

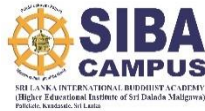
**Sri Lanka International Journal of Buddhist Studies (SIJBS)**

**Volume V (2019), ISSN- 20128878**

**An Analytical Study of Constructivist Approach  
in Buddhist Education**

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## **An Analytical Study of Constructivist Approach in Buddhist Education**

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### **Abstract**

Constructivism is a recent theory introduced to the educational sphere by western educationists in the second half of the 20<sup>th</sup> century. Though it became the leading theory among western and eastern scholars in the 1930s and the 1940s it is not a new approach to Buddhist education since the Buddha applied constructive learning approach 2500 years ago. Even western psychologists accept the view that the constructive learning approach is an aspect of Buddhist education. Therefore, the main aim of this paper was to study the constructive learning approach reflected in Buddhist educational psychology. Here, the *Sutta-piṭaka* was used as the main source with adequate reference to secondary sources. Research findings of this paper have been discussed through critical and analytical perspectives using descriptive and explanatory methods. According to this research, the *Sutta-piṭaka* proves that Buddhist education consists of fruitful constructive learning teaching strategies. In Buddhist constructive learning too, the learner is at the centre of the learning/teaching process. Moreover, constructivism in Buddhist and western education psychology cannot be considered as two distinct methods. The constructivist approach in Buddhist education can lead to the creation of a sound background to strengthen both Buddhist and modern education psychologies in the light of both traditions.

### **Introduction**

Presently, educational psychologists motivate teachers and teacher educators to practice constructivist principles in classroom situations to produce more suitable people for the world of work with 21<sup>st</sup> century competencies. Hence, it has become a contemporary need to examine how far the teachings of the Buddha can be utilized to enhance the use of constructivism in western educational approaches in the light of Buddhist teachings. Therefore, in this paper, it will be examined how Buddhist constructivist elements have contributed in many ways to develop constructivism in modern education as a learning theory by providing rich principles in many dimensions over hundred years. The research paper is elaborated with especial reference to the *Sutta-piṭaka* by comparing constructivist teachings in Buddhism with approaches in modern education.

### **Literature Review**

The earliest recorded proponents of some form of constructivism are Lao Tzu (6<sup>th</sup> century BC), Gautama Buddha (560-477 BC), and Heraclitus (540-475 BC), in the east, and Giambattista Vico (1668-1744), Immanuel Kant (1724-1804) in the west (Mahoney, (n.d.). Constructivist pedagogy is informed from the work of many scholars from east and west; examples are, to name a few, John Dewey, Jean Piaget,

Jerome Bruner, and Lev Vygotsky in modern psychology and Gautama Buddha, Nagarjuna, Dalai Lama, Thich Nath Hanh, and Suluk Sivaraksa in Eastern Education (Keerthirathne, 2015:31a). Buddhist educational psychology consists of the constructive approach and those constructivist teachings in Buddhist psychology have contributed to the development of the western constructive approach (McMillion 2010:79). The Gautama Buddha is the greatest among those who promoted the principles of constructivist learning (Ibid). Many *Suttas* in *Sutta-piṭaka* have been framed in a constructive way (Nimnong 2006). The content of similes and metaphors was used by the Buddha to help his disciples to construct knowledge by themselves (Rambelli, Undated). To McMillian, (2010:80) not only in the academic sphere but also in the therapeutic process the Buddha used the constructive approach. Constructivism in psychology is a method of Buddhist education that focuses on both the internal and the external systems of meaning-making.<sup>1</sup> In Buddhist education, the Buddha used the client-centered method. Moreover, meditation-based Buddhist education intervention helps the learner to actively minimize awareness of their mental process (Ibid). Buddhist and constructivist educational psychology can fertilize each other and enrich each other's insights (Keerthirathne 2015:8b). Views of constructive learning in western educational psychology are very close to Buddhist educational psychology where learner-centered education is promoted. When analyzing the Buddhist and western psychological constructive learning, western psychologists have developed the concept of constructive learning in the light of Buddhist psychology (Ibid: 10).

### **Constructive Learning in Western Educational Psychology**

Constructivism is a modern psychological school which has emerged since the second half of the 20<sup>th</sup> century and both eastern and western scholars have contributed to its development in many ways. In constructive learning theory, the learner constructs knowledge out of his/her experiences and they are encouraged to view themselves as active participants in their lives. Moreover, constructivism postulates that knowledge cannot exist outside the mind, truth is not absolute, and knowledge is not discovered but constructed by individuals based on experience (Fosont, 1996). Here, the learner is not a passive object and he is actively present in the teaching learning process. Since the learner is actively involved in the learning/teaching process, constructivists rejected traditional spoon-feeding methods. Here, teachers should find the most appropriate teaching methods and strategies as he or she can awake intellectual potentialities of the learner in constructive way. The teacher is not the sole agent of the classroom but s/he should think that learning does not occur in a vacuum while she or he is playing a major interactive role with both the learner and the learning environment. In a classroom setting where constructive learning teaching process appears, the teacher performs his/her role as a facilitator, helper, mentor and guide. The following are major characteristics of constructivist learning as being discussed in western education psychology (Open Educational Research of USD, n.d).

