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A Comparative Study of Bloom's Taxonomy and Upanishadic Teaching Pedagogy

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Abstract

As we know that, India had an education system which was very different and structural domain. The institutions never named themselves as schools rather them named kulam [1], which means a community according to English translation. A particular scholar, who used to be addressed as Guru, used to intake students and he used to teach the pupils at his house, later the same concept got wider and universities have come up like nalandā, takṣaśilā, vikramaśilā[2] etc.. The Upaniṣads have explained the methodology of teaching in these kinds of Gurukulams in ancient India.

The American educator Benjamin Samuel Bloom[3] has invented different domains in education field by conducting several conferences between 1949 and 1953. He has introduced three domains, which are cognitive, affective and psychomotor. In the cognitive domain he mentions six steps which are remembering, understanding, applying, analyzing, evaluating and creating[4]. A child will start the learning process from the remembrance and will achieve by creating a new thing.

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[1] vaṁśa, janapada: vācaspatyam
[2] New education Policy 2020.
[3] https://en.wikipedia.org/wiki/Benjamin_Bloom
[4] https://en.wikipedia.org/wiki/Bloom%27s_taxonomy#:~:text=Bloom's%20taxonomy%20is%20a%20set,cognitive%2C%20affective%20and%20sensory%20domains.

The Upaniṣads are considered as the end part of the Vedas, there are hundreds of Upaniṣads [5] and ten are considered major Upaniṣads. Chāndogya Upaniṣad talks about 'tat tvam asi'[6] (thou art that) concept. The teacher makes the child to understand the concept; there the teacher has followed nine steps or nine examples which are directly connected with the taxonomy of Bloom. Another Upaniṣad called taittirīya [7] also has imparted the knowledge in a systematic way, the teacher makes the student to attain the supreme knowledge by helping the student to understand, apply and analyze. Finally, teacher evaluates and the student will create.

Even though the taxonomy of Bloom is followed in education all over the world at this time, we can say that, those concepts are from the Upaniṣads. More over ancient India used to follow the same and many students had visited India for education in ancient times[8]. Due to the innovative and systematic education, India was an educated and a prosperous country in the past. Thus we can conclude by saying that Sanskrit kept on contributing to the world till the date.

Keywords: *Chāndogya Upaniṣad, Taxonomy of Bloom, Taittirīya Upaniṣad, Cognition, Remembering, Understanding, Applying, Analyzing, Evaluating, Creating*

Introduction

Hypothesis

The taxonomy of Bloom is connected to the Upaniṣadic teaching pedagogy.

Background of the Study

The Vedas are considered as the oldest scripts and the holy scripts for sanātana dharma. The Vedas are found by the sages in their transcendental condition and no one has written them[9]. Even though Max Muller predicts that, the Vedas had been formed around 3000 years before[10], there is some other Indian and Western Scholars have shown the different time period for the Vedas[11]. So let us say that,

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[5] Muktikopaniṣad 1.4
[6] chāndogya upaniṣad 6.9.4
[7] taittirīya upaniṣad 1.3.2
[8] Xuan Zang and Yijing
[9] Gayatri mantra – Vishvamitra Rishi – Savita Devata
[10] Sanskrit Antah Praveshika
[11] Indian scholars & western scholars, Sanskrit Antah Praveshika

nobody has got a complete idea about the Vedas till today. 'Yasya niśvasitam rgvedo yajurvedaḥ [12]' says that, Vedas had not been written by anyone but sages had found them. However, there are four Vedas: Rgveda, Yajurveda, Sāmaveda and Atharvaveda. There were thousands of branches in the Vedas according to Patanjali[13] but now handful of branches is preserved. In every classification there are some philosophical content, which are being addressed as Upaniṣads, yet again, there were hundreds of Upanīṣads[14] but now only major ten Upanīṣads are being studied. The ten Upanīṣads are: Īśa (Śukla Yajurveda), Kena (Sāmaveda), Kaṭha (Kṛṣṇa Yajurveda), Praśna, Muṇḍaka, Māṇḍūkya (Atharvaveda), Aitareya (Rigveda), Taittirīya (Kṛṣṇa Yajurveda), BṛHadāraṇyaka (Śukla Yajurveda), And Chāndogya (Sāmaveda). These Upanīṣads are considered as Vedānta because they are available as the end part of the Vedas.

There are many schools of thoughts have come in the later period like Adviata, Dvaita, Viśiṣṭādvaita etc.. Different scholars have given their commentaries on each of them. The meaning of the word Upaniṣad is explained in Kaṭhopaniṣad[15]. The prefix upa gets connected with the root ṣadaḷ and gives three meanings. The first meaning is taken gatiḥ, which means heading towards; the concepts which lead to Brahman are called gatiḥ. The second meaning is avasādana, eventually destroying; the accumulated karma will be destructed eventually by understanding the Upaniṣads. The last meaning is that viṣaraṇa, which means the destruction of the illusion or saṁsāra or māyā. If we take any of these three, that will be connected to understand the supreme consciousness or Brahman. So, these kinds of thoughts are elaborated in the Upanīṣads very frequently. The methods to explain those concepts are the key in this article. As we know that, the Upaniṣads are not going to talk about the concepts directly but they talk everything in the parables. So we can see many stories also in the Upaniṣads like Aruni- Shwetaketu (Chāndogya)[16], Varuna- Bhrugu (Taittirīya)[17] Narada – Sanatkumara (Chāndogya Upaniṣad)[18], janashruti - Raikva[19] etc.. Here the Guru uses a different structural methodology to teach the pupil. The methodologies are very unique and never used by anybody else.

