universe May Be A Self-Stimulating Circuit As A Participant*

Quantum entanglement refers to the phenomena where the non-local interconnection of quantum particles may take place. They still should belong to a similar physical system (physicists say a single wave function). Even though they are spatially far apart. Therefore, they are merged as if by a magic force which in turn is contradicted with the principle of independence defending that things behave individually and independently of one another (the chair is not influenced by the fact that there is another chair in the adjoining room) (Jaeger, 2018, p. 4-5) as emphasized by Bohm (1987, p. 197), the cosmos could thereby introduce new kinds of large-scale regularities that could not be understood in terms of the movement of matter or the propagation of effects at speeds no faster than light. Furthermore, the odd condition of interaction between two particles which is called quantum entanglement surprisingly implies the holistic nature of the physical world. According to many repeatable tests, the other component (i.e. one not measured) automatically renounces the flowing state of the quantum limbs and assumes identical properties, regardless of how far they are away from each other, provided a couple of properly prepared

particles of similar roots. This phenomenon reveals how two particles that come from one origin in the microscopic realm are dependently arising and become the causes and conditions of each other (Chu, 2019, p. 112). What the notions of decoherence, the entanglement of quantum mechanics tell us is that an observer conveniently splits up the universe into three subsystems: the degree of freedom that suits their subjective expectations (the subject), degrees of freedom that are observed (the object), and everything else (the environment). As suggested, there is a qualitatively specific influence of the interactions between these three subsystems, which is why it is always important to analyze them separately (Tegmark, & Wheeler, 2001). However, this separation brings us to the concept of "wholeness" or "inseparability" of the physical objects in essence and the role of the observer and observee affecting the behavior of the characteristics of phenomena which we can see the similar rationality and irrationality in social sciences. As emphasized by Roy (2018, p. 47), in further into the phenomenology of reason, we notice the assertion of Husserl that the fundamental structure of world-consciousness resides within a dialectic relationship between reason and unreason and between cognition and horizon. This is an immensely valuable interpretation from the educational point of view. In this sense "the connection between reason and unreason reveals however that the reason as a whole is an ongoing mechanism where we constitute reason in the light of the necessary presence of unreason. We have to pursue to recreate a purpose pedagogically in a critically self-aware way that combines it with other sources of experience, such as carefully-developed intuition. This is important for the way we interpret learning. The curriculum is historically known as a unidirectional acquisition and accumulation process. The dialectic relation with the psychic horizon outside is not taken into account. Therefore the modern natural science indicates the importance of subject, context, and interactions since the science of the first half of the twentieth century have challenged Newtonian mechanics 'belief that one should discern distinctly between the actual activities of the universe and the location of them in time and space. As emphasized by Peters (2008: xii), we might still tell a parallel tale of the disciplinary adoption of modern formalist techniques and developments in mathematics and physics and their penetration into the social and cultural sciences, particularly after Einstein's theory of relativity at the turn of the twentieth century, following Minowski 's elegant equations. The subsequent mathematization of 'spatial time' and its vectorization in social and cultural sciences, along with the sequence of flows and influences from the arts, revealed that the influence and growth of formalist methodologies and techniques taken from advances in mathematics were increasingly complicated in epistemologically speaking scientific practices.

The new paradigm is not only seen in natural sciences but also the social sciences. Symbolic interactionism in sociology or constructionism in education came up with the idea of focusing on the organic nature of phenomena. For example, social psychology tries to understand the question of "What makes a good boy sitting quietly at home crazy when he goes to the disco? What could be the force that allowed a person who was regarded as quiet and submissive to be in front of the lynching attempt in a group?". These and such effects, which cause different behaviors in the individual and a group, are the subject of social psychology. In this context, it is called social behavior as it is affected by a society where people live and respond according to the expectations of society. Social behavior occurs as a result of specific needs and learning. Individuals' behavior can change with social impact. Behaviors that he/she did not do alone can be done within the group. Norms are effective in this, as a set of behaviors and rules set by a group. As a result, when it is desired to receive rewards or to prevent punishments, the normative effect may arise as compliance and obedience.

One of the important holistic concepts of the social sciences which are very similar in the context of subject-object-environment interaction is social conformity in social psychology. Social conformity is a type of social influence that results in a change of behavior or belief to fit in with a group (Coultas, & van Leeuwen, 2015). Social conformity can occur in the form of obedience, compliance, identification, and internalization. Obedience occurs when someone behaves in a particular way since someone of higher status is ordered to do so. Compliance occurs when you behave in a direct or indirect request (Larsen, Ommundsen, & Van der Veer, 2008). İdentification occurs when the person wants to be the other person, vicariously, or literally. Lastly, internalization can occur if a person embraces control from a person so that behavior and beliefs remain congruent with their value systems (Kelman, 2006).

Many experimental studies are showing the differentiation of people's behaviors in a group with what they live in their worlds. This phenomenon was examined in Sherif's (1936) experiment of the formation of the group norm in the 1930s. This study was an experiment based on the human perception of an object as moving when s/he looked at a stationary tiny spot of light that was lit in the pitch dark. In the

first stage, Sherif took the subjects into a dark room one by one and asked them to tell them how far the tiny spotlight moved each time, which was fixed but said to be moving to the subjects. At this stage, the subjects answered the same questions that were asked in succession, but their answers are contrastingly not in harmony with each other for each time. However, for a while, they developed an approximate average by themselves. In the second stage, when the subjects were taken into the room collectively when the experiment was repeated, it was observed that the other subjects were influenced by each other together with the opinion of the first subject and formed a good-bad group average. In the third stage, when the subjects were taken into the room again, it was determined that the answers they gave this time were close to the group average. It demonstrated that these subjects constitute a certain group standard or norm while side by side.

A similar study was developed by Asch (1951; 1956). In a series of research, Asch distributed a pair of cards to groups of a certain number of subjects. There are three lines on one card with distinct differences between them. The other shows a single line. At the beginning of the experiment, group members hold the floor one by one, and the last person who is a researcher who seems to be an innocent participant took the floor. To gain the trust of the subjects, firstly correct answers were given. In the experiment, in which a large number of cards and subjects were used, within the framework of the scenario determined by the researcher, the assistant started to give wrong answers. Other subjects tended to participate in the false answer. Subjects were asked which of the lines A, B, and C of the X line shown in the figure are of equal length. Although X is equal to B, it was seen that the participants responded following the response of the assistant, who was suggested to say the wrong answer C.

In his study, Milgram (1965) examined the extent to which the level of compliance of individuals can reach. In this experiment, two people, one teacher, and one student will be selected. While the student's role is to answer the questions, the teacher's role is to deliver an electric shock to every wrong question. The person who plays the student role is the assistant of the researcher. For a while, the teacher comes up with an order to punish the student as he starts to answer the questions incorrectly. The participants did not stop before 300 volts, despite the student screaming in pain, groaning. After the 40 participant group, this experiment was carried out on 1000 people and it was found that people in different professions behaved similarly.

Therefore some sort of decoherence effect can be observed at the social level as well as quantum physics. However, it should be noted that this holistic effect is not only restricted by humans. The observer-observee effect is so pervasive that can affect even other beings. Robert Zajonc and his teams (Zajonc, Heingartner, & Herman, 1969) built a contraption to observe how a cockroach's behavior was affected by the presence of other cockroaches. The investigators put a bright light on the end of a runway that was not favorable to cockroaches and calculated how long time a roach needed to avoid the light by rushing to the other end of a darkened room. The problem was, could roaches perform this easy feat better while they were alone, or when the other cockroaches were present? As expected, the individual cockroaches carried out the mission quicker as other roaches observed them than while they were isolated. However, this performance can change by the difficulty of the task. When the cockroaches had a tougher challenge at the labyrinth on the ground, the opposite results were seen: When other roaches were around, the roaches needed a longer time to solve them than when they were alone. Several other experiments have shown that in the presence of other humans and animals do worse when the task becomes challenging (Aronson, Wilson, & Akert, 2010, p. 276-279).
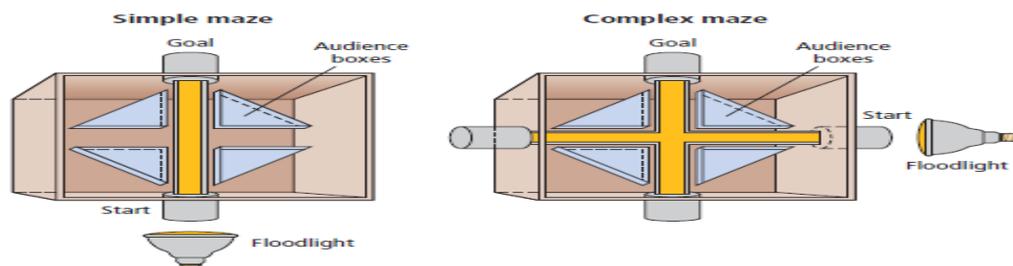

Figure 3. *Cockroaches and Social Facilitation (Aronson, Wilson, Akert, 2010, p. 276)*

What this research suggests that learning can be affected by observer-observee context depending on the difficulty level of the task. Zajonc (1965) claimed that the performance of a performer in front of others tends to increase because of increased arousal (Bordens, & Horowitz, 2008, p. 287). In an influential article, Zajonc (1965) clarified elegantly why the participation of others encourages a positive response, yet prevents a less learned or fresh reaction. He claimed that the involvement of others enhances physiological stimulation (i.e. the vitality in our bodies). If there is some anticipation, it becomes simpler to perform a dominant response but more challenging to do something creative, or learn something different (e.g. something we are excellent at) (Aronson, Wilson, & Akert, 2010, p. 276-279). Higher stimulation improves commitment. It raises the commitment when the activity becomes dominant and when the activity becomes the non-dominantly impairing output. If you're good at tennis, you get more enthusiasm and thus more energy. If you're not a successful tennis player, your success is possibly affected by increased enthusiasm and determination (Bordens, & Horowitz, 2008, p. 287).

There are many theories regarding the explanation of this. According to the first explanation, we are more sensitive to the existence of other individuals. The second explanation is that people sometimes care over how others judge them, as compared to cockroaches. The third explanation focuses on how distracting other people can be (Aronson, Wilson, & Akert, 2010, p. 276-279). For example, a theater audience doesn't just have a passive performance. Instead, audience members sit in judgment of the actors, even if they are only armchair critics. The sort of arousal this situation induced by this circumstance is known as evaluation apprehension. A variety of social psychologists conclude that anticipation of appraisal induces performance discrepancies while an audience is present (Bordens, & Horowitz, 2008, p. 287). Distraction-conflict theory, by the way, suggests that the presence of others is a source of distraction that leads to conflicts in attention between an audience and a task that affect performance. The theory consists of three key aspects. Firstly, interference contributes to tension in his concentration. Secondly, the involvement of other people distracts him from the mission. Thirdly, the tension between these two claims pressures the performer and raises the arousal level (Nicholson, Parboteeah, Nicholson, & Valacich, 2005).