1. Constructive learning opportunities create multiple representations of reality
2. Avoiding oversimplification and representing the complexity of the real world is the task of multiple representations
3. Constructive learning stresses construction of knowledge instead of the reproduction of knowledge
4. Constructive learning stresses meaningful real learning situations rather than abstract instructions
5. In a constructive learning environment the learner experiences case-based learning (real world settings) instead of predetermined sequences of instruction
6. Constructive learning motivates thoughtful reflection on the learning experience with reference to what the learner has received
7. Constructive learning situations “enable context- and content-dependent knowledge construction”
8. Constructive learning supports construction of knowledge collaboratively through social negotiation

### **Constructivist Approach of Religions Contemporary to Buddhism**

As a preliminary discussion, it is useful to examine the availability of constructivist elements in other religions contemporary to Buddhism. The religious background at the time of the Buddha can be discussed under two traditions: *Brāhmaṇic* and *Śramaṇic*. While *Brāhmaṇic* trend was influenced by Vedic system of thinking the *Śramaṇic* was influenced by non-Vedic thinking and to the latter belongs the Jain, Buddhist and other similar ascetic traditions. According to the teachings in Vedic literature, man has gained knowledge by listening to someone. On the contrary, in Buddhism, knowledge received by listening to someone is incomplete due to four reasons: (a) *Susutampihoti* (knowledge gained by listening may be correct) (b) *Dussutampihoti* (knowledge gained by listening may be incorrect), (c) *Tathāpihoti* (knowledge may be the same), (d) *Aññathāpihoti* (knowledge may not be the same) (MN II: 513). The *Vedic* people believed in a powerful God who created the world and this was an almighty god surpassing all human capacities. The almighty God was regarded as not only the creator of whole animate and inanimate world but also the giver of ideal set of ethics for living good life. People did not have opportunities to criticize the teachings of the religion, and, as they were not allowed to express criticism of what god had said, constructive ideas could not be seen among people. On the contrary, the Buddha rejected such a concept of divinity as he respected the cognitive ability of man. Some followers of the Buddha who needed to increase the Buddha’s popularity said that the Buddha was omniscient. In the *Vaccagotta-sutta*, the Buddha said that if someone says that the Buddha has omniscience, it is an exaggeration. He says it is something that the Buddha had not preached, and was not one of the three knowledges of the Buddha (MN II: 71). The most appropriate word to introduce the Buddha is the “*tevijjosamano Gotamo*” (threefold-lore).

The Brāhmins sought external purification by submerging in rivers *Bāhukā*, *Sundarikā*, *Sarasvatī*, *Payāga* and *Bāhumati* in order to wash out sins they had done

instead of internal purification which could be received by developing constructive learning experiences. The Buddha rejected these religious observances followed by the Brahmins and preached them to have internal purification instead of external purification by using their constructive human capabilities (MN I: 36).

*Āraṇyaka and Upaniṣadic* eras were somewhat different than the *Vedic and Brāhmaṇic* eras because people started finding the truth behind the world without the limitations of the traditional teachings (BU I.3:27). Creative ideas of people in *Āraṇyaka* era led the foundation for intellectual awakening that emerged in *Upaniṣadic* era. *Monism* was the dominant feature in the *Upaniṣadic era*. These people questioned the nature of the world in order to awaken their critical mind. “What is the truth regarding man?”, “Is there any truth regarding the external world?”, “What is the relationship between man and the world?” were some of the basic questions they asked. This intellectual environment proves that a human’s cognitive ability was accepted in the *Upaniṣadic* era to a greater extent than in the *Vedic, Brahmin and Āraṇyaka* eras.

