Study of Memetics in the Teaching of ESL Writing

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Abstract. Memetics is a new theory for interpreting cultural evolution. A meme is a unit of cultural transmission, like gene, is also subject to the selection “the survival of the fittest”, which is copied through the imitation among vectors, only the strong memes can be survived. This infectivity of memes provides a close connection between memes and the process of second language learner’s acquisition.

Introduction

With the development of modernization in modern times, as well as China’s entry into WTO, Chinese students are facing more changelings under the pressure of integrated ability that includes writing. As a significant means of communication, writing in English has been widely applied in many areas, e.g., different kinds of business letters are inseparable in daily trades. Undoubtedly, writing in English grammatically and pragmatically appropriate is fundamental for capable college students.

However, in sharp contrast to such a social demand, the writing ability of college students is continuously lowering. In the mid-1990s, there were a series of tests on the proficiency of the Chinese language of 4287 college students in 11 institutions of higher education in China. The tests covered six aspects, namely, pronunciation, diction, vocabulary, grammar, logic and rhetorical devices, and writing. The overall average passing rate was 26.1%. For diction, vocabulary and grammar, the average passing rate was 31%, which was much higher than the rate of the other three aspects while the passing rate of writing was only 19%, which was the lowest. The writing test was designed mainly to examine students’ knowledge of and ability in practical writing. In the test, students were asked to write an official letter based on a given context and some materials. However, only few students could correctly grasp their “role and position”. The content and form of their letters were mostly casual and inappropriate in tone. That is precisely why since China’s opening up to the outside world institutions of higher education in China have been very active in offering courses in writing and listed enhancing the knowledge of and ability in practical writing as the main contents of teaching.

Definition of “Meme”

Memetics is a new theory in the research field of cultural evolution. Memes are a sort of self-propagating units of cultural evolution, having resemblance to the gene that can spread through human cultures and across the generation. Memetics is a theoretical and empirical science that studies the replication, transmission and evolution of memes.

In 1976, Richard Dawkins, a very famous professor and zoologist, of the Public Understanding of Science in Oxford University, first proposed the term “meme” in his best selling book The Selfish Gene (1976). In this book, he popularized the growing view in biology that natural selection proceeds not in the interest of the species or the group, nor even the individual, but in the interest of the genes. Although selection takes place largely at the level of the individual, the genes are the replicators and it is ultimately their competition that drives the biological evolution. At the end of the book, he radically proposes that biology is not the only field where evolution is at work; Human
culture also evolves and changes. Gene is the biological replicator, so by analogy, “meme” is the cultural replicator which drives the culture evolution. The term “meme” is shortened from the Greek word “mimeme” which means the things being imitated.

**Three Qualities of a Successful Meme**

Just as gene, meme also need to be selected in order to survive in the fierce competition. Dawkins suggests three qualities of a successful meme: fidelity, fecundity, and longevity.

Copying-fidelity: the more faithful the copy, the more will remain of the initial pattern after several rounds of copying. Here fidelity means the essence of the original is handed down.

Fecundity: the higher rate of the copying, the more the replicator will spread. As in the case of genes, fecundity is much more important than longevity of particular copies in the process of transmission.

Longevity: the longer the replicating pattern survives, the more copies can be made. Longevity provides enough time for meme to copy. Dawkins mentioned that other things being equal, each species would reveal a “longer life” tendency. It is the basis for meme’s imitation.

**Life Cycle of Meme**

**Four Processes of Meme Replication**

Stage one is assimilation, a successful meme must be able to “infect” a new host, in another word, enter into its memory. To be assimilated, the presented meme must be respectively noticed, understood and accepted by the host through infection. In other words, meme must attract a host’s attention and connect to his or her cognitive systems. The host will unconsciously refuse those memes that differ from or contrast with existed culture and accept those memes in accordance with culture. Under this condition, assimilation occurs.

The second step is retention; the meme have to be retained by the host through memory for some time. Otherwise it is not a meme. With this step meme selection occurs. Without memory, a meme is died and cannot proceed to the next step. Retention of a meme largely depends on the perceived usefulness, interest, and relevance to the host. The longer the meme kept in a host’s memory, the better. The longer the meme stays, the more opportunities it will have to spread further by hosts.

The third stage is expression. A meme must emerge from its storage as a memory pattern and get into the process of physical appearance that can be perceived by other individuals. What matters most at this stage is the probability of being perceived by a potential host. The major means of expression usually refers to speech, text, pictures, behaviors, and so forth. It is not necessarily a conscious action for the host to choose a way of expressing the meme.

