



A Theoretical Model of Learning Process Based on Modern Educational Psychology and the Concept of Seed in Yogācāra Buddhism

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Abstract

This qualitative research consists of three objectives: 1) to study the learning process in modern educational psychology; 2) to study the concept of Seed in Yogācāra Buddhism; 3) to propose a theoretical model of learning process based on modern educational psychology and the concept of Seed in Yogācāra Buddhism. Findings show that theories in modern educational psychology have great disputes concerning the source of learning, the role of the learner and the faculty that enables learning. As the concept of Seed in Yogācāra Buddhism deals with the mechanism of the mind at a fundamental level, it helps the establishment of a theoretical model that explains learning process in an integral way in which Seeds and the manifest activities have influence upon one another, known in this paper as Tri-interaction. As an extension, the model engages an effective learning process in which the function of Object Contingent and Wholesome Mental Factors is emphasized while that of the Unwholesome ones discouraged.

Keywords: learning process, educational psychology, the concept of Seed, Yogācāra Buddhism

1. Introduction

There are generally two kinds of teaching methods in modern pedagogy. One is teacher-centered, and the other is student-centered¹. The former one, also known as direct teaching, pays more attention to the role of the teacher, who is supposed to control the whole class and plays a key role in the whole learning process. The latter, on the contrary, focuses more on the part the students take in the learning process, asserting that the students learn not from the teacher but from their own experience and inquiry and the teacher just serve as a supporter. The former one is the type generally thought to be out-dated and boring, thus discouraged by many teaching institutes while the latter style seems to have won hearts of the majority. Many developed countries have designed their teaching policies in favor of student-centered teaching methods and teachers also seem to favor those teaching approaches that can better arouse students' attention and interest, namely task-based teaching, inquiry-based teaching, etc, in which there is as less involvement of the teacher as possible, students taking the central role. However, recently this new trend is getting more and more criticism from the educational field, complaining that the students almost learned nothing from this fancy fad and teachers do not prepare their lessons with effort as they did before.² So in general, debates and arguments take place not only in academic journals but also in the real teaching situations, concerning which approach is better or more suitable for the students.

In order to serve the educational field regarding the issue above, this research aims at proposing a better theory that explains the mechanism of the learning process by combining theories of educational psychology in the west and the concept of Seed in Yogācāra Buddhism.

1. Learning in Modern Educational Psychology

According to Schunk: “Learning is an enduring change in behavior, or in the capacity to behave in a given fashion, which results from practice or other forms of experience.”³ Not universally agreed though, this definition has incorporated all the major elements of learning from both behaviorist and cognitive sides, with “in behavior” indicating the stance of behaviorism and “in the capacity to behave in a given fashion” indicating the involvement

¹Westwood, P, **What teachers should know about**, (Camberwell: ACER Press, 2008), p.2.

²Delpit, L, “The silenced dialogue: power and pedagogy in educating other people’s children”, Harvard Educational Review, Vol.58 (1988): 280–298.

³Schunk, D.H., *Learning Theories: An Educational Perspective*. (New York: Macmillan, 1991), p.2.

of mental process which is emphasized by cognitivism. Dennis Coon & Mitterer⁴ classify learning into two general types, associative learning and cognitive learning, with former including escape learning and avoidance learning, and the latter including latent learning, rote learning, discovering learning, and observational learning. There are some factors that are crucial in learning process including motivation, memory, emotion, intelligence, sleep and stress.

Learning has long been studied in the west, forming a lot of schools with various theories. These theories on learning started from Plato and continue till today. Disputes among these theories on learning differ from each other to a large extent in aspects such as the source of the knowledge, the role of the learner, and the faculty that enables the learning process. These disputes can be generalized as: innate VS. acquired; active VS. passive; mental VS. physiological.

Concerning the source of the knowledge, some theories, especially Plato, believe that the knowledge is stored in the soul. What one has to do is to retreat it by recollecting it. Other theories, especially Locke, believe all knowledge is to be required from experience, a person is originally born with a mind like a blank slate. Although some constructivists, especially Piaget, tried to propose a synthesizing concept, similar to that of Kant, by saying that a person, bearing some of innate faculties, constructs structures of knowledge. Some people believe that such a constructing view is essentially supporting the idea in favor of innateness while others think it is obvious here that the environment is the original source.

