Exploring the Feasibility of Applying Memetics in Teaching English as Second Language

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Abstract. As communication between countries becomes increasingly frequent and international trades as well increase rapidly, English as a world common language is useful for assisting countries to communicate with each other. At the same time, the number of people in demand of second language teaching of English is also increasing exponentially. In the development process of second language teaching, there are various theories throughout history, either repellent or similar. Among them, the linguistics memetics is an innovative direction to do studies in applied linguistics in recent years. From the perspective of memetics, memes are deemed as cultural transmission unit, because memes can spread through imitation, therefore, language as one of the most important carriers for the transmission of memes takes an important position.The purpose of this paper is to introduce the theory of memetics to the area of second language teaching, thus to speed up the reform of second language teaching modes.

1. Introduction

The Selfish Gene is the fundamental book for the study of memetics, exemplifying the language as meme. Since then, linguistics began to introduce this theory to the traditional research of language evolution. As "Words are memes that can be pronounced" [1], memetics is the extensional analogical application of the evolution theory raised by Darwin in the field of social science, and like the biologic gene that can replicate, meme duplicates, transmits and finally survives by imitating among speakers. This process of contagious infection connects meme with second language learner's acquisition of knowledge tightly, and will provide extensive research chances for English researchers to explore in the field of SLA.

This thesis will firstly give an overall introduction to memetcis, then a list of theories which are the foundation follows behind. Under the support of memetics and theories of second language teaching, there will be an analysis on the previous literature and their empirical results thus to apply theories to practice. As a result, an suggested teaching mode to apply memetics in TESL will be presented at the end of the paper. This suggested model aims to help second language learners to improve linguistic performance of English.

2. A General introduction to Memetics

2.1 The Definition and characteristics of the Term "Meme"

Memes which can be inherited are small unit of cultural information that can represent the heritable basis of culture in the same way genes represent the heritable basis of organic evolution. To define the term is difficult, but the most representative one can be that a meme is a cognitive information structure that is able to replicate using human hosts and to influence their behaviors to promote replication. Memes were originally coined by Richard Dawkins in his book The Selfish Gene as "a unit of cultural transmission, or a unit of imitation" [2]. Possible examples of memes are tunes, ideas, catch-phrases, clothes fashions, ways of making pots or building arches, just as genes propagate in the gene pool via the process of imitation. Such as if a scientist professor encounters a good idea, he will share it with his colleagues or his students. Then he would possibly publish them in

his article or dress them in his lectures. If the idea strikes a chord, it would be deemed as propagating itself, spreading from brain to brain.

Meme as a replicator basically has three distinctive features like gene: longevity, fecundity and copy-fidelity [3]. To put it simply, if a meme wants to be strong enough to last for a long time, it must have many copies which need to be duplicated accurately. The first feature of strong meme is longevity which means the longer the replicating pattern survives, the more copies can be made, which is deemed as the basis for memes' imitation. The next one is fecundity which refers that the higher rate and speed of duplicating, the more the replicator will carry out the task of spreading. The last one is copying-fidelity, that's to say, the more faithful is the copy to the original, the more will remain the initial pattern after numerous copying processes.

2.2 The Life Circle of Memes

Meme formation is a relatively long and sophisticated process. It is not to say that any element which possesses the three characteristics mentioned above could become a meme. The world is changing and developing every moment, and meme as a replicator, can only be transmit or survive if it adjusts to the surrounding environment until going though the complete life circle. Daniel Dennett presents there are three necessary conditions for a meme to be selected naturally, which is variation, heredity or replication and differential "fitness" [4]. Whether a meme could survive or not depends on its ability to adapt to the external environment and its performance while imitating.

In memetics, imitating is a complete process to be proceeded, which refers to the whole periodic life circle of memes. According to Heylighen [5], meme's life circle can be divided into four phases: assimilation, retention, expression and transmission, which is much similar to transmission, decoding, infection to encoding and spread [6].

Assimilation refers to the memes the host encountered and then assimilated; retention denotes the already assimilated memes that are still remembered in mind; expression means the times of a remembered memes being expressed by the host; and transmission represents the amount of an expression's copies which is transmitted to other hosts.

2.3 The History of "Memetics"

Memetics provide a new explanation of human cultural evolution, including the origins of language and consciousness, and the evolution of human brains. This theory adopts and evolves Darwinian Dynamics, from adaption, drift, mutation to recombination. Memes firstly originated in Dawkins' best-selling The Selfish Gene [7], where he advocate natural selection carry out in the aspect of genes on a species, and then raises that similar to the genes which is deemed as replicators, there are also a unit of imitation in cultural evolution. Finally, he gave the name "meme" to this replicator.