Social facilitation which can be identified as 'enhancing success through the pure presence of others.' is very similar in the context of subject-object-environment interaction. There are two types of social facilitation: co-action effects and audience effect. Norman Triplett performed the first work in this area in 1898. In his work on speed records of cyclists, he found that cycling speeds hurried toward each other instead of the clock alone. He sought to duplicate this under laboratory conditions using children and fishing reels. The studies of Triplett show the influence of co-action, a process in which the very existence of those performing the same job improves work performance. Social facilitation occurs also in the presence of a passive spectator/audience which is known as the audience effect. Dashiell (1935) observed that the participation of an audience improved the success of topics by growing the number of basic multiplications. Travis (1925) found that well-trained subjects were better at a psychomotor task (pursuit rotor) in front of spectators. This principle of social facilitation is confirmed by a variety of studies: The participation of others also boosts success is well learned, basic tasks and impedes output in complicated unmastered tasks (Kenrick, Neuberg, & Cialdini, 2009, p. 436). Social loafing is the opposite of the social facilitation settings we have just considered. It means that you are performing a nondominant skill, one that is not very well learned, then the presence of an audience detracts from your performance. This effect is known as social inhibition (Bordens, & Horowitz, 2008, p. 286). Social loafing implies that individuals continue to ease in the presence of others and can not judge their success to the degree that they become bad at basic tasks that do not matter, but at the same moment, at complicated tasks that are important to them (Aronson, Wilson, % Akert, 2010, p. 280).

Another example that can be given for the observer-observee context is the Kohler effect. Recently, Kerr and his coworkers have rediscovered another motivational gain in groups known as the Kohler effect. The researchers rediscovered Kohler's (1926) work by noting that a less competent member of a group of two (one dyad), working together on a particular task, works harder and performs better than predicted because of the collective (collective) effort of the two participants, when the group result emerges from both partners' shared (conjunctive) attempt. The inverse of social loafing is realized. The weaker member of the group, rather than free-riding or loafing, increases his or her effort (Bordens, & Horowitz, 2008, p. 291).

What different concepts and phenomena in two cultures such as quantum physics and social psychology underlined are that the emergence of knowledge in the interaction among subject-object-

environment is of significance to understand the reality behind those phenomena or concepts which is partially dismissed by the positivist perspective in the last century. According to complexity theory, the notion of emergence of new properties and behaviors which are not present like the component elements that are not contained in the essence of the constituent elements, or able to be predicted from a knowledge of initial conditions (Mason, 2008, p. 2). As emphasized by (Slattery, 2006, p. 106), modernity's influence discourages theological self-reflection through, for instance, deepening autobiography, ethnography, phenomenology, spirituality, mystical practices, ecumenism, and narrative work. In this sense, the focus on systematics, textual criticism, canonicality, and formal catechesis is paired with fervent support for theological foundations. Indeed, cultural and individual isolationism is responsible for this inclination. Modernity has facilitated the alienation of individuals, locked into quantifiable space and time, unable to construct personal contacts, incapable of recalling previous memories, unable to control the way world affairs take place in the future. A contemporary intelligentsia that disregards self-understanding of itself is no better than pre-modern fundamentalist thinking. Yet both theology and self-reflection incorporate a positive post-modern curriculum. Therefore, without being considered as a human construction, the dominions of science are viewed as a corpus of knowledge. Science must be seen by specific findings or formulating theories as a domain of information. As such, it represents a human society governed by norms, values, ambitions, and ideals which translate the historical perspective of personal and intellectual struggles and quarrels (Paraskeva, 2011, p. 10). Therefore as remarked by Roy (2018, p. 219), the subjugation culminated, along with the subsequent myopic curriculum that is currently evident, in an alienated, fractured, and neurotic man out of touch with reality. This one-dimensional man is partly the result of an impoverished education and his development, in turn, is the primary social construct of modernity. The curriculum has so far been used as a slave or tool for producing and cultivating this one-dimensional object without any other sort of cognition and awareness being coordinated. Today's most of the research is still disregarding these new ideas in both two cultures. Many educationists still view students are separable, atomic individuals that can be analyzed just as the bodies were analyzed in free body diagrams. They assumed that if they meet certain criteria and present desired inputs, they can get the predicted ideal outputs. However, these assumptions dismiss the context of Observer-Observee interdependence and relationships. As emphasized by Roy (2018, p. 220),

> *"The refusal to phenomenologically isolate the being from the curriculum produces both the being- in- curriculum and curriculum-in-being—a single process. And, second, if curriculum literally means the course one runs, then the course now run must include moving toward an educational imaginary in which such becoming-in-knowledge is thinkable. For it is impossible to bring about a true change in the fundamental conditions and content of curriculum without at the same time bringing about a corresponding change in the fundamental social unit of experience that constitutes and is constituted by curriculum. Rethinking curriculum therefore also means rethinking the question of being: Who or what is the social unit of being and becoming that is being educated?"*

Curriculum Theory in the Context of Data-Information-Knowledge-Wisdom-Idea

Since the beginning of the philosophy and humans' research endeavors to understand the universe around themselves, the epistemological understanding of the knowledge forms, as well as the understanding of human nature, has been always on the agenda so far. The allegory of Plato's Cave refers to the epistemological and taxonomical understanding of knowledge "forms" beginning from "names" of the physical objects that we can see to the idea or true forms of knowledge. Later, this allegory has been heated by different thinkers until modern times and has come to this day. For example, Karl Marx, a proponent of dialectical materialism, said that "All science would be superfluous if the outward appearance and the essence of things directly coincided." and said that the freedom that the working class will break its chains by their "class consciousness". Michel Foucault's famous book (1973) "This Is Not A Pipe", in a way, refers to the similar arguments of Plato in which he discusses the systematic link established between a visual representation (image) and a linguistic sign (word) and reality (object) (Gültekin, 2017, p. 50). Wittgenstein's insect allegory is another attempt at this debate. "It's raining, but I don't believe it's raining." summarized as Moore's paradox, is a different footnote to Plato's cave allegory. Baudrillard's concept of simulation is in this context a modern adaptation of Plato's ideas. Just as in philosophy, the education and curriculum theory also focuses on the taxonomic and epistemological understanding of the content and aims of education as well as curriculums. That might be the reason why Pinar (2012, p. 5) emphasized that the first step to altering reality — the nightmare which is the current state of public miseducation which is similar to Plato's cave allegory where prisoners chained in a cave, so

that can not turn their heads since the cave wall is all they can see in which a fire is burning behind them — is aware of the fact that we are truly going through a nightmare. The present nightmare — in which educators do not influence the curriculum, the very operational and d intellectual core of education which is the case in Plato's cave allegory where there is a parapet between the fire and the prisoners that marionettes will walk along. The puppeteers behind the prisoners carry puppets, which cast shadows on the cave wall. These marions, the actual objects which move behind them, are not visible to the prisoners. The inmates are seeing and listening to shadows and echoes cast from items they can not see. — has several markers, including "accountability," a fairly common concept which accounts for the educational success of the student instead of the student and their parents. What is suggested by Pinar (2012, p. 4) to achieve this social and subjective reconstruction project, teachers must consider the past and imagine the future, although how the domain is perceived to be unpleasant just as prisoner's eyes are not accustomed to actual sunlight. However, teachers become "temporal," living simultaneously in the past, present, and future to see the true forms of Sun or light. That is what the previous section emphasized that two cultures converge that knowledge is not independent of subject, object, and environment so that knowledge is not a discrete part of a whole but it is an organic extension of particular contexts. As emphasized by Feyerabend (1993) regarding the western and eastern perspectives on medical viewpoints emphasizing the distinction between western analytic style and eastern holistic perspective on how things work. For example, in western thought, the method consists of two stages in the case of herbal medicine. Next, it is studied in its chemical components by herbal concoctions. It then decides the basic effects of each constituent and discusses on the basis of the overall effect on a single organ. This neglects the probability that the whole herb affects the state of the overall body, and that the diseased organ is treated by this current condition of the whole body rather than a mere portion of the herbal structure, a 'magical bullet. 'As remarked by Bohm (1987, p. 12), First of all, our main reaction to reality has become utterly fractured. This often causes one to concentrate on individual topics, even though they are closely connected to a wider context. Consequently, we do not know the unforeseen consequences, which is a fragmentary way of thinking that can't always be handled. This leads to these issues extending through the whole background and ultimately generating challenges that could be worse than those we began with. For instance, humanity has caused forest and agricultural land degradation produced deserts, and even threatened melts by pursuing natural resources in fractured ways. That is actually what happens in curriculum theory as well. For example, focusing on objectives in Tyler's paradigm of curriculum limits the creativity of educators to what decision-makers or teachers themselves determine is essential and attainable and too frequently behaviorally observed or measured utilizing standardized assessments (Pinar, 2011, p. 84).

It can be seen even the passive role of the observer can influence the behavior of the observee in positive or negative ways depending upon the difficulty level of the task according to the two cultures. Therefore, there is an interrelation among the observer, observee, and task. However, today's curriculum theory rests on "the observer/observed ("ego/ world") antithesis and deals only with the patterns that connect" emphasized by Roy (2018: 167), rather than examining 'objects' we switch from one observation node to another, from one communicational complex to another, to understanding relations in each component structure. It is apparent that the previous objectification of the universe and its isolating analysis are an unsatisfactory and imperfect reaction to the dynamic world.' The most organic and efficient approach is to explain it, rather than in terms of causes and consequences between isolated bodies, in terms of relations and "connections. Today, knowledge appears as nothing other than new variations of elements that begin to arise from evolving configurations. This does not mean that the stability of the element we call water, for example, can not be taken for granted. This means we are continually changing our connection to water. It seems to us in a new, unparalleled light with a previously unknown complexity and meaning. Adding new elements or agents to a given system exponentially multiplies the number of relations or potential interactions with these elements or agents, hence the number of possible effects. This is an important attribute of complexity theory (Mason, 2008, p. 35). Therefore cultivation of the inner self in this unbreakable organic whole of observer-observee-task relationship gains importance. As emphasized by Murillo (2018, p. 4), a re-conceptualized viewpoint of the curriculum reveals its relationship with the notion of education which, in German culture, came to express in the word "Bildung" for the subjectively existing person and the potential for subjective reconstition. Loosely translated as "the cultivation of the inner self," education is a self-initiated transformation mechanism that strengthens meaning and character. In this respect, it is something that happens in the practice of study: the moral enhancement of the discipline of academic activity with alterity and knowledge.

To incorporate this modern viewpoint, our concepts and understandings of interactions and relationships need to shift. Curricula need to return again and again to the existing points and processes of dominant buildings and the way we view each other concerning the environment (Roy, 2018, p. 168). However, what we face in curriculum theory is the special case of fragmentation. The thought is separating itself and then suggest that these parts are there naturally. The distinctions between nations are considered to be 'just there,' but apparently, people have invented them. People came to recognize these distinctions and they were there. The same refers to the splits between sects and countries. For example, the divisions between nations are regarded as being 'just there', but they were invented by people. People have come to accept those divisions and that made them be there. One of the obvious things wrong with thought is fragmentation. The thought is breaking things up into bits that should not be broken up (Bohm, 1992, p. 3-6) so that the curriculums do the same action. As underlined by Roy (2018, p. 168), this allows the curriculum to deliver more than equations, formulas, factoids, irrelevant definitions, and remote knowledge irrelevant to everyday life. It can be designed to awaken or fulfill the subject's existential potential. The alternate interpretations thus have no less than a "flesh" of the relationship between subject and curriculum to the extent where the standard distinction between subject and curriculum disappears. In other words, one becomes the curriculum.

What is needed in curriculum theory is the synthesis of the western analytic perspective and eastern holistic view so that learning should be understood to be a transformation process from data to information to knowledge to wisdom to idea (episteme) in the context of sign (task)-signifier (observer)-signified (observee). As emphasized by Bohm (1982, p. 259), in East and West, an imaginative growth of a new order is required. This growth is not probable when humanity persists with its current fragmentation of Eastern and Western cultures. Nor is it sufficient for each culture to adapt to its own needs certain features from the other that it may find useful or desirable. To do this, to still go on with the rigidity of basic assumptions that are characteristic of both cultures which just contribute to misplay and blockage of creativity. It is important for a true dialogue between the two societies where fixed roles are not taken into account so that there can maybe be a new free and open shared spirit.