Concerning the role a learner takes in learning, early theories such as Plato, Locke and Behaviorism put the learner in a passive position, where the learner is waiting to be filled with knowledge. While the later theories, especially Dewey, emphasize more on the initiative of the learner, saying that the learner is supposed to take an active role in the learning.

Concerning the faculty that enables the learning process, most theories such as Locke, Behaviorism, and others, believe that it is something physical that makes the learning start and others such as Plato believe it is the mind that undertakes such a function.

As a conclusion, Chart 1 exhibits the disputes.

⁴Dennis Coon & John O. Mitterer, *Introduction to Psychology: Active Learning Through Modules*, (Marceline, US: Wadsworth, Cengage Learning, 2009). pp. 279-308.

Chart 1: Major Disputes among the Western Theories

	Theories	Source of the knowledge		Role of the learner		Faculty of learning	
		Innate	Acquired	Active	Passive	Mental	Physio-logical
1	Plato	✓			✓	✓	
2	Locke		✓		✓		✓
3	Behaviorism		✓		✓		✓
4	Dewey			✓			
5	Piaget	✓	✓	✓			
6	Von Glaserfeld	✓	✓	✓			✓

2. The Concept of Seed in Yogācāra Buddhism

Seeds are defined in CWSL (Ch. *Cheng Wei Shi Lun*) as “different energies in the fundamental consciousness that immediately engender their own fruit or results.”⁵ Lin comments that Seed is a metaphorical term that refers to the function of the Eighth Consciousness that is to produce fruits of various kinds.⁶ There are two kinds of Seeds, one is the innate, and the other is newly perfumed. Seeds are unstable and inclined to produce fruits with consistent ethical feature under certain conditions.

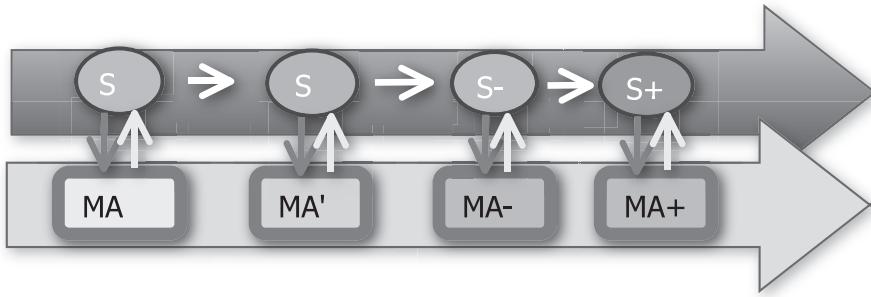
According to Yogācāra, there are basically five kinds of phenomena (dharma) in the world: Consciousnesses (citta-dharma), Mental Factors (caitasika-dharma), Forms (rūpa-dharma), Embodied-conditioning Not Directly [perceived] by Consciousnesses (citta-viprayukta-saṃskāra-dharma, aṣaṃskṛta-dharma), Unconditioned Dharmas (Aṣaṃskṛta-dharmas). Among these phenomena, there is a fundamental one called Ālaya Vijñāna, the Eighth Consciousness among the eight consciousnesses, because from this one all of the other phenomena are generated either directly or indirectly.

⁵ Xuanzang, tr. Francis H. Cook, *Three Texts on Consciousness-Only*, (Berkeley, US: Numata Center for Buddhist Translation and Research, 1999), p.48.

⁶ Lin Guoliang, *Cheng Weishi Lun Zhijie* (A Direct Translation and Commentary to Discourse on the Perfection of Consciousness-only, Chinese Edition), (Shanghai: Fudan Press, 2007). p.123.