The last step is transmission. Transmission may occur through physical gestures (hand or facial movements), speech, the spoken or written word, or pictures. In order to reach another individual, an expression needs a person or a physical vehicle. A meme should encourage its hosts to put as much effort as possible towards publicizing and transmitting it. The meme can be conveyed to the next potential host.

With regard to the above four processes of life cycle of meme, this can be illustrated clearly in the following figure.
Selection Criteria of Meme

In the process of meme life cycle, there are some criteria. The more of these criteria a meme conforms to, the more likely it is that it will maintain and spread. And this can be illustrated in the following table:

Table 1. Criteria of meme.

<table>
<thead>
<tr>
<th>Stages/selectors</th>
<th>Objective</th>
<th>Subjective</th>
<th>Inter-subjective</th>
<th>Meme-centered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assimilation</td>
<td>Distinctiveness</td>
<td>Novelty Simplicity Coherence</td>
<td>Authority formality</td>
<td>Self-justification</td>
</tr>
<tr>
<td>Retention</td>
<td>Invariance controllability</td>
<td>Coherence utility</td>
<td>conformity</td>
<td>Self-reinforcement intolerance</td>
</tr>
<tr>
<td>Expression</td>
<td></td>
<td></td>
<td>expressivity publicity</td>
<td>proselytism proselytism</td>
</tr>
<tr>
<td>Transmission</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

From the above figure, it is clear that not all memes can go four processes of meme replication. Heylighell holds the opinion that all other things being equal, a meme that scores better on one of these criteria is predicted to become more numerous in the population than a meme that scores worse. The list of selection criteria does produce a range of qualitative predictions, which can be tested through experiments or observations.

Formulaic Speech as Strongest Language Meme

Nattinger and DeCarrico provide a complex and broad classification of formulaic speech. They outline two large categories of it: phrased, strings of specific lexical items and generalized frames. The former are generally unitary lexical strings and may be canonical in the grammar or not, while the latter consist of category symbols and specific lexical items. Four criteria help in classifying the phrases: length and grammatical status; canonicity of the phrase; variability or fixedness; whether it is a continuous, unbroken string of words or discontinuous, allowing lexical insertions. The formulaic speech then is classified into: polywords, institutionalized expressions, phrasal constrains, sentence builders.

The most obvious characteristic of formulaic speech is: long-time existence, invariance or non-productive use of rules underlying a sequence, and frequent occurrence or community-wide use of a sequence.

In a word, formulaic speech can be the most appropriate “strong meme” that can help the development of second language acquisition.
L2 Input and Memetic Assimilation

It is widely accepted that input is necessary for the acquisition of a second language. According to Ellis, “L2 acquisition can only take place when the learner has access to input in the L2”. In SLA, input refers to “the language that is addressed to the L2 learner either by a native speaker or by another learner”. The concept of input is often distinguished from intake, which Ellis defines as “portion of the L2 which is assimilated and fed into the interlanguage system”.

The most influential theory to date of the role of input in second language acquisition is Krashen’s Input Hypothesis. It is Krashen who made the first theoretical claims regarding the role of input in L2 acquisition. The input hypothesis is one of the most controversial hypotheses in Krashen’s second language acquisition theory. Krashen wrote that “humans acquire language in only one way – by understanding messages or by receiving ‘comprehensible input’”. Central to his theory, it follows that to acquire language along the natural order; one must be able to comprehend what is being heard. It also follows that if the input is too easy to understand, the learner will not increase his or her knowledge of the language. The learner must hear input that is more difficult to comprehend. Krashen called this the i + 1, whereby the “i represents the last rule…acquired” and the 1 “is the next structure” that one is going to acquire. This means that the input, the i, is just slightly out of the realm of understanding. However, by hearing or reading new information in context with familiar input, the learner is able to understand the new material. If the teacher uses realia and other visuals to aid in understanding, the student will be able to increase his or her knowledge. With scaffolding, or with the use of contextual information from someone who is more advanced than the learner, the student will acquire more language.

L2 Processing and Memetic Expression

Processing is the most effective way for input and output process. Through processing, learners receive comprehensible input and feedback from their interlocutors, and are provided with opportunities to test target language hypotheses as well as to ‘notice the gap’ between their interlanguage and the target language. It is the function of processing, providing a meeting place for input, output, and feedback, that promotes learning. When these components of processing come together, “learners gain additional information about the language and focus their attention on particular parts of the language. This attention primes language for insertion into a developing interlanguage system”.

Conclusion

In the history of ESL composition, there have been different approaches dominating in certain times, such as the process approach, the communicative approach, the controlled approach and so on. Different approaches have its advantages and disadvantages. From this research, learners’ attitude toward this method is clear. For the future teaching, it is better to combine the traditional ESL writing teaching approaches with other learning strategies.
References