As opposed to Bohm (1987, p. 12) 's concept of "fragmentation arising when an attempt is made to impose divisions arbitrarily, without any regard for a wider context, even to the point of ignoring essential connections to the rest of the world", in this scheme thought-signs can be divided into four classes first, pictures or diagrams (icons); and secondly, signs, metonymy (analog), trope (metaphor) in terms of those basic units so that the transformation of those parts results in new knowledge forms that cannot be reduced in its parts. In the iconic image, the signifier is identical with the signified so that representamen which satisfies the function of a representamen by a character ($S=T=S'$) under phenomena. In metonymies and synecdoches, the signifier is similar in some way to signified there is some sort of intersection of the sets S, T, S' under phenomena ($S \cap T \cap S'$). As for tropes/metaphors, the signifier is not equal to (distinctly different from) the signified and there is a combination of sets under phenomenon (Monaco, 2000). This is important for curriculum theory since this idea of a metaphor can be used for the illumination of the natural world of science by equating scientific exploration with a poetic interpretation in a metaphorical context. As emphasized by Bohm (1987, p. 32-38) the imagination is engaged in a related process of artistic interpretation to the interpretation of novel concepts in science when it uses a poetic metaphor In science, however, it is important to establish more and more "actually" the importance of metaphor, although the metaphor can remain relatively implicit in poetry. Naturally, it is difficult for the nonscientist to have a clear experience of what it is like to create a new theory or scientific once. However, it is necessary to obtain some insight into speaking about the use of metaphor in poetry. It is clear that in poetry and science the artistic interpretation in the form of a metaphor will take place but in much wider fields of life. What is important is that in both these places the action of creative interpretation in the context of a metaphor is essentially identical, as it requires an acute interpretation of intense passion and high energy dissolving overly static concepts of widely accepted information in a tacit framework.

Therefore learning is now understood to be a "cultivation of the inner self" where data is transformed into ideas (episteme) from icons to symbols to metonyms to metaphors based on the interaction with phenomena represented from short term memory to working memory to long term memory. Just as Bloom's taxonomy, what most taxonomies emphasized is this internalization process ended up with ideas. Thus, post-modern reform scholars give a curriculum model as a theological text that contains a metaphysical discourse in the educational undertaking. The program promotes self-reflection,

intuition, non-rational thought, non-linear ways of instruction, meditation, and wisdom. Only in this context will T. S. Eliot's probing question to modernity, "Where is the wisdom we have lost in knowledge?" become intelligible (Slattery, 2006, p. 105). This is important and central for curriculums as pointed out by Murillo (2018, p. 57) follows:

> *"The psychoanalytic understanding of language—and the role of the Signifier in relation to the signified in particular—actually constitute a theory of the subject. As such, it is central to the discussion of curricular work. As Manuel Asensi has pointed out, when Ferdinand de Saussure elaborates what became the basis of modern semiotics, organized in the formula of signified/signifier, and tied it to psychology, he was actually articulating the classic notion of the subject (one that operates by conscious control) which is the underlying notion that operates in much of modern social sciences. By subverting it, and placing the Signifier above the signified in the formula, Lacan redefines the theory of the subject, giving way to the recognition of the unconscious and its understanding as a language phenomenon.*
>
> *For the context of curriculum studies, taking this redefinition seriously implies an ongoing retheorizing of curriculum as text: a racial, gendered, class, temporal and spatial text. Understood from a psychoanalytic vantage point, curriculum then appears as a human arrangement that inscribes subjectivity by posing unfinished symptoms that elicit completion in diverse ways. As such, and by virtue of exerting preset meanings, and imposing delimitations, it also opens up and inaugurates the possibility for individuals to assert themselves in their own subjective terms, reinvigorating the ongoing reconstruction of subjectivity, the quest of desire, and ultimately, the re-invention of freedom."*

The theorists and scholars in the curriculum area should take the worry in Heidegger (1968) seriously that most of us have lost the importance, the need, and the capacity to "think" profoundly about the really important things. We know what it means when we try to think about ourselves. If this attempt is to succeed, we must be prepared to learn how to think (Magrini, 2015, p. 11). The absence of existential knowledge and spiritual insight, as well as the unilateral focus on logical thought and scientific thinking in educational settings, has impaired the conception of and the immediate meditative understanding of the true existence of consciousness, self, and reality so that the full development of human potential and the development of true education have been impeded. Therefore, the existential and intellectual value of meditation and the synthesis of wisdom and method-side techniques would have considerable value for discovering the other elements of the curriculum for the transition of consciousness. (Chu, 2019, p. 112) which is beautifully described by Bohm (1987, p. 188-189)

> *"Consider, for example, how music is comprehended. At any given moment, a particular note may be sounding in awareness, but at the same time, a kind of "reverberation" of a number of earlier notes can also be sensed. Such reverberation is not the same as recollection or memory. Rather it is more like a part of an unbroken enfoldment and unfoldment of the notes concerned into ever subtler forms, including emotions and impulses to physical movement, as well as a kind of "ethereal" echo of the original notes within the mind. Indeed if successive notes are played several seconds apart, then they no longer combine together in such a way as to convey the dynamic sense of unbroken flow that is essential to the meaning of the music. But when they are played at their proper speed, the notes fold together into an overall tune or musical theme."*

In curriculum theory, such a language that it both poietic and painterly enables these "hidden" facets to emerge in a new context such that the curriculum is the focus of our inquiries while maintaining and retaining the facets recalcitrant for our inquiries and queries. Such a language, since it gathers its strength as a medium to the truth--happening, will encourage what comes into being, in such a way as to shine and shimmer with a new light, where the problematic facets of the phénomene might motivate our continuous thought that evolves along new lines follows new approaches that would otherwise be kept hidden had not our curriculum practices been driven by the work of art. Such language, just as the brush of the "action-painter," leaves traces of the liveliness of the curriculum, and through spectacular and dramatic and, at times, subtle movement, poetically and in a painterly manner, "translates" our experience and communicates this re-conceived and ever-growing understanding to others (Magrini, 2015, p. 74).
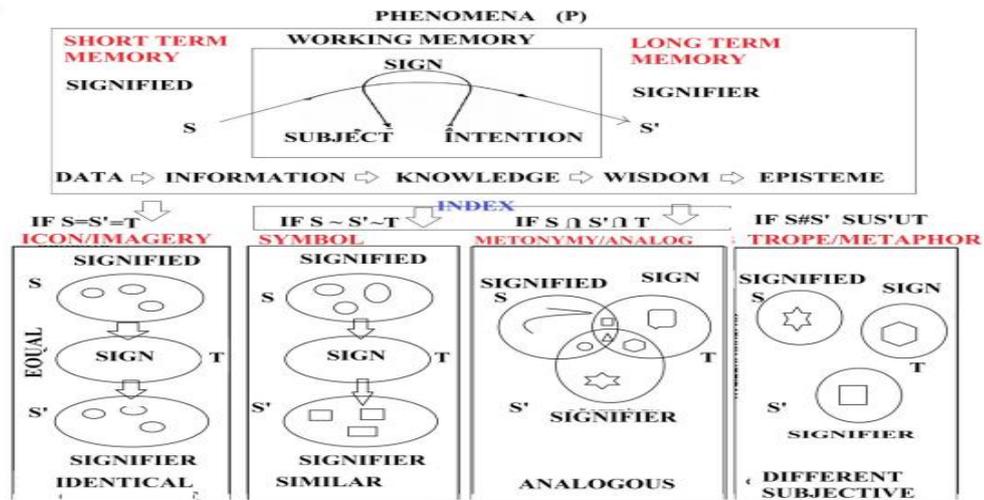
Figure 4. *Observer-Observee-Task Relationship Can Be Understood In The Context Of The Sign-Signifier-Signified Context Where The Internalization Begins From Icons To Metaphors In The Transformation From Data To Knowledge (modified from Monaco, 2000, p. 176-177)*

Currere is an autobiographical theory fundamental approach developed by Pinar (1974) and later improved by Pinar and Grumet (1976) to make it possible to research "self-reflexivity" systematically within education (Pinar, 2004; 2012). The idea of currere abandons the fixed vision of the curriculum as a schedule or text prepared by expert persons so that teachers and students will implement the former with as minimal a subjective intervention as possible. Currere is a reflective loop, in which the thoughts bent back upon themselves and thus recovers its volition (Kumar, 2013, p. 7). The currere process offers no easy remedies. Instead, this autobiographical approach calls on us to calm down, to recall the experience again, and to meditatively imagine the future through reflection. So that we consider the present in a more detailed manner, with more depth and subtlety, we steadily and in our own words examine our knowledge of the past and the dreams of our future. The Currere approach is not a question of psychic survival, but a question of subjective risk and social reconstruction, the acquisition of selfishness and society in the future (Pinar, 2012, p. 4). In this regard, the curriculum as currere which is an interpretation of lived experiences rather than a static course of studies comes to the fore. This process view of curriculum as currere stresses the individual's ability to rebuild their identity, identify relations with others, replicate and reinvent the past, envision and create potential prospects, and become more personal and collective (Slattery, 2006, p. 93). Therefore, as pointed out by (Roy, 2018, p. 192), a living curriculum can help achieve rhythm through the incorporation of corporeal physical acts — dance, theatre, planting, weaving, singing, walking, assembly, etc. which binds the mind systematically with physical intellect. There is much to add to the ethics of treatment, without which the world becomes a desert and our lives a vandal. Thus, from the viewpoint of the Rethinking Curriculum, the correct awakening and involvement of the corporeal intelligence in curricula is a high priority.

The four-stage, regressive, progressive, analytical, and synthetical system of currere characterizes "temporal and cognitive changes in the autobiographical study of education experience" (Pinar 2004, 35). In the regressive step, the memories of the past are treated as "data that is created by free associations — a technique of psychoanalysis — to recreate the past and thereby re-experience and change the memory of one." The analytical stage is like a phenomenological encounter, in which the past and the future are discussed and a subjective room of freedom is generated in the present. It is a phase that looks at what is not yet and "conceives potential future." The present, the past, and the future are seen as a movement. In the fourth, the synthetic phase, one experiences "the living now" by listening carefully to one's inner voice in the historical and natural world where the moment of synthesis will be achieved (Kumar, 2013, p. 7). In this respect, it can be said that since Plato's famous cave theory, many philosophers and scientists have been emphasizing a similar aim with different words: achieving wisdom or wholistic knowledge or ideas encompassing both cognitive and affective domains. What Bloom et al. (1956) cognitive taxonomy as well as affective taxonomy of Krathwohl, Bloom ve Masia (1964) or what SOLO taxonomy, as well as Koplowitz's theory of adult cognitive development, actually point out the similar aspects of cognitive and affective development human nature. We can synthesize those theories in the context of data,

information, knowledge, wisdom, and idea scheme also although each stage occurs each individual in unique ways we can create a general scheme for these stages just as developmental stages of human growth as birth growth reproduction death even though every individual uniquely passes those stages. Therefore actually, what many modern educationalists indicate as deep thinking, meditative thinking can be understood in the context of data, information, knowledge, wisdom, and idea scheme (Moseley et al. 2005). Whether it is deep or mediative thinking or the simple form of thought, all form of cognitive and affective processes begins with internal or external data. Data is related to the sensational receiving of the stimulus from outside and inside. In terms of Bloom's et al. (1956) taxonomy, it is related to remembering and recognizing as well as recalling the stimulus by defining, duplicating, listing, memorizing, repeating, stating which corresponds to the receiving/attending phase which is defined as willing to be aware of something, giving attention to something by asking, choosing, describing, following, identifying, locating, selecting, replying in the affective domain. Data correspond to the pre-structural phase in SOLO taxonomy where the subject is bound to specifics and cues and responses are confused so that cues and relevant data and interrelations are at a minimal level. It corresponds to signal learning which is the simplest form of learning and consists essentially of classical conditioning as well as stimulus-response learning which is a more sophisticated form of learning, which is also known as operant conditioning in Gagne's eight categories of learning. It is related to Engage-Enter (corresponding preparation phase) in the 5E model of instruction where it engages students by having them mentally focus on a phenomenon, object, problem, situation, or event (Moseley et al. 2005).