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[12] Vedanta Paribhasha

[13] śatamadhvaryu śākhā ekaviṁśatidhā bāhvṛcam, sahasra vartma sāma navadhā ātharvaṇam - patañjali mahābhāṣyam

[14] Muktikopanisad

[15] Preface by shankaracharya on Katha Upanishad

[16] Chandogya 6th chapter

[17] Taittiriya 3rd valli (Chapter)

[18] Chandogya 7th Chapter

[19] Chandogya 4th Chapter

Ancient Indian Education System:

India was having a rich heritage of teaching in the ancient time. There were no schools but Gurukulas were there, where some pupils will stay with the teacher in his house and used to study. In a way it was a set - up of residential education system. Once a child reaches eight years, he needs to go to Gurukulam for his education[20]. Here is an important concept that Upanayanam, the threading ceremony. The Upanayanam samskara is considered as second birth of a child. In that ceremony a child will get the ideas about gāyatri mantra[21], which will be practiced by everybody after the threading ceremony. After that, child won't be considered as a young one. But that child will be considered as a brahmacāri (One of the āśrama, out of four[22]). The idea is that, the child will be there with the parents till that age and in that age child will be getting Upanayana - saṁskāra and starts performing gāyatri upāsanā and it will go to a Guru for the knowledge. The saṁskāras were the most important things in those days, where the children used to be refined. Many SmṛTi, Dharmaśāstra, Purāṇa have mentioned about the sixteen saṁskāras [23]. In the Gurukulam, the disciples used to study for twelve years by staying with the Guru. After the education, disciples used to have the option to choose the path.

Later the same Gurukulam concept got extended and became the universities. After the Upaniṣadic age, the Indian scholars have created the universities, which used to follow the teaching pedagogy which is practiced in the Upaniṣads. Some of the ancient Indian universities are mentioned here; Takṣaśilā, Nalandā, Vikrama Śilā, Vallabhi[24] etc.. Once the Mughal invasions took place, the universities were burnt into ashes. In 1193, the Nalandā University was destroyed by the Islamic fanatic Bakhtiyar Khilji, a Turk; this event is seen by scholars as a late milestone in the decline of Buddhism in India[25]. Due to many other internal and external factors many of the universities destroyed and the Indian education system completely had gone down.

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[20] According to dharmashastras
[21] tad asya dvitīyam janma - Aitareya Upaniṣad 5th Chapter
[22] Brahmacāri – Gṛhastha – Vānaprastha -Ssanyāsa
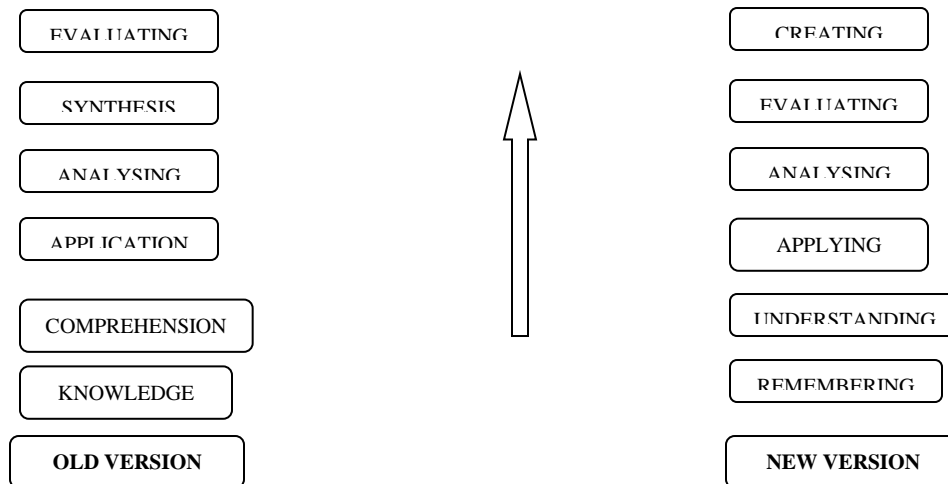[23] Rig Veda 6.28.4 and 8.33.9
[24] Pg no 34, NEP 2020: 10.2, Institution Restructuring and Consolidation.
[25]https://www.thehindu.com/features/kids/clarification/article2467247.ece#:~:text=In%201193%2C%20the%20Nalanda%20University,decline%20of%20Buddhism%20in%20India.&text=Sacking%20of%20Nalanda%20university%20in,University%20in%201203%20by%20Muslims.%E2%80%9D

Taxonomy of Bloom:

Benjamin Samuel Bloom was born on 21st February 1913 in America. He was an American educational psychologist. He made contributions to the classification of educational objectives and to the theory of mastery learning. He is considered as one of the most successful educational psychologists to develop the comprehensive system education. But his concepts got famous and practiced all over the world in the later part of the twentieth century. He has presented in several conferences between 1949 and 1953, the publication was named 'Taxonomy of Educational Objectives' they were designed to improve communication between teachers and curricula. The taxonomy of Bloom went through many corrections and modification till 2001. Today, at present we are having three domains in the education under Bloom's name.