The six heretical teachers: Pūraṇa Kassapa, Makkhali Ghosāla, Ajita Kesakambala, Pakudha Kaccāyana, Nigantha Nāthaputta and Saṅjaya Bellatthiputta who lived during Buddha’s time did not evaluate human ability since their teachings were extreme. Pūraṇa Kassapa expounded *Akiriya-vāda* or the doctrine of non-action. He who valued non-causation (*ahetuappaccayavāda*) discarded the intentional actions (DN I: 47). Where intentional actions are denied, admiration of human potentialities cannot occur. Makkhali Ghosāla’s teachings belong to determinism. According to him, everything in the world exists in accordance to laws of *Kamma*, so no one can have any effect upon such a strictly fated course of *Kamma*. Here, it is clear that Makkhali Ghosāla rejects the validity of moral actions and responsibility (Ibid). The problem is how disciples can make use of their cognitive abilities under the guidance of this type of a teacher when he has uprooted human capabilities? Ajita Kesakambala presented materialistic annihilationism (*uccedavāda*) teachings by rejecting human effort, as well as not accepting a life after death (*paraloka*). According to Ajita Kesakambala, it is clear that there is no place for human capabilities in knowledge construction in his teachings too (Ibid). The Buddha’s opinion regarding Pakudha Kaccāyana is the same as what he said about Makkhali Ghosāla since he rejected the moral behavior (Ibid). In the Theory of Past Determinism (*pubbekatahetuvāda*) of Nigantha Nāthaputta, he asked his disciples to practice severe austerity (self-torture) and four-fold restraints (*catuyāmasaṃvara*) in order to free oneself from bonds (Ibid). Nigantha Nāthaputta’s teachings revealed that he accepted human capability to some extent and more than the other five teachers. Nevertheless, it was still not recommended by the Buddha since he believed in the *Kamma* accumulated from what we have done previously and in previous births. Thus, Nigantha Nāthaputta instructed his disciples to practice self-torture to get free from sins and he was unable to direct his disciples in the right way. Such meaningless guidance was devalued by the Buddha as a perfect teacher who motivated disciples towards constructive learning. Saṅjaya Bellatthiputta rejected giving a direct answer to any doctrine or statement positively or negatively or both or neither which was put to him in question (Ibid). According to the

information above, teachings of the six teachers were not good enough to promote students' abilities in the learning/ teaching process. It is clear that those teachers have not accepted the students' capabilities in the process of knowledge construction. In the *Samgāraya-sutta*, the Buddha divides his contemporary religious leaders into three groups: traditionalists, rationalists and experimentalists.

*Ājīvaka*, *Jaṭila*, *Acela* and *Muni* who lived during the time of the Buddha followed various religious observances including self-torture to achieve the ultimate goal they upheld. As these methods were inappropriate in knowledge construction the Buddha rejected them. To the Buddha, “Not going naked, nor having matted hair, nor smearing oneself with mud, nor fasting, nor sleeping on bare ground, nor covering oneself with dust, nor striving by squatting can purify a being, who has not yet overcome doubt” (Dham:142). An accusation leveled against the Buddha from *Śamaṇa* was that he rejects all the ascetic observances. The Buddha, who answered their accusation said that if any religious observance supports the eradicating of *Rāga* (lust) *Dosa* (hatred) and *Moha* (delusion), such an observance would not be rejected (MN I:68). One who is in standing posture cannot defeat those who run. Similarly, *Ājīvaka*, *Jaṭila*, *Nigāṇṭha* could not defeat the Buddha since their spiritual attainment was not enough to attain the ultimate goal introduced by the Buddha (SN: 376). Buddhism differs from other religions that existed in ancient India due to the constructive learning environment it has introduced. In the *Śamaṇa* tradition, students including those of Nigāṇṭha Nāthaputta were more active relative to those who believed in the *Vedas*, *Brāhmaṇas*, *Ārṇyakas* and *Upaniṣads*, but their active participation did not help them reach a meaningful goal since the methods they followed were not skillful. Moreover, the above discussion suggests that we think of Buddhism as an anthropocentric religion.

### **Constructivist Approach in Buddhist Psychology**

*Kusala* and *Sakko* are two words used in Buddhism to imply the cognitive abilities of the learner. In the commentaries, the ability to build up *Sīla* (morality), *Samādhi* (concentration) and *Paññā* (wisdom) is known as *Sakko* (PJ: 137) and effort taken to understand wholesome thoughts and eradicate unwholesome thoughts is called *Kusala* (*kusalaṅca pajānāti akusalaṅca pajānāti*) (MN II: 248). Usage of one's ability to get rid of evil thoughts is also known as *Kusala* (DhaS: 63). In the process of knowledge construction, the learner is guided to remove evil thoughts and establish wholesome thoughts in his/her spirituality (Ibid). Here, the Buddha asked the learner to refrain from constructing knowledge to cultivate actions that lead evil thoughts and to take up actions that lead to wholesome thoughts (Dham: 183). When achieving *Nibbāna* the learner constructs knowledge to know what s/he should know (*pariññeyyaṃ*), to eradicate evil thoughts (*pahātabbaṃ*) and to develop what he/she should practice (*bhāvetabbaṃ*) (Dham:383) for the attainment of the sublime.

Buddhism is for those who construct knowledge in a critical manner (SN I: 117) through reflection (MNI: 414). In the *Alagaddūpama-sutta* the Buddha taught his disciples not to grasp the doctrine incorrectly since it brings bad results. Incorrect understanding of *Dhamma* is similar to catching a cobra using an inappropriate

method. When a cobra is caught by an untrained person without applying the proper method, obviously, the cobra would bite the person. Similarly, if someone understands the Buddha's doctrine inappropriately, it does not help him to acquire the way to *Nibbāna*. Therefore, the Buddha aimed at creating a group of learners who would construct knowledge in critical manner without clinging to the traditional methods that prevailed among contemporary religions.

