EDF4120

ASSIGNMENT TASK 1:

An examination of Learning theories

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Over the years, many learning theories have managed to enter classrooms as part of teaching pedagogy in the western countries. Theorists supporting behaviorism, constructivism, nativism, humanism, cognitivism, etc. have arguably answered biological, philosophical and sociological questions surrounding children's learning and teaching practices. According to Brainerd and Reyna (2015, cited in Barraouillet, 2015), successful theories are built upon two strong functions of scientific theories – explaining something that has never been addressed before with numerous findings and fewer assumptions, and predict expected failures or opposing beliefs or findings based on competing theories. This essay tries to compare and contrast three major theorists under the Constructivist paradigm – Jerome Bruner, Lev Vygotsky and Jean Piaget. Their findings have changed the way education was perceived many years ago, addressing issues related to effective teaching practices in relation to meaning construction, hence, making their work profoundly insightful for educators.

First part of this essay focuses on briefly explaining the Constructivist paradigm, also in relation to the other major ones. In addition, the position of the constructivist theorists mentioned above in the constructivist paradigm is explored. Second part illustrates the theoretical underpinnings of Bruner, Vygotsky and Piaget's work, simultaneously discussing the differences and similarities between their learning theories. Finally, my personal understanding of learning based on my experiences as a child and now an adult has been explored.

There exists a degree of overlap between and among the behaviorist, constructivist, cognitivist, humanist and socialist paradigms as they attempt to address the same issues surrounding effective learning and teaching practices (Churchill et al., 2015).

Social learning theory by Bandura (1976) on one hand encompasses Vygotsky's beliefs of social situations affecting child's learning (discussed later in the essay). In a way, this view is connected to cognitivist orientations to learning as well, wherein, learners' manipulation of information from the environment affects their behavior in hand with cognitive development. Thus, teachers have to create an environment conducive to enquiry-based and interaction-based learning. Vygotsky's theory of social constructivism (discussed later in this essay) is relatable here. On the other hand, situational orientations to learning are claimed to be an extension of or a transition between the behaviorist and cognitivist explanations of learning (Churchill et al., 2015). In addition, Bruner states that any act of learning should take us to a place in the future, i.e. change our thinking (Bruner, 2006). Similarly, humanistic beliefs foster self-actualisation at the epitome of effective learning – personal change and growth (Rogers, 1969, cited in Churchill et al., 2015). Hence, it can be concluded that Constructivism is an amalgamation of certain theories designed to promote learner-centered pedagogy.

Furthermore, constructivist learning theories also oppose conventional teaching practices. Churchill et al. (2015) suggests that the definition of learning has evolved to be the way people understand, experience or conceptualise the world around them, making it an ongoing process as well as a product encompassing knowledge acquired. Conversely, behavioristic views of learning emphasise on knowledge adoption through transmission (Brown, 2006). A learner is deemed successful if he or she has mastered the content by means of rote learning, conditioning minds to change behavior, being the root of this paradigm. While a teacher's role in this paradigm is solely instruction based, constructivist views consider teachers as facilitators of learning. In its core beliefs, it is for the teacher to present information in

such a way and in terms of such a structure that the learner can get maximum regenerative travel from the material to which he or she has been exposed (Bruner, 2006). This immediately brings up the rewardingly complicated issue of how one presents different kinds of material in order to honour properly this particular function of teaching – successful knowledge impartation (Bruner, 2006). What materials should be presented to the learner at different stages and in what order and pattern?

CONSTRUCTIVISM

Cognitive and Social constructivism are the two main branches of the Constructivist paradigm. In cognitive constructivism, individuals construct knowledge through a personal process, whereas, construction of ideas through interaction with peers and educators is known as social constructivism (Powell & Kalina, 2009). While cognitive constructivism is strongly supported by Piaget's work, Vygotsky's approach of considering learning as a social activity mediated through the symbols and language of culture has influenced social constructivist theories. Despite differences in applicability, both cognitive and social constructivist teaching methods are suggested to be used by teachers interactively so that students can process individually what they learned in a group or from another adult or peer (Powell & Kalina, 2009).