The three domains for the education are: The Cognitive domain, which will be based on knowledge. In the original work, there were some levels namely Knowledge, Comprehension, Application, Analysis and synthesis and Evaluation. Later in 2001 they broke into six namely Remembering, Understanding, Applying, Analyzing, Evaluating and Creating. Let us look into the new version and the application part of the same.

OLD VERSION	NEW VERSION
EVALUATING	CREATING
SYNTHESIS	EVALUATING
ANALYSING	ANALYSING
APPLICATION	APPLYING
COMPREHENSION	UNDERSTANDING
KNOWLEDGE	REMEMBERING

- The very first or the base level is called Remembering; here the child will be able to retrieve the relevant knowledge from the memory and we can say recalling also. The same concept is explained in the Yogasutra of Patanjali that 'anubhūtaviṣayāsaṁpramoṣaḥ smṛtiḥ[26]', which means the

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[26] Yoga sutra – 1.11

power of remembering the thing or an incident which has happened in the past.

- The second level is named Understanding; the child ordains the meaning of a statement or a message which verbal and pictorial. Child will develop the abilities to explain, compare, infer, summarize, classify etc..
- The third level is named Applying; the execution level will be improved here and the child starts implementing the learnt phrase or a word.
- The fourth level is named Analyzing; the child should be able to take every bit and pieces and should start amending each of them. Child will be able to understand the overall structure. Here child develops to differentiate, organize and attributes.
- The fifth level is named Evaluating; child will be able to make the judgments based on the situation and starts the critiques.
- The sixth level is called Creating; child will start doing the new things by having the knowledge of previous steps, the partial things would be same but the new products will be generated. Here child learns to plan and produce.

These are the levels, which will come under cognitive domain of Bloom.

He has given two more domains also which are named, the affective domain which is based on the emotions and the psychomotor domain which is based on actions. As he explained the cognitive domain, here too he has given many levels. In this way Bloom has given his contribution to the education field being an educationalist. The taxonomy of Bloom is being influenced and inspired many educationalists and the new education philosophers of the modern world.

Upaniṣadic Teaching Methods:

In the introduction section I have mentioned the names of all major Upaniṣads. Each of them will discuss the real and unreal, the discrimination between the good and bad. They ultimately talk about the supreme consciousness [27] and the paths to achieve it. The philosophies which are explained in the Upaniṣads are quite difficult to understand so they will tell the parables. In the parables generally a teacher develops the methods to make his disciple to understand the concepts. The main teaching methodologies in the Upaniṣads which are connected to the cognitive domain of taxonomy of Bloom are listed below:

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[27] Nirguna brahman

Chāndogya Upaniṣad: Aruna – Shwetaketu
Taittirīya Upaniṣad: Varuna – Brigu
Kaṭha Upaniṣad: Yama – Nachiketa
Praśna Upaniṣad: Pippalada – Six disciples
Kena Upaniṣad: Parable of 'fight in the Devatas'

Teaching Pedagogy in the light of Chāndogya Upaniṣad:

The Upaniṣad is from sāmaveda, it's one the lengthiest Upaniṣads among the other Upaniṣads. The conversation between the father Aruni and the son Shwetaketu will take place in the 6th chapter in this Upaniṣad[28]. The son will be back from the Gurukulam after finishing his twelve years of studies. There the father will ask the son that, what he has learnt in Gurukulam. Shwetaketu was very egoistic, stubborn and he was thinking that he was the only scholar. The father understood the problem of his son, so he decided that, himself shoud teach the son. So he asked his son that, whether he knows about a particular thing, by understanding which nothing else will be remained to understand and by knowing which nothing will be left out in the world which to be known[29]. It was a great philosophical concept and nobody can understand this concept so easily, as Aruni accepted the same way Shwetaketu got confused and requested his father to teach him. The father, Aruni takes examples, does experiments, makes shwetketu to try to understand and finally the son Shwetaketu will understand the concept of Brahman.

In order to that, the father takes an example of a honey bee[30] in the beginning, because father wanted to make the child to understand the surrounding in the first step. Here, if we give bigger examples to children they will not be able to understand the example and the matter. In the previous verse itself father has taken the word or statement called "tat tvam asi", so the listening part happened to the child, due to the new idea, the statement will remain just as memory in child's mind. In the present honey bee example, father tells that, just like, honey bees are travelling to the corners of the world and they collect

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[28] śvetaketurhāruṇeya āsa taṃ ha pitovāca śvetaketo vasa brahmacaryaṃ na vai somyāsmatkulīno'nanūcya brahmabandhuriva bhavatīti - Chandogya 6.1.1

[29] yenāśrutaṃ śrutaṃ bhavatyamataṃ matamavijñātaṃ vijñātamiti Chandogya 6.1.3

[30] yathā somya madhu madhukṛto nistiṣṭhanti nānātyayānāṃ vṛkṣāṇāṃrasānsamavahāramekatāṃrasaṃ gamayanti Chandogya 6.9.1

the rasa (essence) from the varieties of flowers. After collecting the rasa, they will fly back to the honey comb and all the bees will store the rasa in the honey comb. At this point, the rasa from the different flowers is mixed. Would anybody be able to identify the rasa from which flower that had been sucked! That's an impossible work, the same way all the animals, humans, birds, plants etc. are having the same consciousness within them. All of them have come from the same consciousness and they will go back and merge within the same consciousness, once they reach back, nobody can identify that, which body they had gone from. That supreme consciousness is called Tat and you are called Tvam and both of you are same. Here in the example child is remembering the word 'tat tvam asi' statement, which was uttered earlier. So, here the first level in the Cognitive domain of Bloom is satisfied. Bloom also said the same thing that, a child should recollect the things as the beginning level. A special note that, the both mugging up and remembering are different.