According to the Buddha, there is no one in the world to protect us. The world is unprotected. We have to safe guard our own skin (MN II: 54). At this point, the Buddha explains that the construction of knowledge should be made by the relevant person him/herself when reaching the ultimate goal (*Nibbāna*). There is no any other person to save our lives or to take us to the blissful state. Therefore, the Buddha asks his disciples to be the light for their own sake (DN II: 137). Through these explanations, the Buddha intended to encourage his disciples to act in creative ways in order to win their supra mundane life as well as improve their mundane life. For that, the Buddha explained the way which had not yet been created for attaining *Nibbāna*. He introduced the way which had not been introduced by anyone and explained the way which had not been explained by anyone. He saw the way. He was clever in finding the way. Anyone who is not crafty can understand (MN II: 80) and follow his constructive teachings (SNIII: 65). The Buddha's teaching, of *Kusala* (wholesome) and *Akusala* (unwholesome) can be understood only by knowledgeable persons (SN I: 200) as preached by the Buddha. If the learners are not in a position to comprehend both *Kusala* and *Akusala*, they are unable to reach *Nibbāna* (DN: 126). Thus, the anthropocentric form of teachings found in Buddhism help the learner in awakening his or her cognitive skills.

The Buddha's doctrine was opened to anyone and he explicitly invited his disciples to 'come and see' (*ehipassiko*) (MN I: 622) what he had taught and to examine whether it was correct or not. Having understood the teachings, the disciples can decide whether the teachings should be studied or left aside. This implies that learning should be achieved by the students themselves through active participation (*paccattam veditabbo*) (AN I: 270). The Buddha's task was guiding the learner to follow the correct path. The Buddha says that when learners are curious and investigate his teachings due to their critical studies, it is then that his doctrine starts to shine (MN II: 80).

In Buddhism, the learner can initiate any action (*ārambhadhātu*) he or she likes. In this case, s/he avoids laziness and increases his/her efforts to engage in that task productively (*nikkhamadhātu*). Moreover, s/he engages in the task with effort (*parakkhamadhātu*) and, then, this effort becomes more powerful (*thamadhātu*). The learner who intensifies his/her effort perseveres to continue the task (*thitidhātu*). Finally, he/she follows strategies to continue the task until he/she reaches the goal (*upakkhamadhātu*). According to this explanation in *Attakāra-sutta*, it is clear that the learner participates actively in the process of knowledge construction from the beginning to the end.

The Kālāmas who lived in Kesaputta had a problem: "How to distinguish wholesome thoughts (*Kusala*) and unwholesome thoughts (*Akusala*)". The Buddha,

who went to Kesaputta of Kālāma, taught them to use introspection when deciding the difference between wholesome and unwholesome thoughts (AN: 188). Here, the learner reflects on what he has learned. The Buddha further explains that, if the action is done with non-greed (*Alobha*), non-hatred (*Adosa*), and non-delusion (*Amoha*), such thoughts are rich in *Kusala*. If the action follows from greed (*Lobha*), hatred (*Dosa*) and delusion (*Moha*), it belongs to thoughts which are not suited to good values (*Akusala*). The nature of thoughts should be decided by the doer him/herself according to their results.

A fine example to show constructivism in Buddhist educational psychology is the *Ambalaṭṭhikārahulovāda-sutta* which the Buddha asks Venerable *Rāhula* to reflect on what he has learned by taking the example of a mirror. When the Buddha asked *Rāhula* to describe the use of a mirror, *Rāhula* answered that the mirror is used to see the face in order to correct anything wrong on it. Following that answer of *Rāhula* the Buddha asked him to reflect on what he does, like a person who uses the mirror to see his face in order to correct if there is something wrong in his face. Furthermore, the Buddha explained three criteria one can use when selecting something wholesome and unwholesome. They are: a) the action which is beneficial to the doer, b) the action which is beneficial to others around the doer and c) the action beneficial to the doer as well as to others around him. Therefore, these types of actions should be practiced and they can be considered as actions rich in *Kusala* thoughts.

The *Adipatteyya-sutta* of the *Aṅguttara-nikāya* is also important when discussing the Buddhist conceptualization of constructive learning (AN: 528). In this *Sutta*, the Buddha explains three methods one can use to select good from bad. First, if someone has to lose his dignity because of his action such action should be avoided, because it is not value-oriented (*attādhipeyya*). Second, if our action is criticized by someone who notices it, such action should be avoided too (*lokādhipeyya*). Third, if the action is recommended by *Dhamma* such action is liable to be undertaken (*dhammādhipeyya*).