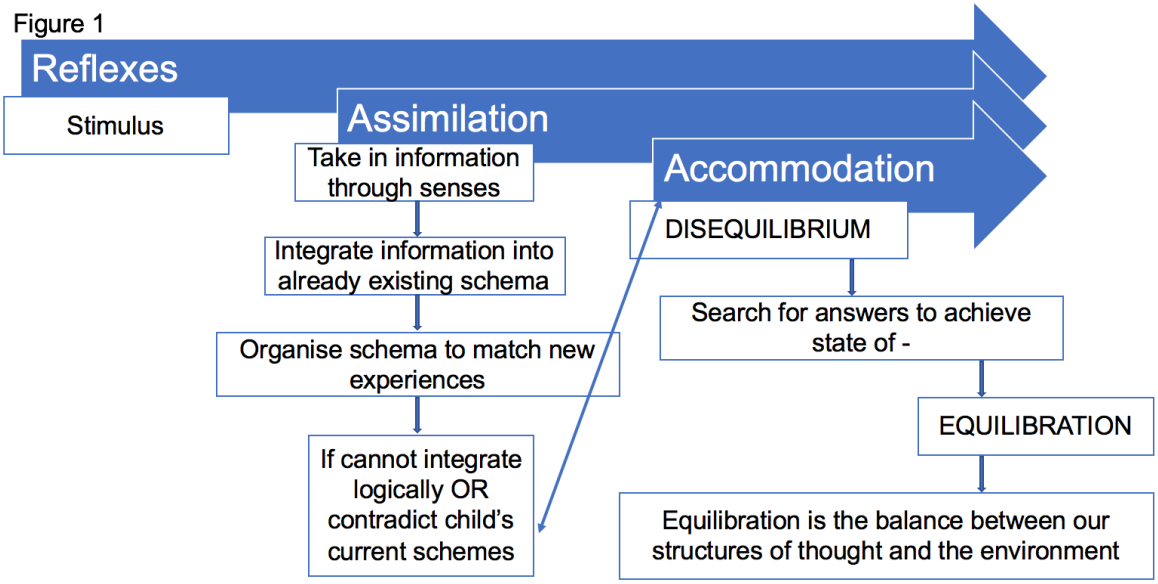
In the following section of the essay, Piaget and Vygotsky's constructivist theories are explained in detail. Consequently, Bruner's views are also discussed.

JEAN PIAGET

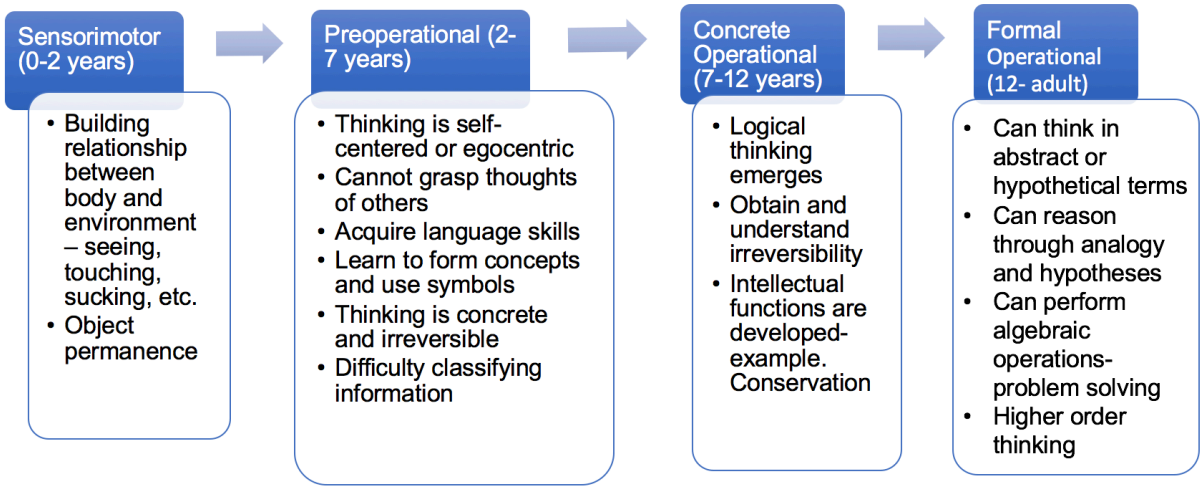
Primarily, Piaget considered knowledge construction by an individual to be at the core of his theory (Powell & Kalina, 2009). Information has to be intrinsically processed in order for it to be understood or further applied. He strongly believed

that humans are not able to immediately understand information given to them, they have to undergo an active construction process (Piaget, 1953, in Powell & Kalina, 2009). A diagrammatic representation of the same is attempted below in Figure 1.