The father moves on to the next level which is called understanding level in the Cognitive domain. Here, the father takes the example of rivers, "imāḥ somya nadyaḥ purastātprācyaḥ syandante paścātpratīcyastāḥ samudrātsamudramevāpiyanti sa samudra eva bhavati tā yathā tatra na viduriyamahamasmīyamahamasmīti" [31] to make the child to understand. The rivers flow from the east, from the west, from the north and from the south, once they go into the ocean all of them are called just ocean. After reaching the ocean nobody can identify whether the river is the Ganges, Yamuna or Brahmaputra. In the same way, once the consciousness from the all living beings reaches the supreme consciousness, nobody can identify from where it has gone. In this section the statement 'tat tvam asi' is is being understood, I meant verbally the meaning is understood by the child and the visualization of the river example was satisfactory for the child to understand the meaning.

The next level of Bloom is called Applying; again the Upaniṣad says the application part of the same concept. According to Bloom, child will be able to execute the learnt things here. "Mahato vṛkṣasya yo mūle'bhyāhanyāj jīvansravedyo madhye'bhyāhanyāj jīvansravedyo'gre'bhyāhanyāj jīvansravet sa eṣa jīvenātmanānuprabhūtaḥ pepīyamāno modamānastiṣṭhati" In the Upaniṣad, father tells the example of peepal tree[32], if someone cuts the branches of the tree, cuts the tender part of the tree or cuts a smaller root of the tree, then also the tree will be living. Once the power or consciousness leaves the tree, the tree will start getting dried. So, here father makes sure that the 'jeeva', which is having

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[31] Chāndogya 6.10.1
[32] Chāndogya 6. 11. 1

the power of life leaves, than the body will not be able to move, senses will not work. The person is declared as dead. The child will apply the concept 'tat tvam asi' here and will be able to get to know. Gradually the child is getting the concept clearly. "Nyagrodhaphalamata āharetīdaṃ bhagava iti bhinddhīti bhinnaṃ bhagava iti kimatra paśyasītyaṇvya ivemā dhānā bhagava ityāsāmaṅgaikāṃ bhinddhīti bhinnā bhagava iti kimatra paśyasīti na kiṃcana bhagava iti"; Father asks the child to get a seed from the peepal tree[33] and asks him to smash it; the child does so and finds small particles in the seed. Father asks him to smash the particle also, there nothing can be seen. The child executes the 'tat tvam asi' concept here and get to know the subtle form of the consciousness. As I was mentioning earlier the philosophy is quite higher, its not everybody's cup of tea unless a person is having a determination to learn the same. Here the child is determined for the knowledge, so he does the steps one after one under the guidance of his master or Guru. This is how application level in cognitive domain is shown in the Upaniṣad.

The present level is called Analyzing; here the Upaniṣad says the analysis of the taken concept 'tat tvam asi'. "lavaṇametadudake'vadhāyātha mā prātarupasīdathā iti sa ha tathā cakāra taṃ hovāca yaddoṣā lavaṇamudake'vādhā aṅga tadāhareti taddhāvamṛśya na viveda"; The child takes a salt brick and puts in the water[34], after waiting for a night, till it mixes with water, the child tastes the water from the top, midst and bottom and child finds the salt taste everywhere. Here, the child starts analyzing that the same salt brick which was kept in the water is not being seen, but he can taste and confirms the existence of salt. The same way in the taken concept 'tat tvam asi', the tat or consciousness which exists and creates the whole world that cannot be seen but can be experienced as tvam or individual consciousness. Child finds answer that, just like the salt-brick and mixed salt both are same, like that, the both tat and tvam are same, there are no differences between them. In this way child will be able to differentiate, organize and will break the statement into constituent parts and structure them again.

The fifth level is called Evaluating in the taxonomy; the taken concept will be evaluated in this level. Child will be able check that he will be able to critique the same. The Upaniṣad shows two types of evaluation in order to create the new thing. "puruṣaṃ gandhārebhyo'bhinaddhākṣamānīya taṃ tato'tijane visṛjetsa yathā tatra prāṅvodaṅvādharāṅvā pratyaṅvā pradhmāyītābhinaddhākṣa

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[33] Chāndogya 6.12.1
[34] Chāndogya 6.13.1

ānītoʻbhinaddhākṣo visṛṣṭaḥ"; as the first evaluation, a blindfold person[35] is been sent to a forest and he will be left there. If the person is quite sensible he will find a way by asking the other people or tourists on the way to Gandhara (An ancient place o f India, now which is existed in Afghanistan). If the person is foolish, he will be crying until somebody comes and helps him. In this evaluation child will understand that, the consciousness which exists in the individual body, which considers the whole world which is being experienced is truth. Due to that, the human will have bondages with the relatives, friends, family, sons and daughters etc., he worries for the action (karma), which is done by him. He will worry about the lokas (heaven etc), which is again illusionary world; he defines self as sinner or goody by his actions. He will worry for the diseases which will occur to the body. Finally, he understands the truth or reality by the help of a guide that he was completely in a wrong assumption and was pretending the whole world is true and that's the greatest place for one to achieve something. The concept 'tat tvam asi' is evaluated here abstractly and child understands that, the concept is understood but experiencing the same is most important.