The information has a meaning 'for us'. In terms of Bloom et al.'s (1956) taxonomy, it is related to the understanding level where an individual explains concepts and the data by classifying, describing, discussing, explaining, identifying, locating, recognizing, reporting, selecting, translating. It is related to the responding phase in which the individual willingly participates or be ready to respond by answering, assisting, aiding, complying, conforming, discussing, greeting, helping, labeling, performing, practicing, presenting in the affective taxonomy. In the SOLO Taxonomy, information corresponds to the uni structural stage in which it is possible to generalize only one element without the sense of continuity that is therefore too fast; leaps to conclusions can therefore be very inaccurate in that indication, and related facts and interrelationships are poor. It refers to the chaining where the participant can link two or more previously learned stimulus-response connections into a linked sequence and verbal interaction, in which the ties between the related components are of a verbal type in the eight learning categories of Gagne. It is related to Exploration (corresponding incubation phase) in the 5E model of instruction where students explore ideas to understand them (Moseley et al, 2005). Many educationalists criticize the information-acquisition aspect of education just as emphasized by Kumar (2013, p. 9), the distribution of information is centered on facts without respect to the understanding of individuals engaging in educational experiences. In its orientation, it is strictly behavioral, positional, and "scientific." The meditative inquiry is a deep psychological approach to understanding one 's existence, while not against information. It is an analysis of the existence and interaction with individuals and the natural environment not an aggregation of knowledge.

Another important concept of deep or mediative thing is the knowledge which corresponds applying level in which individual use the information in new situations through executing, implementing, solving, using, demonstrating, interpreting, operating, scheduling, sketching in addition to analyzing level where the individual takes part the knowledge to determine relationships, causes and, connections by differentiating, organizing, relating, comparing, contrasting, distinguishing, examining, experimenting, questioning and testing in the cognitive domain of Bloom's et al. (1956) taxonomy. It is related to the valuing phase in which the individual begins to identify with behavior and commit it by demonstrating, differentiating, explaining, following, initiating, joining, proposing, studying in the affective taxonomy. It refers to a multi structural stage of SOLO taxonomy in the sense of consistencies based on isolated attachments that can only generalize the cue and the related details and interrelationships at a medium level with a few small and separate aspects. It is equal to discrimination learning by developing the ability to provide adequate (different) reactions to some related stimuli which vary in a structured way and conceptual learning and that includes developing the ability to respond to various stimuli consistently in the eight categories of Gagne's learning which form a common class. It corresponds to the explain phase in the 5E model of instruction where students use resources and information, to construct or revise their evidence-based models and explanations (Moseley et all, 2005). It should be noted that knowledge is a more internalized form of information as indicated by Macdonald (1974 Cited in: Kumar, 2013, p. 106), knowledge is not only facts and experiences that are present in the external world waiting to be

uncovered, but rather a mechanism of "personalization" of the external world by human beings' inner capacity as that capacity interacts with natural reality.

Wisdom corresponds to the relational level in which individuals are now able to appreciate the significance of the parts with the whole. Wisdom can be defined as the state of knowledge in equilibrium with action, as the mastery of knowing the method and having the virtue of knowing the golden mean of the questions as "Why?" "When?", "Where?", "How?", "With /what?", "Whom?" without going to extremes. Aristotle explained this as finding the right middle/golden mean in knowledge and action based on virtues (Gökberk, 1961, p. 88). Accordingly, for example, if 15 kg food is more and 3 kg food is less, a trainer does not recommend eating 9 kg food because; 9 kg of food can be more for one, less for one. Arts (Coach) should do their work to find the ideal medium (Özçelik, 2019, p. 16). Therefore wisdom corresponds to the evaluating level where the individual appraises, argues, defends, judges, selects, supports, values, critiques, weighs, and justifies a stand or position by judging the value of knowledge in the cognitive domain of Bloom's et al. (1956) taxonomy. It is related to the organizing phase in which values become systematic by comparing and contrasting them and ordering as well as prioritizing them in judgment by adhering, altering, arranging, combining, comparing, competing, defending, integrating, modifying, ordering, preparing, relating in the affective taxonomy. It corresponds to the relational phase in SOLO taxonomy where one generalize within a given or experienced context using related aspects so that cue and relevant data and interrelations are high. It correlates with rule learning, which is a highly contextual process, requiring the ability to understand and apply relationships between concepts in various contexts including circumstances not commonly seen in Gagne's eight categories of learning. It corresponds to an elaborate phase where the students involve their knowledge in further experiences that apply, extend, or elaborate the concepts, processes, or skills in the 5E model of instruction (Moseley et all, 2005).
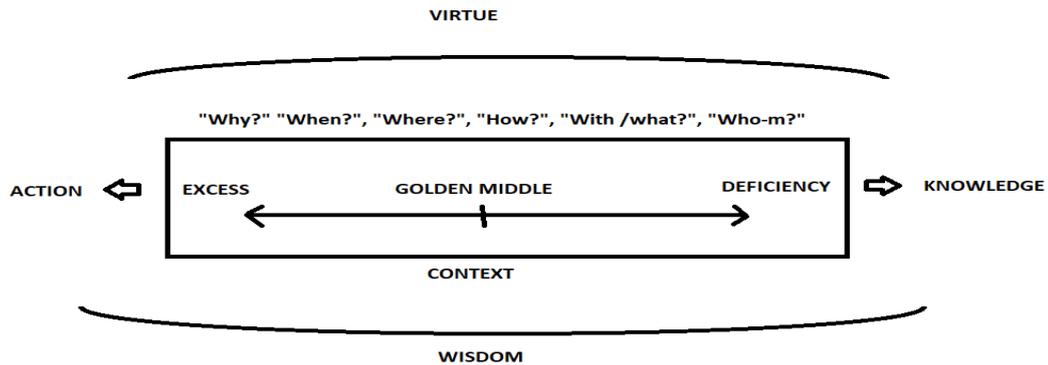

Figure 5. *Wisdom as A Golden Middle in Judgement as A Virtue*

Finally, ideas which are the highest level in knowledge acquisition in Platos's philosophy corresponds to an extended abstract level where individuals are capable of interacting and generalizing and transmitting the fundamental concepts and ideas within a certain subject, not only within the specific subject area but also beyond its conceptual boundaries. It corresponds to creating level where the individual design, assemble, construct, develop, formulate, investigate, and produce a new and unique a new whole (Moseley et all, 2005, p. 85-88). It corresponds to the characterization level where the individual internalizes, acts, displays, influences, immerses, incorporates, acquires the value in the affective taxonomy. It corresponds to the extended abstract level where one can generalize to situations not experienced so that cue and relevant data and interrelations are maximal in SOLO taxonomy. It corresponds to problem-solving that involves developing the ability to invent a complex rule, algorithm, or procedure to solve one particular problem in Gagne's eight categories of learning. It corresponds to evaluate phase encouraging students to assess their understanding and abilities in the 5E model of instruction (Moseley et all, 2005).
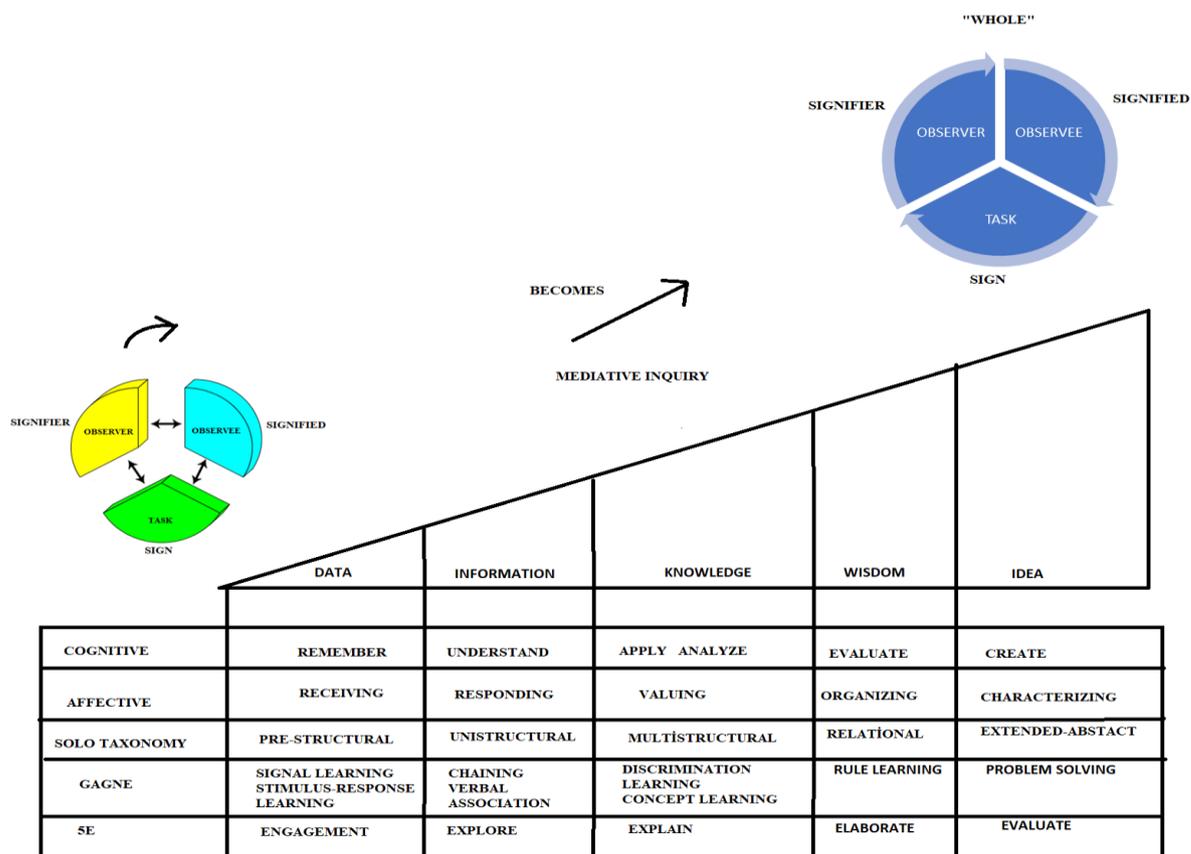
Figure 6. *Different Levels of "Knowledge" According to Different Taxonomies*

The developmental scheme of the stages of the knowledge according to many taxonomies is very compatible with Koplowitz's theory of adult cognitive development including not only logical thinking but also post-logical thinking. Even if his theory is founded on Piagetian theory, his post-logical and unitary phases transcend Piagetian theory. According to this model, there are four stages as Pre-logical, Logical, Post-logical, Unitary in adult cognitive development as given in Table 1 (Moseley et al. 2005, p. 214).