The life of ascetic Gotama too is a great example to prove the constructive nature of Buddhist education. His life is a model for present-day students. As is explained in the *Suttas*, the way followed by the *ascetic* Gotama to find the truth is critical and creative. The word “*Ariyapariyesana*” itself implies the critical and analytical nature of truth found by the ascetic Gotama. On his way in the noble search the ascetic Gotama constructed knowledge to comprehend the difference between two searches: ignoble and noble. Here, firstly, the *Gotama* went to Alāra Kālāma, a distinguished ascetic, in order to learn the truth (MNI: 160). Since Alāra Kālāma’s teachings did not lead to disgust or detachment, nor to cessation, tranquility, intuition, enlightenment, or *Nibbāna*, the ascetic Gotama left him even though he was invited to be together as a co-teacher. After that, the ascetic Gotama found another teacher who was more competent than the former. He was Uddaka Rāmaputta. Since his doctrine too did not provide the expected support to eradicate unwholesome; *Raga* (lust) *Dosa* (hatred) and *Moha* (delusion) except in the final stage of mental concentration, the Realm of neither Perception nor Non-perception



(*N'evasañña N'asaññāyatana*) he politely departed (Ibid). Here, it is proved that the ascetic Gotama was very watchful and inquisitive in learning. He did not believe what was taught by the teacher at once and did not become dependent on the teacher. He who believed that his spiritual aspiration was higher than what he got from Alāra Kālāma and Uddkarāma Putta realized that the highest truth was to be found within oneself. Having thought this way, he started practicing self-mortification in order to attain that highest truth (MN I: 237). In this effort, too, he came to feel that the quest of the highest truth cannot be achieved by practicing self-mortification. Finally, he who understood that all those bitter and difficult austerities would not help him to reach excellence, worthy of supreme knowledge and insight and transcending those of human states, started to follow the middle path. As a result of that great effort, he gained perfect one-pointedness of the mind (*Samadhi*) and comprehended the reminiscence of Past birth (*Pubbe-Nivasanussati*), the perception of the disappearing and reappearing of beings (*Cutūpapāata ñāna*), and the comprehension of the cessation of corruptions (*Asavakkhaya Nana*), which paved the way for him to attain *Nibbāna*: “This is sorrow”, “This, the arising of sorrow” “This, the Cessation of sorrow” and “This, the path leading to the cessation sorrow”(Ibid). The Buddha represents the highest state in the Buddhist constructive learning which is referred to as *sampannakusala and paramakusala* (MN II: 374).

One who studies this learning process of ascetic Gotama carefully can see how far he has been active in exploring the truth. Though present-day students receive support from their teachers in knowledge construction, the ascetic Gotama did it by himself without the guidance of a teacher. He himself explains it in his own words as “*na me ācariyo atthi- sadiso me navijjati*” (MN I: 160). This is a big positive feature regarding the constructive learning in both ascetic Gotama’s life and Buddhism.

### **Constructivist Elements as Reflected in Buddhist Education in Many Dimensions**

In the constructive learning process of Buddhist psychology, the Buddha performed his role as a facilitator. He provided the necessary mental and physical assistance to the learner so that s/he can achieve learning outcomes. This can be seen in the incident of Venerable Chulla Panthaka. He was punished by his teacher, Venerable Mahā Panthaka who had been his elder brother in lay life. In this case, he was excommunicated since he was unable to study even a line of a stanza (*Ghata*) for three months. The Buddha, who saw this incident, went to the small monk *Chulla Panthaka* in order to help him and took him to his monastery. After that, he was given a simple activity: to touch a piece of pure white cloth and say “*Rajoharanam, Rajoharanam*” in order to realize the nature of the changeable world by himself (TheG: 59). With this learner-centered exercise he understood the changing nature of the world.

As a constructivist teacher the Buddha guided his students to explore their target learning experiences. He merely provided the necessary instructions with limited intervention. The way the Buddha taught the nature of the world to *Kisāgotami* tells us that guided discovery learning is not formulated by the Western educational

psychology. *Kisāgotami*, who had lost her one and only baby infant, came to see the Buddha with eyes full of tears in order to find a solution to her burning problem. In this case, the Buddha gave her a small piece of guidance to help her find solution to her sorrowful problem. The Buddha asked *Kisāgotami* to go around the village and find a fist of mustard from a house where a person had not died. The lesson to her was to reach a better understanding of reality, because she could not find any home where no person had died (DhaA: 270).

Since the constructivist teacher acts as a helper (assistant) as well as mentor in constructive learning, the Buddha too illustrated the idea that the teacher helps and performs the role of mentor when the students have problems in knowledge construction, as is shown in the case of the character of Rev. *Nanda*. He loved his betrothed, *Janapada Kalyāni*, while being a monk, without completing the necessary spiritual requirements to attain arahanthood, so he was motivated by the Buddha who took him to heaven to persuade him to give up his idea regarding his lay life lover. The Buddha allowed him to see a beautiful goddess in heaven and then the Buddha asked *Nanda* whether *Janapada Kalyāni* or that goddess was more beautiful. Hearing the question, Rev. *Nanda's* answer was that the goddess was more beautiful than *Janapada Klayāni*. After this reply, the Buddha promised *Nanda* that he would be given the goddess if he completed the necessary spiritual achievements to reach arahanthood. In this case, the Buddha had known that there was no need to give him the goddess since he was in a destined position to attain *Nibbāna*. It is said that, in order to gain the goddess, Venerable *Nanda* was more enthusiastic in his effort to become an Arahant. As the Buddha expected, he could take *Nanda* to an expected spiritual level in a short period of time because of the strategy he followed (Uda: 3; 22).