The second evaluation is given here. "puruṣaṃ somyotopatāpinaṃ jñātayaḥ paryupāsate jānāsi māṃ jānāsi māmiti tasya yāvanna vāṅmanasi sampadyate manaḥ prāṇe prāṇastejasi tejaḥ parasyāṃ devatāyāṃ tāvajjānāti" A person, who is on his last breath[36], the relatives, friends and family members, will ask him whether he can recognize them or not. The person will not be able to recognize because his senses have merged in the mind, mind has gone into prāṇa śakti and prāṇa has gone into the consciousness and finally the prāṇa is on the way to merge back in the super-consciousness, from where it has come. This is another evaluation made by the child. Here child will understand the complete concept of 'tat tvam asi', the individual consciousness which has emerged from the super consciousness will merge back in the same. In this evaluation child can make some critiques also. If a person is not in the path of Brahman (super consciousness), will get lower births like animals, plants etc depending on his accumulated karma. The people who have done the spiritual sadhanas will merge back into the Brahman and they will not be rotating in the wheel of saṃsāra or cycle of birth and death. Some others, who have done some good works in their life time like upāsanā [37] etc., will move out of the body through the mūrdhā and reach the adityaloka (Creator[38]) and they will stay there only waiting for the destruction to merge in Brahman. But ultimately everything has

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[35] Chāndogya 6.14.1
[36] Chāndogya 6.15.1
[37] kṛcchra, atikṛcchra cāndrāyaṇa etc
[38] Chaturmukha Brahma or Saguna Brahma

come from the super consciousness or Brahman and merge back (getting liberated from the world) into the same, the sadhakas will take some time to attain the liberation (who has rested in aditya) and the others will get the birth and death over and over again.
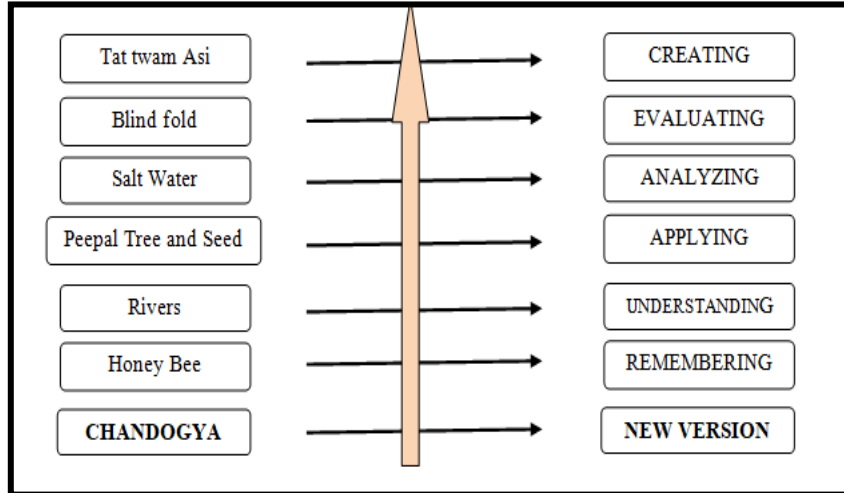
After the Evaluation level, the last level in cognitive domain is called Creating. The creating level is explained here, after the examples in order to the entire levels child will be able to experience the 'tat tvam asi' concept. Experiencing which means, child will be able to produce the concept. The Upaniṣad says that Shvetaketu, the son will experience brahmajñāna[39]. The experience gives the more clarity about any concept is said by the educators. So, the ultimate level of education is satisfied here[40].

In this way the taxonomy of Bloom which is accepted by all the educational philosophers was already being practiced in Indian education system thousands of years back. That's how so many scholars have come up and contributed almost in all the fields like science[41], mathematics[42], history[43], literature[44], philosophy[45], astronomy[46] etc.. The methodology had been adopted by the universities in ancient India, which have been destroyed by the invaders.

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[39] Liberation or Ultimate knowledge
[40] Education was not merely acquiring the knowledge but it was attaining the realization
[41] Vagbhata, Charaka, Sushruta etc in Ayurveda
[42] Baudhayana, Bhaskara etc in Veda Ganita
[43] Valmiki, Vyasa in Ramayana and Mahabharata
[44] Kalidasa, Dandi etc in Kavyas
[45] Gauthama, kanada, Jaimini etc in Darshana
[46] Aryabhata etc in Khagola

Teaching Pedagogy in the light of Taittirīya Upaniṣad:

It was completely activity based methodology in the previous Upaniṣad chāndogya. There is another Upaniṣad named Taittirīya [47], where we can see the experimental methodology to understand the concept of Brahman. Here the Guru (father himself was a teacher) Varuna, teaches the student (son was the student) Bhrigu about Brahman, the supreme consciousness.