Table 1. *Koplowitz's Stages in Adult Cognitive developMent (Moseley et al. 2005, p. 215)*

	Pre-logical	**Logical**	**Post-logical**	**Unitary**
Cause	one-step	linear	cyclical	all-pervading; cause and effect as manifestations of one dynamic
Logic	emotion over logic; process not separated from content	logical	logic in context	one communication tool out of many
Relation among variables	unrelated	independent	interdependent	Constructed
Blame/problem location	others	where problem starts	in the system	problems as opportunities/boundary constructed
Intervention site	others	where the problem is	where there is leverage	where appropriate
Ability to deal with the abstract	concrete	abstract	relationships	spiritual; non-material
Boundaries	closed	closed	open	Constructed

In Koplowitz's theory of adult cognitive development, especially the unitary operational thought where we perceive the outside world is only one of many possibilities, and the causality considered linear now pervades the whole universe, connecting all events is important especially for the concept of "self-reflexivity" and regressive, progressive, analytical, and synthetical system of currere as well as mediative inquiry. All things have this connectivity, which goes beyond rational linear thought and can be best conveyed by context, metaphors, paradoxes, experience, and even mysticism (Moseley et al. 2005, p.213). As noted by Kumar (2013, p. 11), this psychological phase of becoming – an observator who regulates the observed or the ideal that regulates the reality – is a separate thought method that gives rise to the

perception that the "observer" is different from the "observed" or the "thinkers" is different from the "thought." If the thought split itself as the observer and the observed, the controller (e.g. non-violent ideal) and the regulated one (e.g. violence) lead ultimately to elimination and conflict.

These stages are compatible with the method of currere having four stages as the regressive, the progressive, the analytical, and the synthetical. In this regard, we can combine Koplowitz's theory of adult cognitive development with the data, information, knowledge, wisdom, and idea (episteme) scheme with a web metaphor. We can consider our cognitive knowledge as a web and take the data as an outside information unit that has no "meaning" for us except "stimulation". In the second or progressive stage, one looks into what's still not the case. Just as in the past case, the future inhabits the present. The currere student contemplates potential possibilities meditatively. In the analytical stage, the student examines both past and present. Currere's analysis is similar to phenomenological bracketing; distancing oneself from past and future experiences to establish a hypothetical field of autonomy at the moment. In the synthetical step, one re-enters the lived present. When you listen closely to your inner voice in the historical and natural world, you ask: "What is the meaning of today? (Pinar, 2012, p. 37). In the end, the object of the authentic interpretation of the curriculum is not simply the reconstruction of the content, but to think about the subject and its nature and, in doing so, to search for what has become unthought inside the subject, and it happens in the context of "critical confrontation" with the reconceptualistic tradition (Magrini, 2015, p. 5).
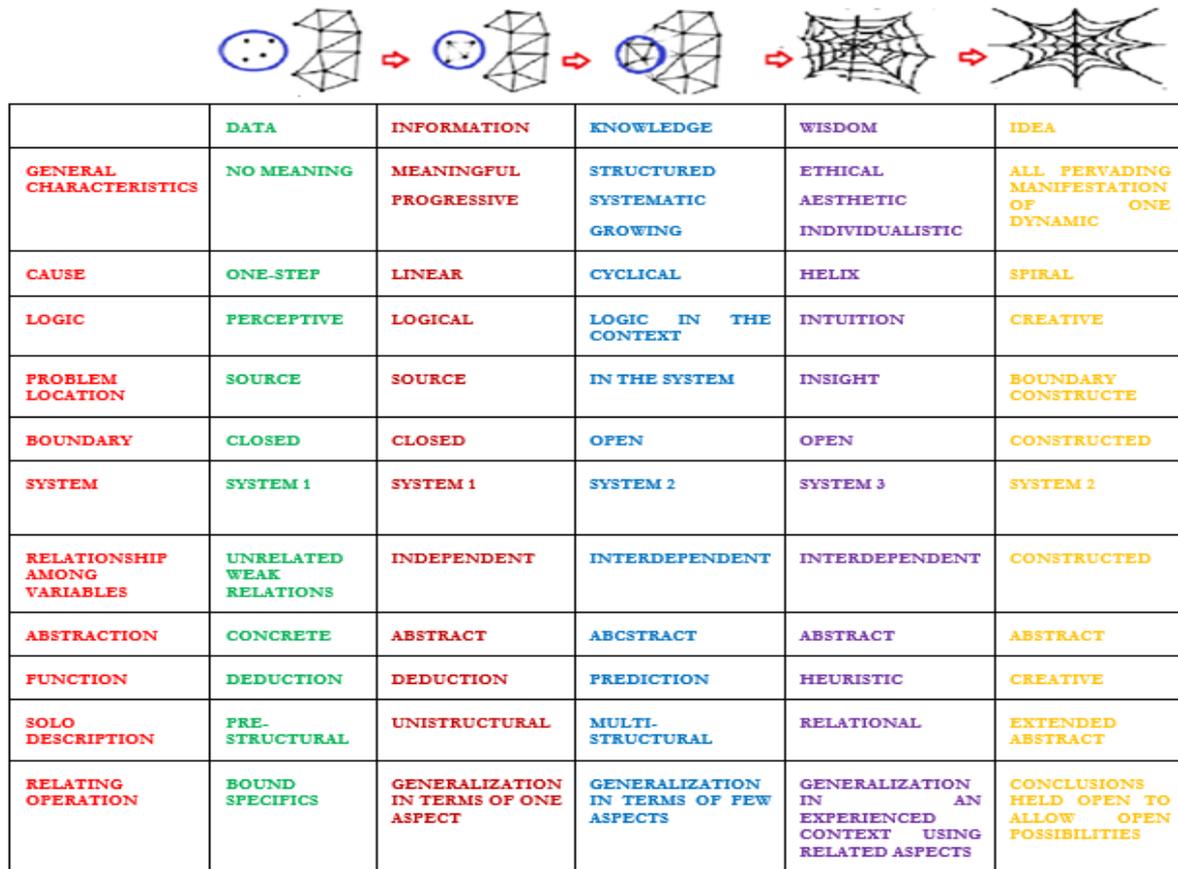

	DATA	INFORMATION	KNOWLEDGE	WISDOM	IDEA
GENERAL CHARACTERISTICS	NO MEANING	MEANINGFUL PROGRESSIVE	STRUCTURED SYSTEMATIC GROWING	ETHICAL AESTHETIC INDIVIDUALISTIC	ALL PERVADING MANIFESTATION OF ONE DYNAMIC
CAUSE	ONE-STEP	LINEAR	CYCLICAL	HELIX	SPIRAL
LOGIC	PERCEPTIVE	LOGICAL	LOGIC IN THE CONTEXT	INTUITION	CREATIVE
PROBLEM LOCATION	SOURCE	SOURCE	IN THE SYSTEM	INSIGHT	BOUNDARY CONSTRUCTE
BOUNDARY	CLOSED	CLOSED	OPEN	OPEN	CONSTRUCTED
SYSTEM	SYSTEM 1	SYSTEM 1	SYSTEM 2	SYSTEM 3	SYSTEM 2
RELATIONSHIP AMONG VARIABLES	UNRELATED WEAK RELATIONS	INDEPENDENT	INTERDEPENDENT	INTERDEPENDENT	CONSTRUCTED
ABSTRACTION	CONCRETE	ABSTRACT	ABCSTRACT	ABSTRACT	ABSTRACT
FUNCTION	DEDUCTION	DEDUCTION	PREDICTION	HEURISTIC	CREATIVE
SOLO DESCRIPTION	PRE-STRUCTURAL	UNISTRUCTURAL	MULTI-STRUCTURAL	RELATIONAL	EXTENDED ABSTRACT
RELATING OPERATION	BOUND SPECIFICS	GENERALIZATION IN TERMS OF ONE ASPECT	GENERALIZATION IN TERMS OF FEW ASPECTS	GENERALIZATION IN AN EXPERIENCED CONTEXT USING RELATED ASPECTS	CONCLUSIONS HELD OPEN TO ALLOW OPEN POSSIBILITIES

Figure 7. *The Combination of Koplowitz's Theory of Adult Cognitive Development with The Data, Information, Knowledge, Wisdom, And Idea (Episteme) Scheme With A Web Metaphor*

The framework of curriculum re-conceptualize the curriculum from course aims to dynamic discussion with yourself (as "own," intellect), an ongoing self-understanding process where you are mobilized in the collective rehabilitation of the public domain to constructive pedagogical action as a private-public-intellectual (Pinar, 2012, p. 37). In these phases, we can consider information as a meaningful and connected data set while it is not part of the cognitive web. We can think that "knowledge" as a more structured and systematic form of information whereas wisdom is considered as an aesthetic, personalized part of the cognitive web. Finally, we can think of ideas or episteme as an all-

pervading manifestation of one dynamic cognitive structure in this respect. Data, information, knowledge, wisdom, and idea (episteme) scheme is related to the mediative inquiry which is emphasized by Kumar (2013, p. 124), an existential mechanism for the understanding of the way you perceive, sound and behave, both within and beyond your connection to people and nature or to be attentive to it. Awareness means a meditative state of mind in which persons and nature are noticed and experienced without any interruption in the continuous flow of thought. Such meditative listening and observation make for a more transformative aspect of perception, conversation, and understanding.

Discussion and Suggestions

The exploration of the issues which are key to curriculum theory must begin from an analysis of the status of human knowledge for several reasons in this respect. First, when we think about education and curricula, it would be clear that any sort of preparation is necessary, such that what is to be taught in knowledge forms needs to be a central factor in preparing curricula. Secondly, what is crucial to the development of the curriculum is not just how knowledge is to be transmitted in the curriculum; but how this knowledge is also relevant to other aspects of the curriculum as well. Thirdly, It is already obvious that the curriculum is designed in different ways and how we conceptualize it depends on our conception of human knowledge. As stressed by (Kelly, 2004, p. 25), the inability to recognize the troublesome nature of human knowledge and the consequent presumption that non-problematic aspects can be established without further consideration that has to form a core curriculum has been and continues to be, beset, is one of the most serious, and also one of the most dangerous, fallacies with which the curriculum debate. Thus, the decisions about knowledge-content of the curriculum are the first, and thus the only, stage in the preparation of the curriculum. Therefore the way we understand the knowledge leads us to understand the curriculum in this respect.

