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A Definitive Review of Perspectives in Learning Applied

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Abstract

This paper discusses the theoretical perspectives of constructivistic-cognitivistic, phenomenographic and socio-cultural learning in greater depths on their distinctive features focused on the central concepts of context, meaning and experience. Its aims to relate the concepts to one another within each perspective, and viewing the similarities and differences between these perspectives on the concepts. In light of this reflection, it would be purposeful to apply varied understanding to a learning milieu, thus providing epistemic and utilitarian value of such perspectives.

A Time to Make Sense

In philosophizing cognitive-radical-social constructivism, phenomenographic and sociocultural learning perspectives, a concrete understanding of their beginnings and nature is essential in perpetuating a step forward into a new learning milieu. In an ever changing world of practices and approaches, we also tend to break up the theoretical portion of it to synchronize with the changes and vice versa. In such a dimension, there is no one better learning perspective than the other, but what would be required of a perspective to surface shaped by the culture when called for. Early research by Galda [1] discovered that readers rejected the actions of characters when those actions did not correspond to their own lived experience. Other research has explored the types of intertextual connections that individual readers make between texts and their life experiences and/or other texts [2]. A further reference to the context, meanings and experience of making sense the perspectives applied can be appreciated in the next few paragraphs, hence resonating the stance of these perspectives in the learning world. A look into some of the various learning perspectives will show some distinctive features of learning, and also their differences in many ways. Here, we are of more concern with the differences rather than their distinctive features or similarities.

Cognitivistic-Constructivistic Learning

On reviewing the *cognitivistic-constructivistic* perspective, at its core cognitive science is held by those who believe that the mind is primarily individual, thought is an internal physical process, and essentially private. The cognitive perspective focuses on the ways or processes that allow people to know, understand and think about the world, thus knowledge is accessible and real to the people. Knowledge then is an endogenous process of attention, selection, organization and retrieval of data for some use that represents a whole, and not just a single constituent. Summarized by Hughes [3], he notes that students learn ways to represent information, usually text, in spatially constructed diagrams. Tony Buzan's trademarked brand of mind-mapping techniques provides parallelism to such a learning construction. It organizes students and teachers' information in the cortex cells for the purpose of delivering quick speeches, lectures or presentations.

In Piaget's [4] cognitive development theory studies, he deals with these three stages of development: pre-operational, concrete, and formal operations. Pre-operational cognitive level involves the mental age from age 2 years to age 7 years. The concrete level person, mental age of 7 years to 12 years, understands conservation of matter and classification/generalization. Formal operation is the highest cognitive development level still defined by Piaget. It is the ability to deal with abstractions, form hypotheses, solve problems systematically, and engage in mental manipulations. A typical childcare centre uses puzzle-like rubber tiles that can be conjoined to form a large ground mat. A pre-operational level child cannot distinguish the colors or use of the rubber tiles, but knows they exist. However the concrete level student can already classify the rubber tiles into colors, the use of it and juxtapositioning of the tiles meant for comfortable sitting. Using another plane of thought process in conjunction with Piaget's theory, human cognitive abilities can also be extracted and improved upon by separating and recalling perceived awakening, un-awakening and sub-awakening and when interacting with various elements. One has full operative senses used to engage learning on an awakening mode at every age. On the un- awakening plane, development is shut-off due to none or over stimulation of the senses, impairing all cognitive abilities and linkages. This could be a complete loss of memory. For sub-awakening mode, there is a tendency to re-enact knowledge and experiences left over from the past. For instance, how an urbane literate person sits like a peasant, carries a corporate bag in a bundle-and-stick fashion over the shoulder, dumps money when doing payment over a counter, refusal to dump the winter garbage as summer hasn't approach, or blurts hatred of some ethnic, all these tendencies revealed at formative and teenage years, which in no ways are transpired out of the learning urbane culture of his own, until he visuals and reenacts those tendencies in adulthood years in another alien culture of exact characteristics to his formative tendencies, resulting in self-conflict. Here, cognitive abilities seemed pre-programmed and imploded at some developmental stages. The utilitarian distinction of cognitivistic-constructivistic learning is to separate modes of cogitation skills from the construction of needs understanding. Hence such distinction clarifies to the educator the goals they seek to attain is representative and predictable in reality.