Figure 1



After an individual is exposed to Stimuli, he or she goes through the Assimilation process of organising newly acquired knowledge into existing schemas, or view of the world (Southwell, 1998). If the new information accessed through social transmission does not fit a child's current schemes, it leads to disequilibrium. In order to reach the equilibration state from there, either new schemas are created or current ones are adjusted to accommodate new knowledge. Children's schemas are constructed through this process while going through the four stages of development (Wadsworth, 2004, cited in Powell & Kalina, 2009), as seen in Figure 2.



Piaget's Stages of Development (Southwell, 1998) - Figure 2

In the first two years, a child is establishing a relationship with its surroundings. An important developmental aspect learned at this stage is object permanence. Children are able to remember objects they do not see around them. In the Preoperational stage, children believe that everyone else thinks the same way they do. It is difficult for them to view life from another persons' perspective. Maturation of object permanence helps them remember words, hence learn a language, develop concepts in their head, etc. In this stage, their mental capabilities still lack complexity. That starts developing in the concrete operational stage. An important cognitive development is observed in this stage – conservation. It is the ability to differentiate between the possibility or not, of quantity changing based on what is seen when nothing has been added or taken away irrespective of changes in spatial arrangement or form (Pulaski, 1980, cited in Southwell, 1998). The final stage is when most of the functions of the brain can be utilized at its optimum level. Summing up, Piaget's stages of development are based on children's ability to learn to make logical analyses at different ages while growing up (Powell & Kalina, 2009).

LEV VYGOTSKY

Lev Vygotsky, the founding father of social constructivism believed in social interaction and that it was an integral part of learning. Social constructivism is based on the social interactions a student has in the classroom along with a personal critical thinking process. While Piaget supports the notion that biological development supports cognitive development, according to Hedegaard (2012), Vygotsky claimed that societal and historical development shape and concretise human biological development, not denying the biological aspect of it. These sharp divergences in their approach, paradoxically stemmed from a common ground of 'meaning making'. A mind's absolute capacity to express a logical understanding lay at the heart of Piaget's theory of mediation between the external world and individual experience. However, Vygotsky's view of the matter required the cultural context of the external world for meaning making (Bruner, 1997).

In relation, human culture and history as tools of mind, mental development requires to undergo the process of Internalisation to get the culture's symbolic tools through social interaction from outside to inside our repertoire of thought (Bruner, 1997). Vygotsky (1962) argues that once a new structure has been incorporated into a child's thinking, it gradually spreads to the older concepts as they are drawn into the intellectual operations of the higher type. This systematic process is Internalisation. In accordance, language played an important part in construction of knowledge for Vygotsky (Powell & Kalina, 2009). Hence, as opposed to Piaget's theory of language following thinking, Vygotsky argued that language preceded knowledge or thinking as the process of social interaction using language helps individuals learn.

Zone of Proximal development is one of Vygotsky's main theories. It has been described as the zone where a child learns a new concept after help is received (Vygotsky, 1962, cited in Powell & Kalina, 2009). It involves the concept of scaffolding, where there is involvement of someone who can help the child move forward from not knowing something or struggling to understand concepts. Thereby, they work on assignments with aid from teachers and learn the new concept based on what they were doing individually, expanding their zone, encouraging them to do more. Unlike Piaget's biological process of internal construction of knowledge, Hedegaard (2012) claims that Vygotsky's theory of the zone of proximal development connects a general psychological perspective on child development with a pedagogical perspective on instruction. Psychological development and instruction are argued to be socially embedded, hence, understanding them requires us to analyse the surrounding society and its social relations (Hedegaard, 2012). Thus, ensuring socio-cultural factors influencing learning.