The Buddha had understood that the teacher's task should be to enhance the capacities of thinking and feeling in relation to relevant learning experience. Students should be motivated to construct knowledge from the lessons they are taught. When *Aṅgulimāla*, who followed the Buddha to collect a finger, asked Buddha to stop, the Buddha replied 'I have already stopped, you stop'. *Aṅgulimāla*, who heard this answer started to think 'while he was going, he asked me to stop'- what does it mean? Finally, he understood that it was because the Buddha had stopped the rebirth, he said 'I have stopped'. Still, I am to end rebirth (*samsara*). Therefore, he asks me to stop. The statement made by the Buddha motivated *Aṅgulimāla* to complete his understanding to its maximum.

In western education, Peer Learning is an important strategy a teacher can implement in the learning teaching process for a successful knowledge construction. This Peer tutoring method can be seen in Buddhist education too. Allowing Rev. Mahā Kassapa to offer advice to other *Bhikkus*, is similar to cross-age peer tutoring in western psychology. In cross-age peer tutoring, the peer is older. According to psychologists, cross-age peer tutoring usually works better than same age peer tutoring. Once, the Buddha went to the place where the *Bhikkus*, including Venerable *Nandaka*, were discussing *Dhamma* and praised their discussion. This is an example for same age peer tutoring. Here, the Buddha also told them that there

were two things that could be done by *Bhikkhus* who gathered: first, to discuss *Dhamma* (*Dhammiyakathāya*), and, secondly, to protect silence and avoid pointless talking (*tunhibhāvo*) (MNIII: 270). The implication here is that the Buddha admired peer learning as well as prohibited discussing immoral things, since he saw these as an obstacle in constructive learning.

One strategy followed by the Buddha in constructive learning is filling knowledge gaps. In such situations, the Buddha encouraged other *Bhikkus* and *Bhikkunis* to assume the role of more knowledgeable others. One such occasion is the discussion had between *Visāka* and *Dhamma Dinnā* (MNI: 299). Because of this strategy, the disciples could reach different cognitive stages according to their dedication to learning. These stages are the following: *Sotāpanna* (the stream-winner), *Sakadāgāmi* (the once returner), *Anāgāmi* (the never returner) and *Arahat* (the perfected one).

Consideration of individual differences is an important feature in Buddhist constructive education. Learning situations were planned by the Buddha according to the intellectual capabilities of the learner. In the *Aṅguttara-nikāya*, there are many explanations about individual differences, and, according to *Tika-nipāta*, there are three types of students. Some students listen to the teacher, from the beginning to the end, but do not keep the teacher's words in mind. Such learners are called *Avakujjapañña* (*the empty head*). The second types of students listen to everything the teacher says, in the beginning, middle and end but they retain nothing once they leave the classroom. This type of students is referred to as *Uccaṅgapañña* (AN III: 10). The third type of student listens to everything carefully and grasps it in the same manner. This type of student is known as *Puthupañña*. *Catukkha-nipāta* in *Aṅguttara-nikāya* presents four more types of students, namely *Ugghatthatañṇu*, *Vipacītañṇu*, *Ñeyya* and *Padaparama*. Some students are capable enough to understand the lesson when they are given a short guidance. They are called *Ugghatitannu* in Buddhist education psychology. The one who comes under the second category (*Vipatitannu*) understands the lesson when it is explained to a certain extent. The third type of student understands the lesson when the lesson is analyzed in detail in addition to learning much from peers to apply what /he/she has learned from the teacher. Students of this type are called *Ñeyya*. The student of the fourth category (*Padaparama*) is not in a position to grasp the lesson though it has been explained descriptively (AN IV: 3). To the Buddha, some students can understand the lesson but they cannot apply what they have learned in practical or real life situations (*yuttapaṭibhāno na muttapaṭibhāno*). Some students can make use of their learning experiences for problem solving but they are unable to grasp the lesson meaningfully (*muttapaṭibhāno na yuttapaṭibhāno*). There are some students who can construct knowledge as well as apply learning experiences in real world problem solving (*yuttapaṭibhāno ca muttapaṭibhāno ca*). Students who can neither understand nor use in practice are introduced as *neva yuttapaṭibhāno ca neva muttapaṭibhāno* (AN IV: 2). Another two divisions can be seen in *Catukkha* (AN IV: 5) and *Tika-nipāta* (AN III: 10) in *Aṅguttara-nikāya*.

*Mahākhandhaka in Mahāvagga-pāli* presents about eight types of students who had come to the Buddha: *Apparajakkha* (beings whose mental eyes were darkened by scarcely any dust), *Mahārajakkha* (beings whose eyes were covered by much dust), *Tikkhindriya* (beings sharp of sense), *Mudindriya* (blunt of sense), *Svakara* (of good disposition), *Duvakara* (of bad disposition), *Suviññāpaya* (easy to instruct), *Duviññāpaya* (difficult to instruct). The *Visuddhi-magga*, which is considered as a Buddhist book written in a later period, distinguishes individuals according to their intellectual qualities: with *Raga* (lust), *Dosa* (hatred), *Moha* (ignorance), *Saddhā* (faith), *Buddhi* (intellect), and *Vitakkha* (reflective thinking) (VM: 157).