Radical Constructivistic Thinking

In the *radical constructivistic* view of thought, [5] particular epistemological emphases leads to defining principles that maintain the

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internal nature of knowledge and the idea that while an external reality may exist, it is unknowable to the individual. He continues to argue that reality is unknowable since our experience with external forms is mediated by our senses (Flaws in a personal and cultural context). This differs from mental cognitive approaches where knowledge is reflected on the subject passively underpinning critical analysis and a belief that knowledge is accessible and reality is made known to learners, even in some abstract form. In the radical case, students should also push forward a learning path-goal for themselves by creating knowledge and opportunities that may not exist. Within the radical-constructivist theory, knowledge isn't something that exists outside of the learner. According to Tobin and Tippins [6], radical constructivism is a form of realism where reality can only be known in a personal and subjective way. It is by this learning perspective that students can build their wealth of experience by accumulating their knowledge and experience regardless of its true representation, and that to experience the world is through one's own unique effort, even in a metaphysical one. Radicals sense a tinge of unpredictability and an uncommon scope of learning. What would one make of in the middle of the night when one's whole body is stuck under a block of invisible force. Or if one feeds the nether spirits during the hungry ghost festival with cooked soft white rice and green vegetable dishes laid out on the shrine at your own abode, and comes back to the shrine in half hour's time to see hard stale yellow rice and vegetables instead. There is no objectivity in this sense, since no objectives and factual assumptions are reached. It is no longer an act of cogitation then construction, but an act of construction first then cogitation. It is not a separation of the mind to a whole end, but an inclusive combination of mind and experience to another experience. However, it is of the subjective responsibility of the person to see the occurrence as proof of his real world.

In the scope of fudiciary duty, a paid teacher is to ensure an alteration of the student's thoughts and do patterns for a unique experience where the media alone is insufficient to provide for. With aided computer facilities, students grades may not improve, is an inductive reasoning. Since, most students play simulated computer games day and night long based on their own prior experiences of game playing, teachers can only contrive a fine slapped on their students to hopefully change their addicted habits, and such a practice coincides within one's own boundary and objectives. Teachers or students outside the communal circle elsewhere might know or not know of such a practice and will have to determine the impact of slapped fines on their subjects. Thus, according to Staver [7], "knowledge is knowledge of the knower, not knowledge of the external world; improving knowledge means improving its viability or fit in, but not match with an external world". In the event of a fit in, the cognitive function of knowledge adaptation is necessary to engaging a creative construction of operant conditioning, where learning takes in the form of rewards and punishments, transforming a passive form of cognition to becoming an active one resulting in a kind of utilitarian truth, and not a universal one.

Affixing an electricity count meter in the classroom is knowledge known only to the management of the school and implemented within a certain class boundary, to those who waste electricity. A fixed amount of electricity is charged monthly for these students, and any excess rate of use will be paid for by them by slotting a recharge card into the meter. Again, students from other classes have not heard of such an implementation as yet. Hence such knowledge is knowledge exclusive to reaching an objective and not will be experienced if the context did not exist. This has led students' to resisting the changes where their ingrained patterns of conception do not allow for the new changes,

and students would imperatively have to vary their mentalities to suit a new functionality. Implementing learning strategies, structures and systems are interrelated that allow each and every student to perceive their realities differently.

Social-constructivistic Trials

On hindsight of the *social-constructivistic* learning perspective, it entails all the elements of the other constructivist perspectives placing a learning emphasis on the role of others in a social context. This can be seen from Von Glasersfeld's [8] works that: "Knowledge is constructed, not transferred.Knowledge construction is embedded in learner's interests and personallymeaningful activities. Learners take initiatives in growing their learning environment. Social interaction is an essential element in the construction of knowledge."

It aims to find a meaningful practice of learning with the community, but which a proposed system should be available as such for delivering instruction. Goals are not measured in specific terms, but from a qualitative measure. No objectives of any quantified grades or study hours put in should be met. It is a process of value-added learning where a central assumption of social-constructivistic approach to education posited by Wilson [9] illustrates that knowledge is "a person's meanings constructed by interaction with one's environment, and that instruction entails a learner drawing on tools and resources within a rich environment." An experientially sound based learning environment involving mentors and proteges is aptly suited for creating synergistic benefits essential to the human learning environment.

A person's expectation of the unknown is shadowed by previous knowledge and experience and to be shown the light by surrounding peers, where no man is an island adage comes to mind. To have both parties make meaning out of instruction and shifting away from individualistic learning to learning within a community, Singapore *Republic Polytechnic's* outbound design activities infuse a common learning goal of cohesiveness and mutual sharing, where the knowledge and other values cannot be achieved through individual cogitation or construction of some means. An individual drops backward from a 3-metre high platform and friends below attempt to catch the subject. A closer and trusted relationship is fostered as seen by a deep sense of appreciation from the falling participant to his camaraderie. Even more widespread collaborative applications are seen of youth citizens attempting to remodel Singapore's education system where education ministers and permanent secretaries are challenged and reproved in *World Education: The Open Singapore Forum,* to the notions of traditional versus innovative education systems where multiple feedbacks, chat discussions and bloggers attest to the evaluative measures.