In the beginning the student has got an idea about the word Brahman, so here the remembrance cannot be shown. The word Brahman was tricky in his mind and he wanted to know the concept of Brahman, so he asked his father to teach him Brahma Vidya. The father starts showing the ways to understand Brahman. In the very beginning father teaches him that, everything is maintained in this world because of Annam (food), so the experiments to be done on the body, which is created by the food. Here, in this section Upaniṣad used five modules to make the student to understand and each module moves according to the taxonomy.

As the first module, student picked the word Annam[48], he kept in his mind. He starts understanding that Annam the food itself is Brahman as the first step. Student starts applying the same concept on every creature. If at all there is no food; no animal, bird, plant and humans can live, all of them would have dead, so Annam itself is Brahman. In analysis, the student thinks that because of Annam all the creatures got birth referring to Pañcāgni vidyā. The same Annam will maintain the physical body throughout the last breath and after death everyone will merge back into Annam. Student confirms by evaluating that, each one of this creature is a food for the other creature. But in the evaluating level student gets a question that, if something else is there, which is greater than Annam! So he will go back to the teacher and asks again for teaching the Brahman to him.

In the second module the teacher asks the student to consider prāṇa [49] is Brahman and asks him to perform the experiment on that. In this module also the student will take away the new word, understands that, applies on others, analyses and evaluates. In that process, student understands the concept about five types of prāṇa; the prāṇa [50] which will be located in the thorax and helps to intake the oxygen, the apāna which helps to breath out, excrete the waste from

[47] Krishna Yajurveda
[48] annaṁ brahmeti vyajānāt, Taittiriya Upaniṣad 3.1
[49] prāṇaṁ brahmeti vyajānāt, Taittiriya Upaniṣad 3.2
[50] hṛdi prāṇo gude'pānaḥ samāno nābhi saṁsthitaḥ, udānaḥ kaṇṭhadeśastho vyānaḥ sarvaśarīragaḥ

the body. The vyāna which will be located in the whole body is help to move out word of the body. The samāna will be located in the abdomen, which will help the body to maintain it's balance. The udāna is the last one, which is located in the throat. Udāna vāyu will be moving upwards and will be helpful in spiritual sadhana. After the evaluation the student will get the doubt that something else must be there which is more accurate than prāṇa, so again goes back to his father and asks to teach him Brahman.

The third module unfolds here, which is completely connected to the mind[51] here onwards the concept of subtle body will start. The teacher asks the student to consider the mind as Brahman and asks him to do the experiment on that. After following all the steps as mentioned in the earlier module the child will understand that, the mind is the reason to get bondage and as well as for liberation. The senses are connected to the mind, if there is no control over the mind then the senses move behind the subjects. Once they become subjection, the mind starts getting connected to the things, the desire will be developed, the anger will start bothering and disturbing the mind, ultimately the mind will be clouded by the eccentric behaviors and finally the person or sadhaka will be collapsed. The same things are explained in the Holy Gita[52] also. As usual the evaluation part will be done by the student and he critiques that, if the mind is also to be controlled, there must be a controller behind the mind also then definitely the mind will not be a superior to all. Hence the mind cannot be considered as Brahman. So, he again goes to his father for Brahma Jnana.

The fourth module which is called vijñāna[53] or wisdom starts taking place, the teacher supports the student by accepting his critiques on mind. The teacher asks the student to take wisdom or buddhi or vijñāna   as Brahman and orders him for the task. In this module also, the student will get stuck in the evaluation level. In the analysis he understands five sheaths[54] of the body and three avasthās[55] of the individual. He understands that, all the ideas whatever he has learnt till now are connected to the sheaths. The Annam is connected with the very first sheath which is called annamaya kośa (the physical body) and the physical body is having pains, diseases etc., so that cannot be the supreme one. The prāṇa is connected with the prāṇamaya kośa (the pranic body), which is also having pains, difficulties etc.. So, that also cannot be the Brahman. The mind is