Questioning and answering were a significant feature in Buddhist constructive education. When the Buddha responded to the questions presented by his students, those questions were answered according to the nature of the question and the learner i.e. he provided only a brief answer as a stimulus towards construction of knowledge, if the students asking the question were knowledgeable, whereas more analytical replies were given to those students in need of more explanation. Some questions were not answered since those questions did not provide any support towards knowledge construction. Given below are the four types of creative methods followed by the Buddha when answering questions.

1. *Ekamsa* (answering it straight away)
2. *Vibhajja* (giving an analytical explanation)
3. *Patipuccha* (answering it through another series of relevant questions)
4. *Thapanīya* (refraining from answering) (AN II:90)

Whatever the teaching method he used, the Buddha matched it with constructive learning situations in order to make learning situations more meaningful. The lecture method, which is considered as a less effective method at present, was a more effective method to the Buddha in the learning teaching process. Since the Buddha was so successful in the lecture method, by the end of the lesson there were more effective changes in students: *Sandassetvā* (presenting concrete and abstract ideas), *Samādapetvā* (acknowledging learning experiences), *Samuttejetvā* (arousing curiosity among students to study further), *Sampahansetvā* (keeping the interest among student throughout the lesson) (AN V: 66). When the Buddha used the lecture method, every part of the lecture from the beginning to the end was successful (MN: 19). The Buddha added new meaning to the lecture by practicing the following strategies in constructive way.

1. *Ācikkhana* (giving a short explanation or naming what he wants to say)
2. *Desanā* (explaining the lesson descriptively)
3. *Paññapanā* (allowing the student to understand the lesson as it is)
4. *Paṭṭhapanā* (explaining relevant facts in a deep manner)
5. *Vivaraṇā* (presenting the lesson by showing reasons)
6. *Vibhajanā* (analyzing the lesson)
7. *Uttānikammaṃ* (conducting the lesson as appropriate to the learner's cognitive level, giving a total explanation) (Ana:546)

Similes, metaphors, and stories were used by the Buddha in a constructive way to enrich the content of the lesson as well as to minimize the lecture method or teacher's interventions (MN I: 382). It was the view held by the Buddha that similes help students in the process of knowledge construction to understand the meaning of the lesson (MN I: 368). *Aggivcchagotta* (MN II: 256) and *Vammika* (MN I: 354) are two *Suttas* that can be taken as examples for usage of similes in Buddhist teaching learning process. Specifically, whenever the simile is used as a teaching strategy the Buddha matched it with the life experience of the learner. For example, *Soṇakoḷivisi* was a clever lute player in his lay life. The Buddha who needed to explain adverse effects of extreme effort to *Soṇakoḷivisi* used the simile of tuning the lute since it was more appropriate with his life experience. Here, *Soṇakoḷivisi* understood the adverse effects of extreme effort because of the simile the Buddha used (ANV: 152).

The *Kasībhāradvāja-sutta* shows how far the Buddha was successful when using metaphors in a child-centered learning situation. Once, the Buddha went to *Kasībhāradvāja* for alms. Then, *Kasībhāradvāja* asked the Buddha to plow, sow and eat since he himself does so. Here, the Buddha answered *Kasībhāradvāja* that he too plows sows and eats. Then, *Kasībhāradvāja* replied, you claim to be a plowman, but I don't see your plowing. The Buddha who answered that discernment is his yoke & plow, conscience is his pole, mind is his yoke-tie, and mindfulness is his plowshare and goad (SN:28). This conversation, between *Kasībhāradvāja* and the Buddha proves how the Buddha was successful when using metaphors in learning teaching process as the learner can construct the knowledge relevant to the lesson objectives.

The Buddha was an expert teacher in displaying visual aids creatively. Because of this capability which the Buddha had, there were some disciples who attained *Nibbāna* during the course of the lesson. The characters of Rūpa Nandā and Khemā testify to this claim. Rūpa Nandā was proud about her figure. First, the Buddha allowed her to see a beautiful young girl. Then, he showed the way that the female figure changes into *Jarā* (decaying), *Vyādhi* (becoming old) and *Maraṇa* (death). Here, according to the changes that took place in the bodily figure, the Buddha explained the changing nature of life to Rūpa Nandā (DhaA: 392). It was enough for her to understand the real nature of human life. The method followed by the Buddha with Khemā was the same as Rūpa Nandā (Dha A: 593). Visual aids were used by the Buddha according to the intellectual nature of the learner so he/she could create new knowledge with them (MN I: 414).