The combination of Koplowitz's theory of adult cognitive development with the data, information, knowledge, wisdom, and idea (episteme) scheme with a web metaphor allows us to consider curriculum in terms of five dimensions from an intradisciplinary approach to transdisciplinary understanding.
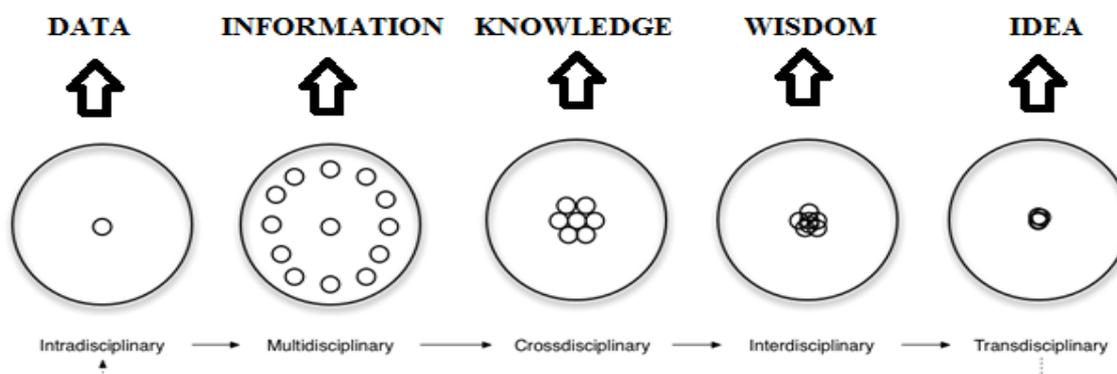

Figure 8. *The Curriculum Can Be Understood In Terms Of Different Disciplinary Approaches Based on the Data, Information, Knowledge, Wisdom, and Idea (episteme) Scheme[3]*

In this respect curriculum, theory is a transdisciplinary study of educational experience in which the main focus is ideas (modified from Pinar, 2012). The trans-disciplinarity of the curriculums in this context relates to a comprehensive approach by overcoming various disciplinary limits. The framework is thus transdisciplinary in terms of the systemic synthesis of various disciplines. Although interdisciplinary study develops new fields of research centered on expertise, a transdisciplinary understanding integrates all the required fields of research into a cohesive whole (McGregor, 2004). However, this doesn't mean that other forms of discipline should be ignored but it is seen as the main aim to achieve this holistic perspective or ideas. As indicated by Doll (2008, p.193):

> *"At the university or college level this has meant for me a caution in using too rigid a syllabus—instead using one which is 'rich' (Doll, 1993, ch. 7) in problematics. The power inherent in such richness is brought forth as students—individually or in groups—work on various texts which web together into a frame that combines closure with openness, a modest rigidity with a structured flexibility. As students work on these various texts, the*

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[3] https://medium.com/we-learn-we-grow/what-is-transdisciplinary-13c16eacf57d, retrieved from 31.07.19

aim is not for all to be on the same page at the same time but, contrarily, for groups within the web to be on different pages, in different texts, at the same time. Embracing complexity, the aim is for a process of crossfertilization, pollination, catalyzation of ideas. Over time (an important ingredient for both Prigogine and Kauffman) a network of connections and interconnections becomes more and more webbed. Learning now occurs, not through direct transmission from expert to novice, or from teacher to student, but in a non-linear manner through all in a class exploring a situation/problem/issue together (and indeed from multiple perspectives). In Jardine et al.'s (2003) phrase, a community of learners is now 'living the world together'. The teacher's role in this community of learners becomes that of both 'planting a seed' and taking a lead (but not overly dominant) role in fertilizing the seed that it may grow (Dewey) to eventually pollinate and catalyze other ideas. In other words, the curriculum (with its expression in a syllabus) is now an emerging one within an ongoing process that actually catalyzes itself via interactions within the system or network."

The first implication of the observer-observee-task relationship is that educationists should be careful about their observant effect in education. As indicated by Semetsky (2008, p. 80) the dynamics of complex systems are above all relational: they are a relationship or an interaction that acts as an analysis unit. In addition, the interactions that make up the dynamics of the system behave nonlinearly. Therefore the indication of taking curriculum as a complex system can be defined in a mediative inquiry noted by Kumar (2013, p. 4) which is a transformative approach towards the educational experience that seeks to enable students and their teachers to realize the controversial essence of consciousness and to dissolve it, if possible, by fostering a deeper sense of awareness. It stresses the skills of listening and observation to get a better picture of one's consciousness and relationships. It supports education experience to promote the values of transparency, esthetics, and freedom. From the perspective of meditative inquiry, education is no longer a matter of transmission of information or end-of-the-art research. It is therefore an environment of freedom, in which learning about oneself and one's interactions with others, nature, and concepts is the focus. While many aspects help conceptualize the curriculum as a meditative study, "consciousness" is its key part. In this regard, it should be noted that in the education settings, the students, especially gifted students, are sometimes seen as special and different individuals, and this attitude is mostly pumped in many educational activities. As can be seen in the social facilitation and social loafing effects, these kinds of attitudes might positively or negatively affect the learning and performance of the students. If this effect is in positive ways, this can be regarded as a desirable thing otherwise we should be careful about what we do. This shouldn't be restricted within the gifted education, this can be seen in many educational settings where "successful students" exist. We sometimes label students "successful" directly and indirectly and we expect that they can be successful also with the subsequent tasks. However, as can be seen, the difficulty of the task blended with the presence of others and the sense of being evaluated make them unsuccessful and may lower their motivation. In this regard, the aim of the curriculum as a meditative study can be actualized to help someone whether s/he is gifted or not to create his/her potential without focusing on previously labeled characteristics.

The second important implication for this is the effect of culture in the context of observer-observe-task relationships. In some cultures like western cultures, encouraging is the desired input for improving students but in others such as Asian culture, this can be seen as not a good thing. Therefore, teachers should also consider this in terms of their cultural setting. The character of education is determined not simply by the knowledge which is considered most important but by the knowledge which gives the greatest social honor, leading to prominent social positions in this respect (Spencer, 1902; Paraskeva, 2011, p. 10). In numerous religious cultures, the legends, myths, and poetry as representations of "morality," of distinction, of transcendence, and of doing things differently maybe "stories of links — of war, confrontation, reconciliation, love — with the development of something new: new life, new partnerships, new understandings, new kinds of power and political authority." as emphasized by Huebner (1985b/1999d) (Cited in: Chu, 2019, p. 21-22). This can be achieved by spirituality in education. Each culture has its spirituality in its essence. However, spiritual motivation in this respect can vary from culture to culture. As indicated before, while western though glorify personal achievements, Asian culture favors collective successes. In other words, the educational experience must include the quest of humanity's spiritual aspects to ensure that students and their teachers are not only acquainted with the outside but also the inside (Kumar, 2018, p. 125). Therefore the curriculum without spirituality is a null text without any motivation and joy. As emphasized by Chu (2019, p. 5), In the educational sense, in the absence of spiritual wisdom, mutuality between responsibilities, love, and respect, the students embrace the absolute, factual view of the world blindly, see competition among humans as human nature or consider the

doctrine of virtues as a platitudinous, hypocritical dogma for social control, or to the contrary, struggling strenuously to retain their core convictions and principles, which challenge and disturb the prevalent absolutist and objectivist worldview. The curriculum must concentrate on this new formative experience which makes cognitive instruments themselves subjects of experience. Such an esthetic experience will educate us of the cruelty of a world focused on artifacts (Roy, 2018, p. 45).

Thirdly, teachers should take observer-observe-task relationships into account in educational settings. Presenting information and observing the outcomes in pre-post-test designs are not useful for settings in which such effects are dominant. It should be clarified or realized whether the significant differences are the results of inputs or the results of the observer-observe-task relationships. It must also take into consideration the economic, social, political, and cultural contexts in which teaching and learning gain more importance (Torres Santomé, 1990); the fact that all study of the processes of teaching and education within schools does not restrict to a specific setting of the institution (Paraskeva, 2011, p. 17). Therefore the concepts of complexity theory gains importance in this regard as Morrison (2008, p. 34) emphasized:

> *"… complexity theory suggests a movement towards bottom-up development and change, local and institutional decision-making, a re-assertion of child-centeredness and experiential, exploratory learning, a rejection of tight prescription and linear programming of teaching and learning, and a move towards non-linear learning, anarchistic epistemologies and their curricular correlates. Complexity theory emphasizes the process rather than the content of learning, as the constituents of relevant and enduring curriculum content are uncertain. Disciplinary boundaries dissolve as connections among areas of knowledge are permeable, fluid and hypertext-linked; curricula are differentiated and different rather than Procrustean. The ethical, epistemological and ontological implications of complexity theory are, in other words, key areas for the philosophy of education."*

The relationship among observer-observer-task often means that information needs to be relational since encounters are many and accumulate, and the multiplicity of time encounters causes results. Causality in this case can not be attributed to one or a few variables (Haggis, 2008, p. 159). Therefore as indicated by Roy (2018, p. 148), the curriculum is designed to confront the collective imaginary connected to abstract language and associated mystification. Liberation is being conscious of the psychological and ontological factors which rule our perception of reality, what we call ourselves, and the connection between this process and the wider cosmos mechanisms. The curriculum needs to lead to reconstructing composites in an imaginative way that brings us in line with cosmic play.

Curriculum developers should again consider this effect in the curriculum development process. The tasks that are presented in the curriculums can negatively affect the motivations of some students, hence, more flexible multi-tasks and contents should be taken into consideration. As can be seen, the two cultures converge at the same point in the context of observer-observe-task relationships. Neither inanimate objects nor we humans are nor isolated beings and the presence of others affects us in many ways and we should take these effects also into consideration. As indicated by Haggis (2008, p. 165), current conceptual framings were found to be challenging regarding the conceptualization of difference, context, processes through time, multi-facet causality, and situational complexity. In addition to preserving their coherence, this idea of transparent, complex structures, interconnected within and partly constituting each other, requires various modes for thinking about situations and provides the basis on which individuals, differences, and specifics can be examined. Complexity theory may also take care of various facets of the mechanism with an emphasis on behaviors, instead of rigid definitions. This does not only in the broader sense of having a vocabulary that speaks of complex interactions but in particular of the importance of the interaction past over time. Furthermore, the theory of complexity articulates a multifactorial notion of causality. It is futile to talk about isolating 'main' variables, since all 'factor factors' function together, with none more relevant than the other. Ultimately, it is not feasible to evaluate the curriculum in isolation from social interactions that are regularly focused on preferences (McLure, & Fisher, 1969). Historically, the academic field of the curriculum has been governed by an approach that considers the curriculum to be a technical topic for the designing, developing, implementing, and evaluating of predefined results in a school environment. Today, this quality is calculated by the output of higher test values. That's what we might call a conventional curriculum approach (Murillo, 2018: 3). However, the synthesis of two cultures in an observer-observee-task relationship indicates the opposite approach in educational and curriculum settings which can be understood in the context of "abstract expressionist" scholarship celebrating the dynamic, malleable and unpredictable essence of human nature as an ever-renewed occurrence of becoming other in the recurring face of the other and this creation

often happens and this transformation often happens in terms of an original process of "learning." in term of our lived curriculum or curriculum vitae. Similar to action-painting, the scholarship of "abstract expressionists" is open to the exploration of different educational phenomena. For instance, when reading and writing curriculum as "abstract expressionist" scholarship, we are no longer seeing and feeling "this present time" in terms of a permanent presence or existence, that is metaphysical time and activity, Instead, we are pushed through an ecstatic tuning mode, from which we "get up" in a new "period" when the past comes to reach us from the indeterminate future (Magrini, 2015, p. 73). As Murillo emphasized (2018, p. 29-30):

> *"A different approach, one more in sync with a psychoanalytic view of education, is to move in the opposite direction, away from the imaginary of the ego and into the realm of the symbolic. The point is to get teachers and students to ground and assert themselves in language, speaking not from a specular image in the imaginary (the ideal or normative view of how things should be, or what they think is expected from them) but from the Real (the drives, their desires).*

> *In a certain way, this movement reminds of what Socrates did with his students, undoing speculative images through constant and open questioning, pushing the limits of what seemed granted.*

> *….While traditional approaches to curriculum influenced by ego psychology and other forms of technical rationality focus their efforts in getting individuals to adhere to a certain image or ego-ideal, psychoanalytic experience has shown that the investment and fixation of libidinal energy within the self (itself a form of narcissism) brings about illness not only expressed in internal psychic disturbance, but also oftentimes in somatic manifestations."*

The utilitarian end of the conventional Ralph Tyler paradigm of curriculum development problems has been challenged by reconceptualized curriculum studies. For instance, the development of curricula in the post-modern era may promote qualitative studies to explore student experiences from the perspectives of phenomenology, aesthetics, history, race, and gender. Today, we are developing stories that not only strengthen the study of history and any other subject but also create a student-centered connection to long-term memory and personal enhancement (Slattery, 2006, p. 53). Doll (2008) provides a useful sketch of some of the main ideas and authors in chaos and complexity, intending to disrupt Tyler's rationale, developing a different sense of curriculum and teaching requires 'open, dynamic, relational, creative, and systems-oriented' understanding. The curriculum is not a text which is stationary in space and time but it is an emergent phenomenon arising from the interaction of many agents through space and time. In this respect, it is also restricted by the boundaries of space and time.