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[51] mano brahmeti vyajānāt, Taittiriya Upaniṣad 3.3
[52] krodhād bhavati sammohaḥ sammohāt smṛiti-vibhramaḥ, smṛti-bhraṁśāād buddhi-nāśo buddhi-nāśāt praṇaṣyati, The Holy Gita 2.63
[53] vijñānaṁ brahmeti vyajānāt Taittiriya Upanīṣad 3.4
[54] Pancha kosha viveka
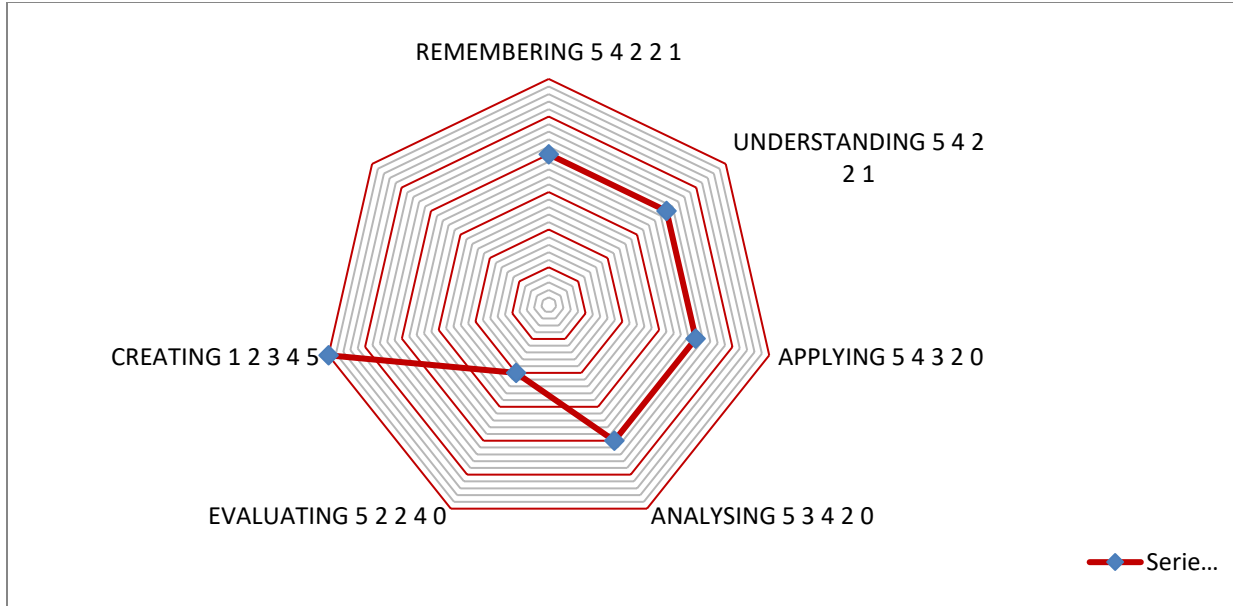[55] Awareness – dream - sleep

connected with the third sheath, manomaya kośa (the subtle body), which will be having the control over five sense organs, five motor organs etc. The manomaya kośa also is having emotions, thoughts etc., due to the emotions it will be considered as aśuddhaṁ mana. The thoughtless state of mind to be achieved and then only sadhaka can upgrade the self to the next level which is called vijñāna. If there is no pure mind, it is impossible to move to the next level. The same way, the awaken stage will be there for everybody, which will occur in the physical body. The dream stage will be creating some illusionary worlds in the mind just like mirage in the desert. So there is no difference between the awaken stage and dream stage, both can be considered as phantasmagoria. The third one is called suṣupti or the deep sleep stage; here the consciousness will not be having the ideas about the world and the dream. At this stage, the pure conscious will be available connecting with the vijñāna or wisdom. Hence the vijñāna also is not the pure consciousness. So, the determined student moves back to the teacher and asks him for Brahman.

The fifth and the foremost level is called ānanda[56] or happiness. The teacher asks the student to meditate on the ānanda and that is Brahman. The student will start working on this according to the cognitive domain and finds the answer for his doubts. The student will get the experiential knowledge of Brahman just like in chāndogya. Once he understands that, nothing else will be remained which needs to be understood. In every module the student has tried the creation or producing the idea but it was not easy for him because his doubts weren't cleared. In the level of evaluation, he checked and critiqued on the learnt module.

In this way, the taittirīya Upaniṣad also teaches the knowledge in a systematic way or procedure. The connection of the cognitive domain with the Upaniṣad is given below.

REMEMBERING	5	4	2	2	1	14
UNDERSTANDING	5	4	2	2	1	14
APPLYING	5	4	3	2	0	14
ANALYSING	5	3	4	2	0	14
EVALUATING	5	2	2	4	0	13
CREATING	1	2	3	4	5	15
*	ANNAM	PRANA	MANAS	VIJNANA	ANANDA	TOTAL

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[56] ānandam brahmeti vyajānāt, Taittiriya Upaniṣad 3.5

REMEMBERING 5 4 2 2 1

UNDERSTANDING 5 4 2
2 1

CREATING 1 2 3 4 5

APPLYING 5 4 3 2 0

EVALUATING 5 2 2 4 0

ANALYSING 5 3 4 2 0

●—Serie…

Teaching Pedagogy in the light of Praśna Upaniṣad:

The praśna Upaniṣad is from Atharvaveda and the sage Pippalada has found the Upaniṣad. Here in this Upaniṣad the sage Pippalada, who has achieved the supreme Brahman will impart the knowledge to the six disciples. Here in this Upaniṣad the question and answer method is used to teach and obviously the taxonomy of Bloom will apply in this Upaniṣad. The six disciples will come with six different questions.