JEROME BRUNER

Numerous similarities can be observed in Bruner's constructivist theories with Piagetian and Vygotskian beliefs. His developmental stages bear close resemblance to Piagetian stages of development in terms of biological growth affecting cognitive development. They are the Enactive stage (0 to 18 months), Iconic stage (18 months to 6 years) and Symbolic stage (6 years onwards). In the first stage, children respond to sensory stimuli, while in the second, they view the world through concrete representations and in the third, they can handle abstract representations using thinking skills to understand concepts (Bruner, 2006). Pulling from Piaget's theory of staged development his argument relates to translating ideas into the language of a

child's internal structures to understand the ideas being taught. Similarly, Bruner's theory of tutoring for problem solving was influenced by Vygotsky's scaffolding technique - the means through which an adult or 'expert' helps somebody who is less adult or less expert (Bruner, 2006).

For Bruner, better comprehension of subject matter is made possible by understanding the principles (Shelton, B. E., Satwicz, T., & Caswell, T.,2011). Structured placement enables the reader to process and make meaning systematically. Bruner's viewpoint stressed the learner's control over organisation of content to fully engage with the mater, thereby, better concept comprehension. Connectedly, proper structure and presentation of materials resonates very closely with aspects of both Piagetian and Vygotskian constructs.

Spiral curriculum theory is a technique used in teaching where the basic facts of a subject are learned, without worrying about details. Then as learning progresses, more details are introduced, while at the same time they are related to the basics which are re-emhasised many times. Bruner certainly acknowledged and espoused the importance of keeping students engaged in their learning activity as being central for successful understanding of concepts (Shelton et al., 2011). Hence, this concept was used as a basis for the way most school curricula and textbooks are organised. Revision enables the leaner to construct, deconstruct, accommodate new information, assimilate and in the end, make meaning of the knowledge internally. Through an expert's support, increased difficulty level is met with successful comprehension. In my understanding, Bruner has arguably managed to

accommodate Piaget and Vygotsky's constructivism ideologies in his work. In view of the above discussions, his work is strongly influenced by these theorists.

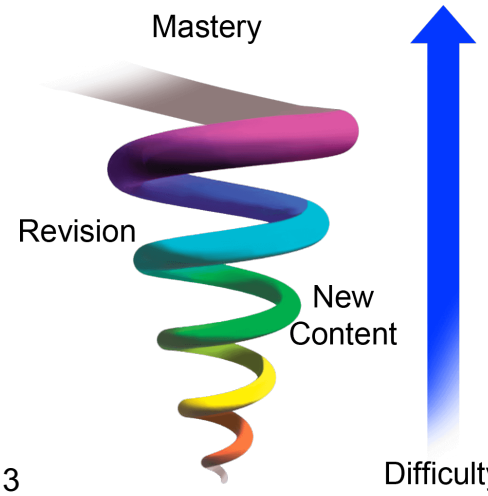


Figure 3

Lastly, this section of the paper discusses my personal views about learning and what it means to me. *"We begin with the hypothesis that any subject can be taught effectively in some intellectually honest form to any child at any stage of development"* – Jerome Bruner (1966). I strongly relate to this statement because I have been an average student all my school life. This absolute statement because of the realisation that absence of scaffolding never allowed me to move forward from the zone of proximal development to successful knowledge acquisition. Hence, for me, constructivism has turned out to be an eye-opener.

Growing up in behaviorism dominated classrooms, learning for me used to be the means for not getting humiliated in front of my friends. It is just recently I have come to realise that I was limiting myself because of what was reflected in standardised tests or my teacher believed I could not do. As per the demands of the learning paradigm I was brought up in, just memorisation was not possible for me. Making meaning of concepts was important to remember and add the newly acquired

information to my schema. Few years of practice and scaffolding from peers helped me overcome my fear of learning something new.

In the end, socio-cultural aspects involved in knowledge acquisition enabled me to understand complex concepts by structuring them logically externally in diagrammatic representations as well as internally. Learning for me, opens up possibilities (in Bruner's words).

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