A change element is perceived, strong or weak, and the meanings are deep. Obstacles come in multiple folds: The teacher provides the students with a written tutorial exercise and the classroom's electricity supply suddenly falls short and the classroom goes instant black, creating not a sudden impact of desolation, but a multiple intensity of cooperation and situational handling from the students illuminating the surroundings with their mobile phones for better visibility so as to complete their exercises. Not that their tutorial answers were any better, but the adoption of harmony, tolerance and cooperation taking place as infallible parts of social learning reminds that the perspective here is of searching a collective truth and reality accepted and reflected in a society.

Phenomenographic Doing

In research endeavors, phenomenography has insisted on a 'purely

descriptive knowledge interest' of investigating the qualitatively different ways in which people experience certain phenomena or certain aspects of the world [10]. The learning capability is not really of a cogitative kind nor a series of information processes, but a reliance on the need to experience a variance or a change of events to satisfy an experiencing concern. One approach to a phenomenography perspective is the figure-ground sketch of "moebious" birds, where the focal concentration is grounded on either the black or white bird figures, both ways get you looking at adjoined black or white birds. Bowden and Martonargue, that "when some aspects of a phenomenon or an event vary while other aspects remain invariant, the varying aspect will be discerned" [11]. Discerning a variance leads to multiple conceptions of actuality known to the individual. Number would not exist if only a zero existed. But when characters 1 to 9 are created, numbers would have a meaning distinct with individual personalities. For instance, one could see the number 19 as 19 or, 1 and 9 separately. Awareness of these variances should also see contemporaneousness as a function of the variation of learning experiences seek. One must be able to have prior cognizance or perception of the numbers 1 and 9, or otherwise there would be no reference of meaning. To fully understand the Chinese hieroglyph "zhong中" in , varying experience and awareness of having lived in China is essential and taken in a context of contemporaneousness to determine the depth variation of learning seek for. Typically, an illiterate would perceive the hieroglyph as, either 5 strokes, a square or a line, and not know how to read it. A native Chinese sees the character as 5 strokes, knows how to read it and understands the meaning as "center". An experienced learner of any other nationalities may interpret the character and denote it as a symbolism only known to him or herself.

Over in the classroom, students discern the structural aspects of phenomenography comfort threshold levels by adjusting the classroom referential factors to suit their study needs. Seats are made of wood material in China, thus a spongy cushion is required to eliminate the hardness. After a while, it becomes a catch22 factor when the students adjust to the softness and become lazy, perpetuating more sleeping equipment to the forefront. Both the structural and referential aspects are therefore vital to the process of personal growth. Phenomenography stands out as being a more modern approach gauging a change of a felt element, rather than as a methodology (It is not of this article's purpose to achieve any methodological answers).

Sociocultural Community

In the advent of the new learning economy, a modern perspective of sociocultural perspective has been employed in renewal of faith in education. It is a social process with an emphasis on the elements of relationships between people, contexts, actions, meanings, communities and cultural histories as well as cultural tools and artifacts [12]. More appropriately where collaborative learning is concerned, communal practices are established when there is common mutuality of shared exchanges of the elements, e.g. rituals, symbols, stories, norms etcetera. As put forward by Robbins [13], students are involved in the process of stretching their concepts to find a common ground, as they collaborate and argue with others. It is not a matter of bringing to the internal plane a product that was produced externally but a matter of social engagement that leaves the individual transformed into a socially meaningful element aligned with others. The elements of the environment and the environment itself are in constant change that results in constant interaction. Because globalization perceives no discrimination of all elements, reference groups must learn international rules of behavior while collaborating on a distance-

learning online platform. There is easy familiarity that norms every student after forming and storming stages, and most wish to be accepted into the mainstream. Thereafter, there can be no separateness of any specific acculturation occurrences and its mediated tools, except during a specific communal displacement (overseas attachment).

Mediated tools would are an extension of ourselves used to transmit thoughts into an activities, and activities back to the thoughts e.g. using a beam projector during talks to enhance an effect, and FAQs through the microphone (a simple yet powerful tool of expression). A cultural movement also facilitates an orientation for community of locals to gain economies of scope in many functions and to avoid duplication (group friends sharing various passwords to gain access to different e-resources). However the barriers of adopting such a perspective are obvious. Sociocultural dimension cannot fully exist on an organic non-perfect community of skeptics and constructivists, illustrated from the rife-corruption practices of the recent Malaysia transport minister's preference of dishing out quota "Approved Permits" of vehicle imports to crony business friends, leaving the parliament questioning the former on transparency policies. Such a cultural context questions the purpose of sociocultural learning. However it does not distinguish useful or useless practices, but could preach Hobson's choice at times. Language and activity of abuses at home and at school for the purpose of blind discipline are detrimental to the formation of a growing societal identity.