The child-centered lesson approach used by the Buddha in a discussion would create an active learning environment for the learner. Before starting the discussion, he would ask the *Bhikkus* 'what was the discussion about before I came here' (MN I: 396). The discussion which had started as a dialogue in this way, provided a sound background in knowledge construction. For the Buddha, discussion is the best way to understand one's wisdom (AN II: 366). Discussion took place in two ways: teacher-student discussions and students-students discussion. *Devadaha* (MN III: 2) and *Cūlasaccaka-sutta* (MN I: 540) in *Majjhima-nikāya* are two examples of

teacher-student discussion. Since the teacher can understand the real nature of the student's cognitive abilities through discussion he/she can arrange a feedback session for the further development of the learner (DN I: 134). The *Nandaka-sutta* (MN I: 299) and the *Cullavedalla-sutta* (AN V: 378) are two examples of student-student discussions. The Buddha paved the way for student-student discussions in teaching in two ways:

1. The Buddha would start the discussion and then ask a senior student to continue. For example, in the *Saccavibhaṅga-sutta*, the discussion started by the Buddha was continued by Venerable Sāriputta (MN III:512)
2. The Buddha presented the lecture briefly, and, then, the disciples were asked to learn the rest from a senior monk (MN I: 272). Most of the times, these senior monks were Venerable Sāriputta, Mahā Kassapa or Ānanda.

As the Buddha believed, the learner constructs knowledge step by step (Dham: 239), moving from simple to complex (MN I: 370). A fine example of gradual learning can be seen in the *Kīṭāgiri-sutta*. According to the *Kīṭāgiri-sutta*, the student who visits the teacher and constructs knowledge gradually until s/he reaches *Nibbāna* (MN I: 473).

When the lesson was done in this way the learner was very satisfied and contented. Once, a learner who became happier due to cognitive changes that took place because of the Buddha's lecture, expressed his heartiest salutation in the following way: "Most excellent; O Gotama, is thy teaching, most excellent, just as man would set upright what is overturned, reveal what is concealed, point out the way to one gone astray, bring an oil lamp into the darkness. So that those with eyes could see objects, even so the *Dhamma* (doctrine) has been declared in many manners by the venerable Gotama"

According to above discussion, it can be concluded that though there is no similar term which implies the meaning "constructivism" as discussed in western education psychology, Buddhist education is rich in characteristics of constructive learning theory in western educational psychology. These similarities motivate us to think that constructive approach in Buddhist and western education psychology cannot be considered as two distinct traditions since western psychologists have developed constructive learning theory as an extension of constructive approach in Buddhist education. The Buddha's view regarding the learner, admiration of one's cognitive abilities, implementation of teaching methods and strategies as appropriate to the learner in Buddhist education testifies that Buddhism has provided many insights when developing constructive learning theory in western psychology. In Buddhist educational psychology, too, the learner is at the centre of learning teaching process. The Buddha rejected passive learning and wanted to take the disciples towards the ultimate goal with the active participation of the learner under his guidance, using the process of facilitation, since only creative disciples can reach the ultimate goal shown by him. Therefore, most of the time, the Buddha asked his students to examine the meaning of teachings by themselves.

## Conclusion

Characteristics of constructive learning which are discussed in western education psychology can also be seen in Buddhist education psychology. Hence, it can be argued that antecedents of constructivism in western education appear in the teachings of Buddhist education. In later periods, western psychologists have developed theoretical frames of constructive learning in western education psychology under the light of the constructive approach in Buddhist education. In both Buddhist and western constructivist education, the learner is at the centre of learning teaching process. In Buddhist education, the Buddha facilitated and guided the learner to achieve not only mundane but also supra-mundane happiness in a constructive way. There are many occasions where the cognitive ability of the learner is appreciated by the Buddha in *Suttapiṭaka*, since it is the core of the constructive learning teaching process. Whatever the teaching method the Buddha used, he planned the learning/teaching process creatively with constructive teaching strategies. Contemporary teachers, teacher educators, curriculum developers, and theory and policy makers can learn many lessons from the Buddha to implement the constructive learning teaching process in the present educational system. Finally, it can be argued that constructivist approach in Buddhist education is much older than constructivism in western education psychology and Buddhist constructivist approach has contributed immensely to strengthen the constructive learning theory in western education psychology.

## Abbreviations

AN	Aṅguttara-nikāya
Bu	Bṛhadāranyaka Upaniṣad
DhamA	Dhmmapadaṭṭhakathā
Dham	Dhmmapada-pāli
DhamS	Dhammasaṅghaṇī
DN	Dīgha-nikāya
MN	Majjhima-nikāya
PJ	Paramatthajotikā
SN	Samyutta-nikāya .
SU	Sutta-nipāta
TheG	Theragathā-pāli
Uda	Udāna-pali
VM	Visuddhimagga

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## Endnotes

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<sup>1</sup>Available from:<http://education-portal.com/academy/lesson/constructivism-in-psychology-definition-theories-approaches.html#lessonquite> (Accessed 14.10.2015)