Finally, one of the biggest problems encountered in the development of curriculums today is that the program developers face a Lucas critique similar to the one in the field of economics saying that It is naive to try, in particular, to predict the effects of changes in economic policy based on the relationships found in historical knowledge. Therefore, to accurately predict the results of the new policy, it is suggested to consider how this policy will affect decision-makers. Although in the needs analysis in curriculum development analytical approach is used to determine the needs according to the possible situations in the future, it can be said that this approach is not actualized beyond popular expectations for the future of education (Duran, & Barut, 2019). Hence, once again, we can see the observer-observee effect on curriculum development in this respect. Therefore, it is important to consider postmodern study encouraging the development, through theological experience, of other important elements of education since the development of the curriculum in the post-modern era recognizes that both the past and the future are essential to a representation of self-reflective spirituality. The development of cooperative and eco-sustainable learning environments, the commitment to a reverent, democratic, and just community model of education are all important (Slattery, 2006, p. 108-109). As indicated by Roy (2018, p. 150), hence curriculum must be more than just a depiction of algorithms and proposals, symbols, and mind-oriented representations; it must also answer issues about the essence of consciousness, being, and the existential objective implicit in the life of the individual. To convert and help to achieve fulfillment, it must accept the human raw material as a whole. Unfortunately, conversations are becoming extremely scarce because mainstream education has opted mostly to rely on representational knowledge, taking off from dominant thought-forms. The scientific viewpoint, which dominates the curriculum, has created an environment in which curricular ontological concerns about human nature and his interaction with the universe should not be posted at all. This is precisely the way that Pinar (1991) sees the "saying" of a curriculum influenced by abstracted expressionism which does not lie in the pursuit of "proving an

argument, not instilling a doctrine, not creating techniques which work for anybody everywhere, anytime and with everyone." rather curriculum theorizing is more "searches for a vision for revealing, which is exceptional, original and opens the eye to realms that have been previously unseen and unknown". But the search for vision is never a goal, aim, or intent, at which we achieve, which has been learned or changed during the inquiry process. Rather, it is a thinking, questioning, and "saying" that harbors the primordial "danger" inherent to language itself, namely, the potential of "poietic" saying to recede into oblivion (Magrini, 2015, p. 70). That is the main aim of philosophy and art which is to develop intellect. That is the process in Plato's cave allegory where the slaves learn what they saw are just shadows that are understood as data-information-knowledge-wisdom-idea transformation process in this paper. That is what the word "philosophy" literally means "love" (Philo in Greek) of "wisdom" (Sophia).
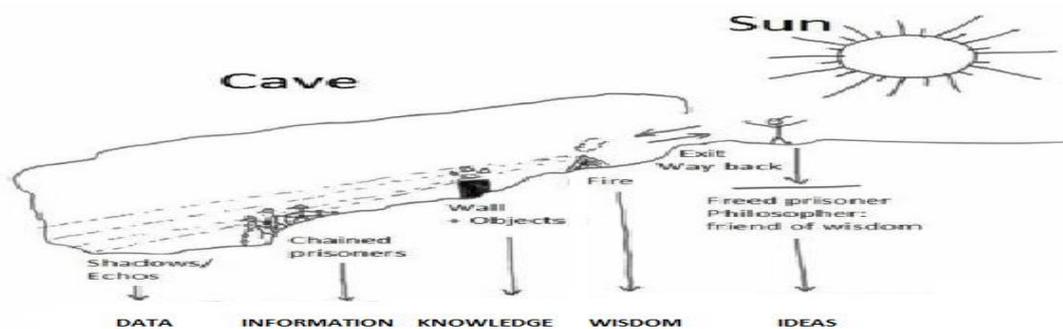

Figure 9. *Plato' Cave Allegory⁴*

Therefore as for developing a "modern or post-modern" curriculum, the intellect should be reviewed again a perspective that is connected emotions, knowledge and will just as described in Plato's Chariot Allegory where The Charioteer stands for the intelligence, reason or part of the soul that is to lead the soul to the truth. In this allegory, while one horse stands for a logical or moral instinct, or a positive side of a love-giving existence (for example righteous indignation), the other represents the soul's irrational passions, appetites, or concupiscent nature. The Charioteer directs the entire chariot/soul, trying to stop the horses from going in different ways and to proceed towards enlightenment. Plato stated that the part that will ensure order and justice in the soul is the intellect. Smart parts must dominate other parts due to their nature, and other parts must be submissive to them due to their nature (Sakınmaz, 2019, p. 80). According to Plato, justice meant the harmony of three virtues, and injustice meant the disharmony of the three where they are classified as 1. Passions that show generosity like courage, 2. Lower level passions like appetite 3. Intellect (Öner, 2008, p. 55; Yıldızdöken, 2017, p. 445).

Figure 9. *Depiction of Plato's Chariot Allegory⁵*

As highlighted by a modern scientist Bohm (1987, p. 218), in this sense it should be reiterated that the intellect, emotion, and will cannot necessarily be isolated from each other. The categories of the intellect, for example, may have a powerful emotional influence. The subtle mental components of these systems reveal that such a distinction is much more irrational. For it is possible to sense, and experience directly an intimate bond between thoughts, emotions, and will so that there is no point at which one of them stops and the other starts. Moreover, the entire meaning of these functions, as well as the entire way

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⁴ https://www.quotev.com/story/12201582/Allegory-of-the-Cave-by-Plato modified from 20.09.20
⁵ https://www.quora.com/According-to-Plato-Socrates-talked-about-escaping-society-and-belief-to-a-true-reality-beyond-their-own-yet-in-his-perfect-utopia-he-confines-everyome-to-a-role-that-theyre-born-into-and-not-allowed-to-leave-Does-he modified from 20.09.20

in which they proceed at the level of physics and chemistry can be deeply influenced by creative intelligence. It has already been suggested, in truth, why much of this content is not likely to be interpreted in terms of established laws of physics and chemistry will need requires a level of explanation that goes beyond the superimplicate order. However, as Plato's Chariot Allegory we have a rough picture of the intellect although it surprisingly shows its brilliance in the social and individual interaction with the external and internal world. This magnificent allegory of the soul has come to this day by deducting a footnote to Plato which has been transformed in different ways until Freud or more recently by Popper's three worlds of knowledge. The key concept in this context is justice which is the health of the psyche and injustice is its disease (Öner, 2008, p. 55). Hence for a healthy spirit curriculum re-focus on the holistic nature of intellect in essence where the intellect is taken as a mechanism transforming the "chaos" to "cosmos" in the justice or balance between logos corresponding to character or super-ego in Freudian sense and as well as eros which corresponds to temperament or ID in terms Freudian terminology. In there, super-ego corresponds to system 2 or rational system based on an objective, platonic world related to the reasoning sphere which is based on social and economical needs, cultural needs, political needs, religious or secular needs, professional needs, or family-friend circle. ID or temperament, however, correspond the system 1 which is an experiential system based on the intelligence sphere and physical world which is based on physiological needs, safety needs, love, and belonging needs, esteem, self-actualization, and transcendence in Maslow's hierarchy. Finally, the ego is related to system 3 based on the hypercognitive system which is related to cognition, consciousness, and intuition (Popper, 2000, p. 7-9, Stemenkovic, 2009, p. 114, Habermas, 2001, p. 102). Their reflection, mixed with social and individualistic desires or filters, may be considered as logos and eros which are meant to be superego and ID according to Freud's theory of psychoanalysis as well as it corresponds to the character (Self-directedness, Cooperativeness, and Self-transcendence) and temperament (Novelty Seeking, Harm Avoidance, Reward Dependence and Persistence) in Cloninger's model of personality (De Fruyt, Van De Wiele, Van Heeringen, 2000; Köse et al., p. 107-108). Nous (intellect) is defined in this design as the central faculty which covers three systems and spheres where comprehension is possible through perceptions of the meaning, thinking, and reasoning in the meaning of the definition of us by Aristotle (Dillon, 1993, p. 99-107). Therefore in this context what the main aim of the curriculum theory is to enhance individual in a holistic and healthy sense in which s/he develops his personality in a healthy way in the context of Plato's concept of justice. However, it should be noted that this process can be achieved through the data-information-knowledge-wisdom-idea process implying that any curriculum will hence at the end reach the trans-disciplinary nature which is implied in the Plato's Cave allegory.
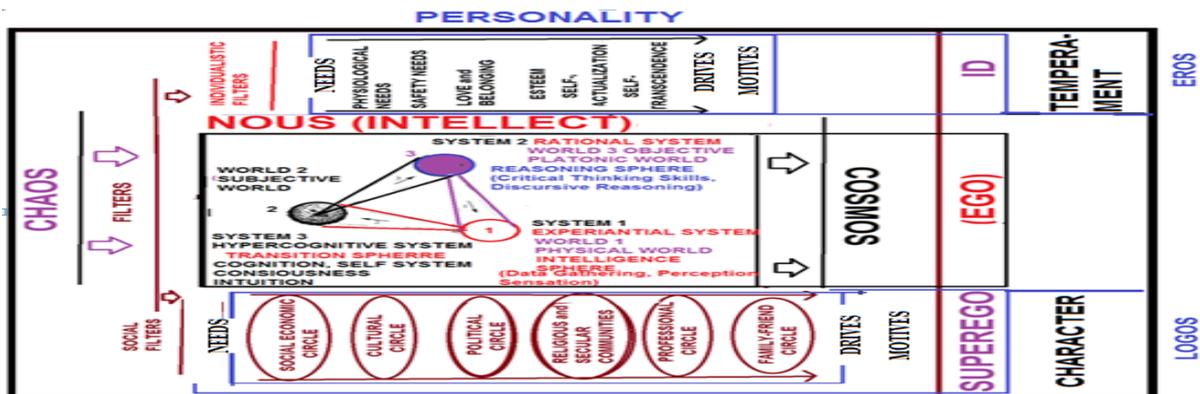

Figure 9. *Based on Memory Types it Can Be Argued That There Are Three Systems in Human Cognition in the Framework of Nous (Intellect) and Their Reflection in Personality Can Be Regarded As Logos And Eros (Modified from Penrose, 2004, p. 18)*

To sum up, the problem of the curriculum and the nature of the curriculum primarily doesn't involve specifying the goals to be accomplished by the students. An educational curriculum would lead the student to unpredictable, not projected, results. The question of curricula is all about experiencing a process of human activity created by images and comprehension of the things that matter in life (McKerman, 2007, p. 3). In this study, we discussed the epistemology (knowledge or subject base) of the curriculum theory in the context of two cultures. Some people argue that the fundamental theory of curriculum/education is grounded in ontology not epistemology and all of these taxonomies of different types of knowledge classifications are meaningless. However, since the beginning of the philosophical war between idealism

and materialism, the analytical view that ontology is dependent on epistemology is what we try to synthesize in this paper. The contrast between form and content is not absolute, since even well used scholarly discourses can be mixed with current social issues structured according to the needs of schools and students. But also creative curriculum reorganization can not cope with current conditions without the continuous introduction of new knowledge into the school curriculum. In this respect, the German concept of Bildung reminds us that academic fields are also spiritual disciplines, in which human subjects reconstruct, socially and subjectively, both what they learn and who they are and should be (Pinar, 2011, p. 90; 124).