The Eighth Consciousness is also called Store Consciousness because it stores numerous Seeds which are all kinds of potential energy that can produce all of the phenomena that one cognizes, which is named Manifest Activities. The storage of the Seeds have no beginning nor ending. They have been accumulated from countless lives of an individual and they are stored in the form of the Eighth Consciousness, which is so subtle that ordinary beings are not able to realize its existence at all. However, when conditions, both internal and external factors, become mature, these stored Seeds are able to be activated and present themselves as Manifest Activities, and this process is called generating. The Manifest Activities, on the other hand, have their influence on the original Seeds simultaneously, and this reverse effect made on the Seeds are called perfuming. Once the original Seeds are perfumed, new Seeds will come into existence on the basis of the original ones also at the same time, and thus called Seeds generating Seeds. The Eighth Consciousness functions through such a continuous process of producing and perfuming among these Seeds and Manifest Activities. By these non-stopping and repetitive pattern of producing and performing, new Seeds as well as new Manifest Activities appear constantly, each resembles the previous one both on the side of Seeds and on that of the Manifest Activities. Following is the diagram showing this pattern, with Seeds (S) represented by the arrow above and Manifest Activities (MA) below.

Chart 2: Pattern of Seeds and Manifest Activities



Such interaction between S and MA as well as S' and S' is named as Tri-interaction in this paper. Tri-interaction is the fundamental mechanism of how all things, be they spiritual or physical, develop in a incessant manner.

Buddhist theory as it is, the establishment of this paradigm serves soterical purpose, fully justifying the possibility of transformation of an ordinary sentient being, say a man, into a sage. The basic pattern for such transformation is to increase the amount of undefiled Seeds while decreasing that of the defiled ones. The defiled Seeds are those Seeds associated with delusion or ignorance. And undefiled Seeds that are those, possessing wholesome

morality, that lead to spiritual liberation. For an ordinary sentient being, both the defiled Seeds and undefiled Seeds are stored in the Eighth Consciousness. By practice, the amount of undefiled Seeds gradually surpass that of the defiled ones, and eventually there will be no defiled Seeds, only undefiled Seeds existing. This moment is called Buddhahood. A sentient being with only undefiled Seeds stored in his Eighth Consciousness is Buddha.

The attempt to change the amount of the two kinds of Seeds requires deliberate practice primarily through the change of the activities of the Six Consciousness because it is the only consciousness that is controllable meanwhile entails three moral qualities, wholesome, unwholesome and neutral. In another word, the spiritual practice in Buddhism is essentially to modify the way of thoughts, emotion, and will etc. The mechanism, if explained in Tri-interaction, is to modify MA (i.e. an unwholesome activity of Six Consciousness) in a desired way MA' (i.e. a wholesome activity or neutral) to an extent that it has enough force to perfume S (i.e. a defiled Seed), so that S can produce S' (an undefiled Seed) stored in the Eighth Consciousness. As the MA' continues for a sufficient period of time, the amount of S' will be significant enough for spiritual liberation.

The Sixth Consciousness, however, functions in the form of Mental Factors, which are affiliating mental activities that function in different ways. There are six kinds of Mental Factors. According to the frequency of their occurrence, there are two groups classified, Omnipresent Mental Factors and Contingent Mental Factors. Omnipresent Mental Factors are those mental factors that can occur all the time while Contingent Mental Factors only arise in some specific occasions. According to the moral quality, which is related to whether a mental factor has a positive effect on the spiritual practice or not, there are four groups, Wholesome Factors, Afflictions, Secondary Afflictions, and Uncategorized Factors. Among the four groups, the Wholesome Factors have a positive effect on the spiritual practice while the Afflictions and Secondary Afflictions have a negative effect, with the last group of factors don't take either side unless specific situations are given. Both fall into the unwholesome category though, the Afflictions differ from the Secondary Afflictions in that the former are afflictions in general and the latter are more specific ones that derive from the former. There are five Omnipresent Mental Factors five Object Contingent Factors, eleven Wholesome Ones, six Afflictions, twenty Secondary Afflictions, and four Uncategorized Factors. Thus there are fifty one Mental Factors in six classes. *Lucid Introduction to the One Hundred Dharmas*⁷ gives explanation to them in detail:

⁷Ch.: Da Cheng Bai Fa Ming Men Lun; Skt.:Mahāyāna-śatadharma-prakāśamukha-śāstra

- 1) Omnipresent Factors: attention, contact, sensation, perception, intention.
- 2) Object Contingent Factors: desire, resolve, mindfulness, concentration, intelligence.
- 3) Wholesome Factors: faith, zeal, conscience, shame, not coveting, no anger, no folly, pliancy, no laxity, indifference, not harming.
- 4) Afflictions: craving, ill-will, pride, ignorance, doubt, incorrect views.
- 5) Secondary Afflictions: anger, enmity, anxiety, concealing, deceit, flattery, arrogance, hostility, jealousy, parsimony, unscrupulousness, shamelessness, disbelief, indolence, negligence, slackness, agitation, forgetting, incorrect cognition, distraction.
- 6) Four Uncategorized Factors: drowsiness, regret, discovery, scrutiny.

The practice for the spiritual liberation proposed by Yogācāra Buddhism is essentially the process of Tri-interaction involving the modification of Sixth Consciousness through the functions of Object Contingent Mental Factors which is accompanied by manifestation of Wholesome Mental Factors and Eradication of Mental Factors of Afflictions and Secondary Afflictions.

3. A Theoretical Model of Learning Process Based on Modern Educational Psychology and the Concept of Seed in Yogācāra Buddhism

Although learning is not specifically and exclusively defined in Yogācāra, the latter has a systematic analysis of the human consciousnesses and psychological activities. Since learning is included and studied in psychology, it can be well defined in the context of Yogācāra as long as all elements regarding the psychological mechanism are interpreted in the context of Yogācāra. This definition of learning in the western theories consists of the following elements:

- a) behavior,
- b) the capacity to behave,
- c) enduring change
- d) practice or other forms of experience.

Behavior is the result of the function of mental and physical factors which, to large extent, are subject to the awareness and function of the surface consciousnesses including Sixth Consciousness and the five sensory consciousnesses. Therefore, in Yogācāra, a behavior can be interpreted as the manifested activities of Eighth Consciousness at the level of surface mind, i.e. MA. The capacity to behave indicates the latent potential of a