- Kabandhi Katyayana   : How did life begin?[57]
- Bhargava Vaidarbhi   : What is a living being?[58]
- Kausalya Ashvalayana   : What is the nature of man, how life is connected with a man?[59]
- Sauryayani Gargya   : Who experience the subjects in the man?[60]
- Shaibya Satyakama   : What is the mediation and how to practice it?[61]
- Sukesha Bharadwaja   : Who is immortal and how to achieve it?[62]

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[57] kutaḥ ha vā imāḥ prajāḥ prajāyante – praśna 1.3
[58] katyeva devāḥ prajāḥ vidhārayante – praśna 2.1
[59] kutaḥ eṣaḥ prāṇaḥ jāyate – praśna 3.1
[60] etasmin puruṣe kāni svapanti – praśna 4.1
[61] prāyaṇāntamoṁkāram abhidhyāyīta – praśna 5.1
[62] ṣoḍaśakalaṁ bhāradvāja puruṣaṁ vettha – praśna 6.1

In the beginning, all of them come to the sage Pippalada and ask him for the supreme knowledge. There, the Guru Pippalada suggests them to practice and evaluate the tapas (penance), brahmacaryā (celibacy) and śraddhā (the great faith)[63]. They practice those three, which are told by the sage Pippalada, they analyze them and finally they evaluate. After that, they will get few questions in their mind and they want to get the answers. So, after a year, they will approach the sage Pippalada again. Here, the concept about tapas to be understood, it's all about contemplation. The Guru Pippalada wanted them to achieve that stage before approaching the study of Brahmavidya. The brahmacaryā or celibacy is very important for a person to achieve the Brahman, here celibacy is not merely avoiding the physical relationship, it's all about sādhanā. The Yogasutram of Patanjali says about celibacy, forgoing the eight types of physical relation; smaraṇaṁ kīrtanaṁ keliḥ prekṣaṇaṁ guhyabhāṣaṇam, saṁkalpo adhyavasāyaśca kriyānirvṛttireva ca [64]. The meaning is very interesting that; a person should not involve his mind into that (smaraṇaṁ), having relationship is not to be exaggerated (kīrtanaṁ), should not maintain any relation with another human (keliḥ), not make any eye contact with the others (prekṣaṇaṁ), not to have coquettish talk (guhyabhāṣaṇam), all these are considered as a wrong pathway for a sadhaka. The last word was śraddhā , which cannot be translated into English, but we can keep the word faith for understanding purpose. The advaita pioneer Adi Shankara says about shraddha in his book Viveka Chudamani that 'śāstrasya guruvākyasya satyabuddhyavadhāraṇā, sā śraddhā kathitā sadbhiḥ yayā vastūpalabhyate'[65], action of having belief in the statement of Guru (who has experienced the Brahman) and in the statement of Vedas is called śraddhā, and by which a person can achieve the Brahman.

So, the six disciples have practiced and went back to Pippalada with the questions. I am not focusing on the answers given by the sage Pippalada but I want to show the construction of the questions. The first question is just about the life and just about the life of a creature, by this we can understand that, the Upaniṣad will start teaching the very basic step in the beginning. As a second step, the question was about living being, so here in this module the Upaniṣad shows an insight about the kinds of living beings are presented in this universe; Jarāyuja (Mammals), Aṇḍaja (Oviparous), Udbhijja (autotrophies) and Svedaja (arthropods). In the next module, Upaniṣad takes up human and the life. In the each step the insight is getting deeper and the concepts of them will be

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[63] bhūya eva tapasa brahmacaryeṇa śraddhayā saṁvatsaram – Prashna 1.2
[64] Yoga Sutram 2.30
[65] Viveka Chudamani 1. 25

philosophically explained thoroughly. So, here in this question the nature of the human being, the man, the woman and their importance etc are explained.

Fourth question onwards the concepts which are beyond the senses will be getting unfolded. The question is that, who will be experiencing the sensual pleasures and displeasures? The eye balls are just a channel to see something, the nerve will take the message and the mind will understand the knowledge, but who is experiencing it! These things are explained in this module. The next question will be on meditation and the practice of the meditation. That's explained in Viveka Chudamani of Adi Shankara "sthāpanaṁ buddheḥ śuddhe brahmaṇi sarvadā tatsamādhānamityuktaṁ na tu cittasya lālanam [66]"; the buddhi to be merged in nirguṇa (non- qualified) Brahman to be practiced and buddhi not to be involved with the mind instead mind to be controlled. The last and the ultimate query will be on immortality. The achievement of immortality is explained, that's the final level, where every spiritual person will be heading to. In this way the Upaniṣad has taken a different methodology, imparting the knowledge in ancient sanātana dharma was like that.

Conclusion:

The article has made hypotheses that, the taxonomy of Bloom is nothing but Upaniṣadic teaching pedagogy. The world is practicing the taxonomy of Bloom in the education field but the Upaniṣadic teaching pedagogy has shown the best methods millenniums before. The taxonomy gives the modules and domains separately but each Upaniṣad has its own methodology to impart the knowledge. The evolution of the disciples would be the best evidence to consider that, the education in the Upaniṣadic time was very high. In those days education was not just to get a job, partial education was not there and more over education was not commercial. Anybody, the eligible candidate was having complete freedom to seek a Guru and get educated.

At present almost the whole world uses the taxonomy of Bloom in education field, and different methods are being used, innovative ideas are brought in, effective teaching and learning is happening. Indirectly the whole world accepted the taxonomy or Upaniṣadic teaching methodology at present. The effective methodologies also explained in the Upaniṣads. Upaniṣad demands an individual teaching plan for individual student. That's how we can see, teaching plan of Yama for Nachiketa (Kaṭha Upaniṣad), Individual plan of Raikva for Janashruti (Chāndogya Upaniṣad) etc..

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[66] Viveka Chudamani 1.27

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