Recommendations

For future researches related to this study,

- Needs analysis can be performed for a curriculum incorporating two cultures.
- Quantitative and mixed researches can be performed to understand how a curriculum is based on two cultures.
- The curriculum in the context of two cultures can be discussed in terms of different philosophical perspectives.
- Some particular concepts such as intellect can be discussed more deeply in future researches.

Ethical Declaration

In the writing process of the study titled "*Curriculum Theory in the Context of Two Cultures*", there were followed the scientific, ethical and the citation rules; was not made any falsification on the collected data and this study was not sent to any other academic media for evaluation. Since the document is examined in this study, there is no requirement for an ethics committee decision.

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TÜRKÇE GENİŞ ÖZET

İki Kültür, İki Kültür ve Bilimsel Devrim adlı kitapta, C. P. Snow'un (1959) popüler konuşma konferansının ilk bölümüdür. Temel argüman, fen ve sosyal bilimlerin Batı medeniyetinin entelektüel tarihinde "iki kültüre" ayrılmış olduğu ve bu ayrılığın hem günümüz dünyasının sorunlarını ele almada önemli bir engel haline geldiği yönündedir ki bu ayrılık, hem günümüz dünyasının sorunlarının ele alınmasında önemli bir engel haline gelmesi mekanik görüş ve kartezyen felsefe bağlamında anlaşılabilir. Fikir, yalnızca doğa bilimlerinde değil, aynı zamanda sosyal bilimlerde de kendine bir konum bulmak konusunda çok güçlü bir temel bulmuştu. Örneğin, 1800'lerin başlarında filozof Auguste Comte, bir mekanik bilimin toplumun karmaşıklıklarını ortadan kaldırmaya yardımcı olabileceği ümidi ile 'Sosyal Fizik' kavramını formüle etmişti. Eğitim programı teorisi, Fordist üretim sisteminin ilkelerine dayanan bu tür görüşlerle de başlatıldı. Ancak bilim adamları, klasik fiziğin kurallarının ve mekanik anlayışın 20. yüzyılın başların da yeterli olmadığını keşfettiler. Bugün, eğitim programı teorisindeki kartezyen perspektiften eğitim programlarında iki kültürü birleştiren daha bütüncül bir bakış açısına doğru benzer paradigma kaymasıyla karşı karşıyayız. Bu nedenle, bu makalenin temel amacı, bu tür bir paradigma kayması bağlamında eğitim programı teorisini tartışmaktır. Bu bağlamda, eğitim programı teorisi, ana odağın fikirler olduğu, eğitim deneyiminin disiplinler-üstü bir çalışması olarak ele alınmıştır.

Bu nedenle, "modern veya post-modern" bir eğitim programı geliştirmeye gelince, idrak (intellect, anlak) kavramı benzer şekilde arabacının ruhu hakikate yönlendiren zekâ, akıl veya ruhun bir paçasını temsil ettiği Platon'un Arabacı alegorisinde olduğu gibi duyguları, bilgiyi ve iradeyi birbirine bağlayan bir anlayışla yeniden bakılmalıdır. Bu alegoride, atın birisi mantıksal veya ahlaki bir içgüdüyü veya sevgi veren bir varoluşun olumlu bir yanını (örneğin haklı öfke) temsil ederken, diğeri ruhun irrasyonel tutkularını, iştahlarını veya arzularını temsil eder. Arabacı, atların farklı şekillerde gitmesini engellemeye ve aydınlanmaya doğru ilerlemeye çalışarak tüm arabayı/ruhu yönetir. Platon, ruhta düzen ve adaleti sağlayacak kısmın akıl olduğunu belirtti. Akıllı kısım, doğası gereği diğer kısımlara hâkim olmalı, diğer kısımlar da doğası gereği onlara boyun eğmelidir (Sakınmaz, 2019, s. 80). Platon'a göre adalet, üç erdemin uyumu anlamına gelirken ve adaletsizlik, üçünün uyumsuzluğu anlamına geliyordu (Öner, 2008, s. 55; Yıldızdöken, 2017, s. 445). Bohm'un (1987, s. 218) vurguladığı gibi, bu anlamda zekanın, duygunun ve iradenin mutlaka birbirinden izole edilemeyeceği tekrar edilmelidir. Örneğin, akıl kategorileri güçlü bir duygusal etkiye sahip olabilir. Bu sistemlerin incelikli zihinsel bileşenleri, böyle bir ayrımın çok daha mantıksız olduğunu ortaya koymaktadır. Çünkü düşünceler, duygular ve irade arasındaki yakın bir bağı doğrudan hissetmek ve deneyimlemek mümkündür, böylece içlerinden birinin durduğu ve diğerinin başladığı bir nokta belirlenemez. Dahası, bu işlevlerin tüm anlamı ve fizik ve kimya düzeyinde ilerledikleri tüm yol, yaratıcı zekâ tarafından derinden etkilenebilir. Gerçekte, bu içeriğin çoğunun neden yerleşik fizik ve kimya yasaları açısından yorumlanmasının muhtemel olmadığı, üst düzey düzenin ötesine geçen bir açıklama seviyesine ihtiyaç duyacağı zaten öne sürülmüştü. Bununla birlikte, Platon'un Savaş Arabası Alegorisi olarak, dış ve iç dünya ile sosyal ve bireysel etkileşimde parlaklığını şaşırtıcı bir şekilde gösterse de, idrakın (intellect, anlak) kaba bir betimlemesine sahibizdir. - Ruhun bu muhteşem alegorisi, Freud'a kadar veya daha yakın zamanda Popper'ın üç bilgi dünyası tarafından farklı şekillerde dönüştürülmüş olarak Platon'a yapılmış bir dipnot olarak günümüze gelmiştir. Bu bağlamda anahtar kavram, ruhun sağlığı olan adalettir ve adaletsizlik hastalığıdır (Öner, 2008, s. 55). Dolayısıyla sağlıklı bir espritüel eğitim programı, özünde idrak (intellect, anlak) Freudcu bir anlamda süperego olarak tanımlanan ya da logos dediğimiz kısımla Ferudcu anlamda ID denilen ve mizaç ya da eros olarak tanımlanan parça arasındaki adalet içerisinde "kaosu" "kozmosa" dönüştüren bütüncül bir mekanizma olarak tekrar ele alınmaktadır.

Burada süper ego, sosyal ve ekonomik ihtiyaçlara, kültürel ihtiyaçlara, politik ihtiyaçlara, dini veya seküler ihtiyaçlara, mesleki ihtiyaçlara veya arkadaş çevresi ve aileye dayanan akıl yürütme alanıyla ilgili nesnel, platonik bir dünyaya dayanan sistem 2 veya rasyonel sisteme karşılık gelir. ID veya mizaç ise Maslow'un hiyerarşisindeki fizyolojik ihtiyaçlar, güvenlik ihtiyaçları, sevgi ve aidiyet ihtiyaçları, saygı, kendini gerçekleştirme ve aşkınlık ihtiyacına dayanan zekâ alanı ve fiziksel dünyaya dayanan deneyimsel bir sistem olan sistem 1'e karşılık gelir. Son olarak, ego, biliş, bilinç ve sezgiyle ilişkili olan hiperbilişsel sisteme dayalı 3. sistemle ilişkilidir (Popper, 2000, s. 7-9, Stemenkovic, 2009, s. 114, Habermas, 2001, s. 102). Freud'un psikanaliz teorisine göre ID ve süperegoya, Cloninger'ın kişilik modelinde mizaç ve karaktere (Kendini yönetme, İşbirliği ve Kendini aşma) ve mizaç (Yenilik Arayışı, Zarardan Kaçınma, Ödül Bağımlılığı ve Sebat) denk gelen sosyal ve bireysel arzu veya filtrelerle karıştırılmış kişisel yansımaları, logos ve eros olarak da düşünülebilir (De Fruyt, Van De Wiele, Van Heeringen, 2000; Köse, Sayar, Ak, Aydın, Kalelioğlu, Kırpınar, Reeves, Pryzbeck, Cloninger, 2004, s. 107-108). Bu tasarımda Nous (akıl), Aristoteles'in biz tanımının anlamındaki anlam, düşünme ve akıl yürütme yoluyla anlamanın mümkün olduğu üç sistemi ve alanı kapsayan merkezi meleke olarak tanımlanmaktadır (Dillon, 1993, s. 99-107). Dolayısıyla bu bağlamda eğitim programı teorisinin temel amacı, Platon'un adalet kavramı bağlamında kişiliğini sağlıklı bir şekilde geliştirdiği bireyi bütüncül ve sağlıklı bir anlamda geliştirmektir. Bununla birlikte, bu sürecin veri-enformasyon-bilgi-bilgelik-fikir süreci ile gerçekleştirilebileceğine dikkat edilmelidir ki bu da herhangi bir eğitim programının sonunda Platon'un Mağarası alegorisinde ima edilen disiplinler-üstü doğasına ulaşacağını anlamına gelmektedir.

Özetlemek gerekirse, eğitim programı teorisinin doğasının sorunu, aslında öğrenciler tarafından gerçekleştirilecek hedeflerin belirlenmesini gerçekten içermez. Gerçekte eğitici olan bir eğitim programı, öğrenciyi öngörülemeyen sonuçlara götürecektir. Eğitim programı sorunu, yaşamda gerçekten önemli olan şeylerin görüntüleri ve kavranmasıyla yaratılan bir insan etkinliği sürecini deneyimlemekle ilgilidir (McKerman, 2007, s. 3). Bu çalışmada, eğitim programı teorisinin epistemolojisini (bilgi veya konu tabanı) iki kültür bağlamında tartıştık. Bazı araştırmacılar, temel eğitim programı / eğitim teorisinin epistemolojiye değil ontolojiye dayandığını ve farklı bilgi sınıflandırma türlerinin tüm bu taksonomilerinin anlamsız olduğunu iddia etmektedir. Bununla birlikte, idealizm ile materyalizm arasındaki felsefi savaşın başlangıcından bu yana, ontolojinin epistemolojiye bağımlı olduğuna dair analitik görüş, bu makalede sentezlemeye çalıştığımız şeydir. Biçim ve içerik arasındaki zıtlık mutlak değildir, çünkü iyi kullanılan bilimsel söylemler bile okulların ve öğrencilerin ihtiyaçlarına göre yapılandırılmış güncel sosyal konularla karıştırılabilir. Ama aynı zamanda yaratıcı eğitim programının yeniden düzenlenmesi, eğitim programına sürekli yeni bilgi girişi olmaksızın mevcut koşullarla baş edilemez. Bu noktada Alman Bildung kavramı, bize akademik alanların aynı zamanda insanların hem ne öğrendiklerini hem de kim olduklarını ve olması gerektiğini toplumsal ve öznel olarak yeniden inşa ettikleri manevi disiplinler olduğunu hatırlatır.