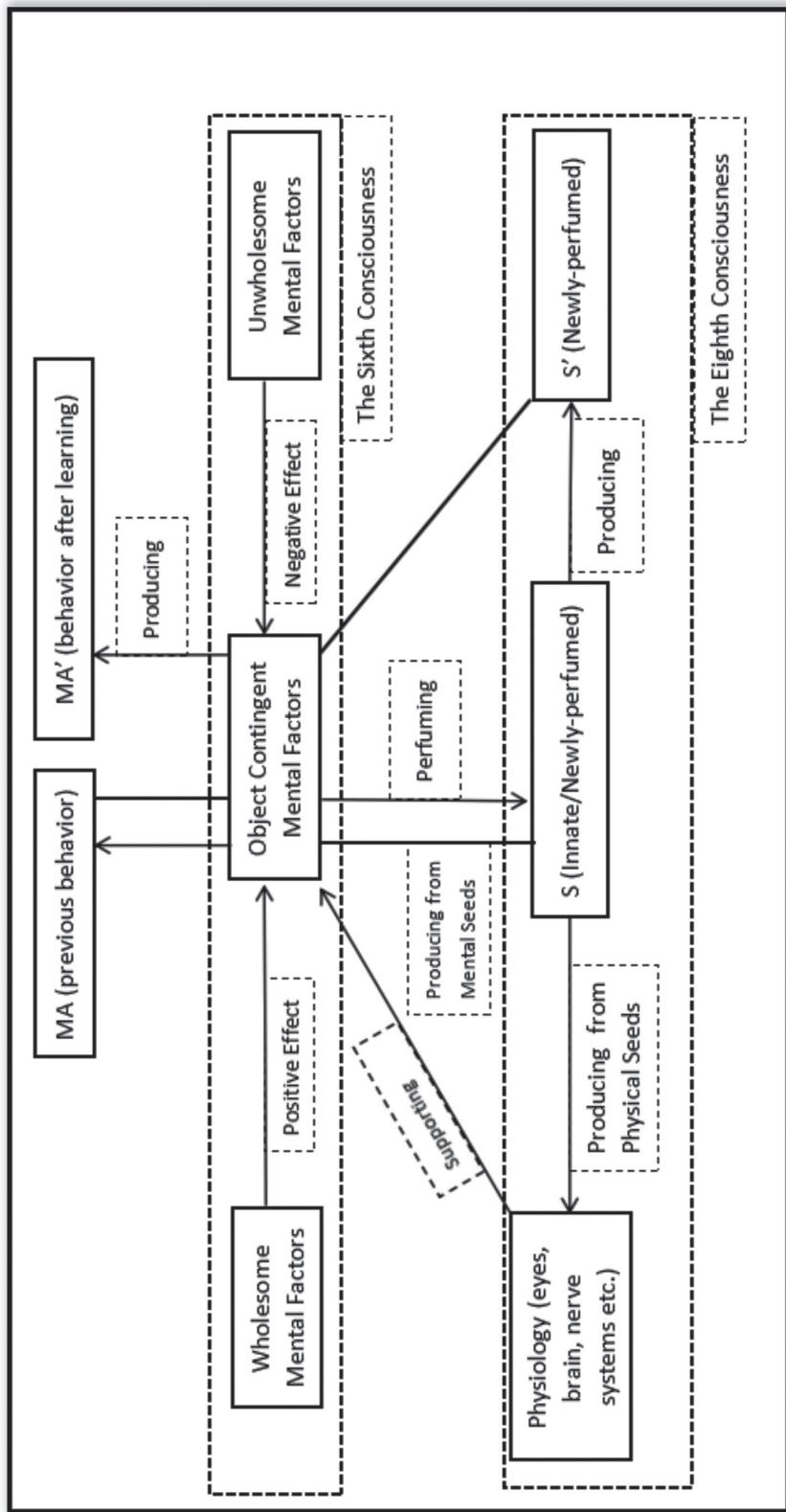
behavior which can be interpreted as the latent form of the Eighth Consciousness, i.e. S. Enduring change can be interpreted as an enduring process of S producing MA', which is significantly different from the previous MA, if the change takes place in the behavior, and of S producing S', which is significantly different from the previous S, if the change takes place in the capacity to behave. Practice or other forms of experience, in Yogācāra's context, are activities involving participation of Sixth Consciousness with or without that of the five sensory consciousnesses. Therefore, practice or other forms of experience can be interpreted as the process of MA perfuming S. The following chart presents the equivalent pattern on the elements of the definition of learning between modern psychology and Yogācāra:

Chart 3: Equivalent Pattern on the Elements of the Definition of Learning between Modern Psychology and Yogācāra

	Modern Psychology	Yogācāra
1	Behavior	MA
2	Capacity to behave	S
3	Enduring change	Enduring S producing M' or S producing S'
4	Practice or other forms of experience	MA perfuming S

The theoretical model of learning process based on modern educational psychology and the concept of Seed in Yogācāra Buddhism is to be carried out by synthesizing the theories of the west and the theory of Yogācāra on learning. The following chart shows such a theoretical model.

Chart 4: A Theoretical Model of Learning Process Based on Modern Educational Psychology and the Concept of Seed in Yogācāra Buddhism



The chart above depicts the mechanism of learning process with all close factors involved. It starts with S, representing Seeds, which are potential energies that produce everything in the phenomenal world both spiritual and physical. Seeds are also constituents of the Eighth Consciousness where all information about everything in the phenomenal is stored in Seeds, including knowledge, skills, experience, etc. Since there are two types of Seeds, innate and newly-perfumed, the knowledge can also be two kinds, the innate and acquired. That is, even before we learn anything, we have some innate knowledge stored as potential energy in our fundamental consciousness. S' refers to the newly-perfumed Seeds.

Seeds can produce phenomena both spiritual and physical in the way that spiritual Seeds produce other consciousnesses such as the Sixth Consciousness and its affiliating Mental Factors, while the physical Seeds produce the physical phenomena such as human bodies, which are considered in Yogācāra Buddhism as parts of the Eighth Consciousness. Although apparently learning process involves function of physiology such as eyes, brain and nerve system as well as that of mentality, the fundamental faculty is Eighth Consciousness which is both mental and physical. As Buddhism in general emphasizes predominantly on the cultivation of mind, Yogācāra Buddhism, without exception, pays attention mostly on the mind. Therefore, learning process in Yogācāra Buddhism is thought to take place mainly in the Sixth Consciousness, known as the mind, with physiology taking a supporting role.