Comparing Constructivism, Phenomenography and Socioculturalism

As with all things, comparison of these learning perspectives is necessary to indicate the similarities and differences. It is not of consequence to determine their strong or weak points, but rather to highlight each learning *in situ* relations. In the case of constructivistic learning, knowledge then is not merely internalization, but a construction of it to render externalization and the truths. An example is a visual impact of a positioning scale used for identifying and constructing some real learning strategies in a school adopted program.

An instant assessment can be visually understood with simple organization of criterion stored and retrieved. The adopted education strategy employed by the school is the full sum of its sum parts of sub-strategies, giving a choice of mix assessments tailored to students' individual preference, strength and weakness to complete the whole program. The varieties of assessments give rise to a heterogeneous form of learning skills which will enable them to manipulate in the knowledge economy. Students would have to examine themselves to determine the best assumptions and mode of learning at the formal stage and not be classified as a statistical follower of a herd mentality, but rather an individual with a unique identity amongst the herd. Constructivism is indeed more heterogeneous than other forms of learning, being more flexible and diverse in paradigm. It is a first order movement in explaining "why" things work that way, unlike the other learning perspectives of second order of "how" and "way" things work.

Phenomenographic expression being non-dualistic, the experiences and changes cannot be separated or otherwise tantamount to an empty space. It differs to constructivist perspective as one being more homogeneous and responsive to learning adjustments. Homogeneous because of it fixed paradigm assumption of experience where one factor relies on another for occurrences. Critical awareness of a particular environment and ways to experience that environment is structurally categorized for effectiveness, not to acknowledge or refuse truth or reality as described in constructivism. The approaches to the

findings are self-customized and internalized. Construct and process concerns are less obvious since it is not too bothered with the depth of the knowledge gained through variances discernment, but rather is more concerned with the width of experiences attained through a trial-and-error means. A positioning scale as abovementioned is a tool of constructivism and cannot be perceived in other ways. It is fixed. Phenomenography views pattern differences, fueling a breeding ground for the unknown leading to many "black and white" instances of events. Many e-learning organizations cannot afford a trial-and-error environment as scare resources and natural obstacles are often a hindrance to the learning curve where objectives supercede the real mission of learning. For many of these goals oriented organizations, learning is forced to acquire a habitual habit, to serve a duty or task, and not to acquire learning for the sake of learning. Favor is not on the side of phenomenography.

Sociocultural being the latter form of perspective is seen as a maturation of learning: a precondition of learning but never the result of it. The learner takes charge of his own development reversing the role of teaching into a mentoring one instead. Learning forms a superstructure over development, leaving the latter essentially unaltered [14]. It is the interaction over time that learners are absorbed into the community by natural or predetermined instances, and not serve to construct any forms of paradigm or retrieve any particular skills or knowledge, but to participate and develop as part of an establishment. Experiencing a phenomenon is part of sociocultural practices too, but forms as a warranty within the society, and not as a precondition for learning in a community. Meanings of variances are absorbed from societal interactions and not formed by an individual, the difference between social-constructivist and sociocultural modes. The desired meanings to creating personality, identity and association of the establishment is likened to a series of parallel and perpendicular threads intertwined by continuous weaves that must maintain shared codes at all points. It is a synchronous constant flow and not an absolute whole of answers unlike constructivism. There is externalization of the mass product into the individual and not the internalization of the individual product to externality. It can tend to be homogeneous in practice after a while due to motor reproducing similar events. This could slowly kill off motivation, innovative learning, and decay full development at some point. At best, sociocultural perspective is group-actualizing habits of development, but hardly pedagogic or enlightening since societal truths mask the real reality of truths [15,16].

Finalizing the Learning's

To advance the growth of learning mantra, it is necessary to acknowledge the interrelationships between humans and its surroundings, to understand the differences each learning has on varying situations, and not put too much emphasis on any particular perspective that would reduce the potential of others. Rendering cognitive-constructivist, experiential based or sociocultural learning perspectives should be promoted and constituted as a unity to an eclectic education, an education of acquiring forms, habits, and meanings to promote individuality uniqueness and group meanings in the new age. Ultimately the space of learning is formed by humans, to review and relive the necessary epistemic or utilitarian needs within their own multi-disciplinary context.

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