Several years later in the Scientific American column Metamagical Themas, Douglas Hofstadter issued an article on viral chunks and self-replicating language structures, such as virulent chain junk e-mails, similarly to the viral blogs which attach simple request, some threats or little promises in one's friend circle or Qzone [8]. After the article ended its illustration, one reader mentioned the discipline for studying memes, which is elementary form of memetics.

The research on memetics in China relatively took off late, but developed dramatically fast among scholars as soon as the study on that discipline spouted. Professor Du Shichun pointed out that memes, brain, and culture are three aspects closely related to each other, which are definitely worth further discussion. After professor He Ziran put forward the equivalent translation of "memes" in 2003, he then put forward the "linguistic memetics", which analyzed language and its related phenomenon under the perspective of memetics, thus introducing the idea of replication into language study. At the same time, the theory of memes provides a new prospect for foreign language teaching .Yet the status of this theory in China as an independent discipline is still in doubt,because the system of memetics is not complete and the related researches are not deep enough. So the field of memetics is still a new and controversial science, with many critics and many difficulties to be resolved.

3.Literature Review

3.1 Overview of Related SLA Theories to Memetics

3.1.1 Formulaic Speech

Formulaic speech has been in heat discussion for several years, and while the grammatical analysis and language structural rule was more and more systematic through standardization, equivalent attention has also been given to the already-existed chunks or raw language materials. The formulaic speech is important and direct entity to be formed as language meme and helpful to SLA in respective of following three aspects.

Firstly, formulaic speech denotes phrases or strings of words as a chunk like an individual lexical item [9]. Wary has give a specific definition: A sequence, continuous or discontinuous, of words or other elements, which is, or appears to be, prefabricated: that is, stored and retrieved whole from memory at the time of use, rather than being subject to generation or analysis by the language grammar [10]. Then, the classification can be four groups: poly words, institutional expressions, phrasal constrains and sentence divided according to the four structural criteria presented by Nattinger [11]. The last one is the criteria of the formulaic speech which stresses on the same features as memetics: longevity, fecundity and copy-fidelity.

Communicativeness, productiveness and learning strategy is the three effective functions that formulaic speech could perform in SLA. From the point of Ellis, large quantities of formulaic speech and chunks require memorizing to develop the ability of second language.

3.1.2 SLA Process and Memetics Stage

The first process of SLA is input, which needs to be repetitive, comprehensive and distinguished. This part begins with imitation and will proceed to the stage of decoding. When the message the host encountered are noticed, understood and assimilated, the target memes will successfully get access to the mind of the host. The next process is memorization, which is equal to the stage of memetic retention stage. Memorization means recitation in another way, where the stage of infection and retention roots. The third similar stage is second language output process co-existing with memetic expression stage. The purpose of SLA is to output, where second language meme is to be expressive to its best. And the last one is to interact between speakers, which serves as a bridge between input and output, the same way transmission does between last expression and new infection. The complex relations among the three process are shown in Figure 1.

Figure 1 The process of S LA

3.1.3 SLA Environment and Memetic Fitness

Memes are replicators which should fit the outer environment as genes. According to Heylighen's theory, the fitness of memetic depended on the interaction among its four stages of imitation process. Only if a meme can survive through a complete process which refers assimilation, retention, expression and transmission, can a meme fit the environment, making through the natural selection.

Under the environment of SLA, language meme's fitness concludes grammar, genre, context, style and so on. Memetics instruct language memes to adjust themselves to the selector criteria thus reaching to its fitness naturally to be a strong meme.

3.2 Retrospect of TESL

Traditional reading TEFL method is the most popular and earliest one along the second language teaching history, therefore it is also the maturest one applied in pedagogy. This method involves simple material and a conversational style of lecture-giving. The main focus is to improve pronunciation, rhyming and word recitation. The instructor always reads a book and pauses now and then to explain certain words and concept.

Later, the method of teaching second language promoting to Communicative Language Teaching (CLT) which focuses on interaction that are both the way and the goal of teaching a language. In the field of CLT, the most effective approach of teaching is task-based language learning approach, which does well in improving the students' ability to listen, speak, write and read. This is a two-way interaction for student to get more positive opportunities while learning.

The current teaching method is a kind of blended method which combines face-to-face teaching and online interactions, which could get access from a virtual learning environment (VLE). VLE is increasing dramatically through past five years, then teachers can combine prepared courses with online materials such as games, video and listening exercises to enrich the knowledge, to arouse the interest and to increase the involvement of students.