Within the Sixth Consciousness, there are five categories of Mental Factors, among which Object Contingent, Wholesome and Unwholesome Mental Factors are closely related to the learning process, especially Object Contingent Mental Factors play an essential role. The Wholesome and Unwholesome Mental Factors can greatly influence the learning process in which the Object Contingent Mental Factors are functioning. the Wholesome Mental Factors will have a positive effect on the process while the Unwholesome will be negative.

Finally comes the MA, Manifest Activity, which refers to anything that is produced by the Seed in a broad sense. However, MA here exclusively refers to the behavior that is to be changed before the learning takes place and MA' refers to the behavior after the learning.

The whole learning process has the core pattern of Tri-interaction. That is, MA, originally produced by the S, either innate or newly-perfumed, perfumes S through the function of Object Contingent Mental Factors. This is the moment when the learner cognizes the knowledge. Then S produces S', the newly perfumed Seeds. This is the moment when the fundamental information about the behavior is modified. Coming next is S' producing MA', which means the behavior is changed, marking the completion of learning at this time point. By saying time point, what is implied here is that the whole Tri-interaction, although

analyzed here in sequential order, actually takes place simultaneously. That is MA perfuming S, S producing S', and S' producing MA' take place at the same time. The completion of learning is repetition of such time-spot of Tri-interaction til the altered behavior becomes stable and relatively permanent as stated in the definition of learning.

When the core pattern of Tri-interaction comes together with Wholesome and Unwholesome Mental Factors, it brings the issue what an effective learning is. As required for the purpose of liberation, a successful learning process should follow the such requirements as well:

- 1) Keeping Wholesome Mental Factors
- 2) Avoiding Unwholesome Mental Factors
- 3) Sticking to the Object Contingent Mental Factors

Keeping Wholesome Mental Factors and Avoiding Unwholesome Mental Factors can provide the learning process with a sustainable mental status, which allows the learning process to take place without much hindrance. The learning process, as mentioned earlier, is essentially Tri-interation, where the desired Seeds should be stored in the Eight Consciousness with enough power. This requires a continuous and forceful perfuming process from corresponding MA, which is not supposed to be interrupted by other MAs, which may cause distractions towards the desired Tri-interaction process. Keeping Wholesome Mental Factors and Avoiding Unwholesome Mental Factors can effectively prevent unwanted Seeds in the Eighth Consciousnesses from transforming into Manifest Activities.

Under the condition of the keeping the Wholesome Mental Factors and avoiding the Unwholesome Mental Factors, sticking to the Object Contingent Mental Factors, it can make sure that the desired Seeds can transform into Manifest Activities with greatest efficiency.

Application of the theoretical model on educational field involves mainly on the exertion of Object Contingent Mental Factors including desire, resolve, mindfulness, concentration, and intelligence. Teacher-centered teaching methods are more effective on exertion of the learners' Mental Factors such as mindfulness and concentration, while the student-centered more on desire, resolve and intelligence. Given the both teaching methods may cause Wholesome and Unwholesome Mental Factors of different kind that arise in the learners, they do have equal weigh under this theoretical model. However, it has been found that the key for the cause of Unwholesome Mental Factors on each side is the mistreatment of the authority of the teacher. It is easy for the authority of the teacher to be overly or misused in teacher-centered teaching mode while undermined in the student-centered teaching mode.

4. Conclusion

Learning process is essentially Tri-interaction among Seeds and Manifest Activities through the function of Object Contingent Mental Factors, upon which the Wholesome Factors can have positive effects while the Unwholesome can have negative ones. An effect learning process requires the learner to keep the Unwholesome Mental Factors, avoid Unwholesome Mental Factors and stick to the Object Contingent Mental Factors. Based on this theoretical model, it is implied that both teacher-centered and student-centered teaching methods are encouraged in the educational field as long as the authority of the teacher is properly exercised and respected.

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