3.3 Memetics and TESL

The memetic firstly stores in the teacher's brain, then through lectures and with the help of language, gestures, facial expressions and auxiliary means such as multimedia, teachers can convey the target knowledge to learners.When the learners use these knowledge and information, it will form the spreading process of language memes. Through understanding, absorbing and storing the knowledge and information, the learners could encode the information into units of memory thus to improve the efficiency of information processing and to prolong the time of memory. Therefore, recitation of vapid and dull words or paragraphs and combination of related information could help to turn weak memes into strong memes for learners to imitate and duplicate.When the information stored in the learners mind reaches a certain level, they will utilize the learned information to express themselves. And the most important way for learners to have a command of language is to study and imitate in class.

4. A Suggested Teaching Model to Apply Memetics

According to the theories summarized in the previous four chapters, a suggested model to apply memetics in TESL is developed with five subordinate part in detail to support the basic theory, which is teacher's talk, input, imitation, culture background instruction and comprehending and applying. Each part has its purpose and method to fulfill memetics and the process of the suggested model is in the similar way as the life circle the memes possess, thus to help linguistic memes be accepted more naturally.

4.1 Teacher's Talk

The classroom is the main language learning environment, where teachers and students participate together to do language communication and learning activities. Therefore, as learning in classroom is an important part of SLA study, teacher's talk would be one of the most important classroom behaviors. According to Heylighen, the transmission of memes undergoes periodic assimilation, memory, expression and transmission. Based on this theory and researches on teacher talk, the suggested teacher's talk model should follow the three criteria hereinafter. Firstly, the teacher talk should comply with the regulation of memetics, thus to make full use of the variation in the replication process of memes. Next, as all the behaviors in classroom is triggered by the memes in the teacher's talk, the teacher's talk is to reflect the dynamics of classroom teaching, and it will provide theoretical support for classroom interaction and mood adjustment of the students. Lastly, teacher's talk should reflect the process of the impartation, as this can better segment the teacher's talk and its communication process, it provides the basis for the improvement of teacher's talk.

As a result, in an English class, the teacher should create a good environment for the memes to spread according to the actual requirements in class, and make adjustment for the psychological and physiological characteristics of the students, thus to produce better effect.

4.2 Input

To perfect the system of input and improve its effectiveness accordingly, Krashen's Input Hypothesis is to be comprehensive use, which emphasizes that comprehending and internalizing the information is the main way for SLA, indicating that if the level of the target learner is "i", then the language standard input for him should be "i+1". Therefore, the basic requirement of the input model is to make pragmatic instruction to be understandable, attractive, relevant and adequate. The role of memetics in this part is to help English learners to memorize a great number of language materials especially chunks like proverbs, idioms, fixed expressions, sentence patterns and

grammatical forms . For example, "A penny saved is a penny gained" and "Omelets are not made without breaking of eggs".

4.3 Imitation

In order to transmit memes to improve learning effectiveness and veracity, the skills of imitation is to be used for language output and drilling is also to be paid attention on. The copying fidelity plays an important role in a successful meme transmission, thus great consideration is giving to imitation. In The Meme Machine, Blackmore mentioned that imitation is the only impetus of meme evolution. The teachers should be aware of the function of pragmatic transfer in class, which means using appropriate and adequate typical information and expressions that can convey target language culture consciously. The process of instructing should strengthen the positive transfer and suppress the negative one. Therefore, the pragmatic ability and the effectiveness of imitation would be improved. For example, the sentence "Love me, love my dog" can be imitate as "Love me, love my shortcomings".

5. Conclusion

In conclusion, the major findings based on the research of memetics, overview of related SLA and TESL theories, and empirical application of memetics in TESL would be listed as follows and a suggested model for TESL would be presented, which have profound influence on memetics, TESL, and future direction of exploration as well. As to Main Findings, first of all, there are SLA memes. They have the same features - longevity, fecundity and copy-fidelity as other memes around the world. Copy-fidelity has different requirements for different levels of meme, but for teaching, the spoken English and the written English should be faithful to the original language to ensure the accuracy of meme transmission. Secondly, SLA meme has the same obligation like other replicators: evolution. The most important evolutionary term is "fitness" to different situation. Memetics indicates that fitness is formed in the process of imitation, so SLA meme must fit the language environment, which includes listening, speaking, reading, writing and translating, to proceed imitation through complete teaching process. Thirdly, TESL model should contain four parts, which are indispensable and depend on each other: sufficient input is the foundation for the whole process; memorization and imitation is the best way to keep the meme for its longevity; output is the way to exam the meme for its copy-fidelity and the way to use it frequently in various places according fitness; interaction gives feedback to output and bring about new input. For short, it is theoretically reasonable and feasible to use memetics to increase the TESL efficiency.

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