Original Paper

Concept-Based Approach in Writing Instruction: The Effect of Concept Model

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Abstract

This paper reports the effect of concept model as mediation in writing instruction. Concept in this study refers to the generalizing language in an argumentative essay (e.g. thesis statement, topic sentence, wrap-up sentence and restatement of thesis) since such language constitutes the basic structure of an essay. Based on Ferreira and Lantolf (2008), a five-week experiment was performed, in which “movement from the abstract to the concrete” approach was used. The experiment procedure consisted of four steps: facing problems, producing concept models, revising concept models and applying concept models. But the control group experienced a traditional approach, “movement from the concrete to the abstract”. The results manifest the facilitating effect of concept model on knowledge internalization.

Keywords

concept model, writing instruction, mediation, knowledge internalization

1. Introduction

Rule-based approach is widely used in writing instruction, which entails memorizing discourse markers, rules and genre structures. However, memorizing concepts is viewed as passive learning by Lantolf (2000) and thus not conducive to knowledge internalization. Moreover, the rules offered to the students tend to be too simple, abstract and even incoherent to demonstrate all of the aspects of a concept (Negueruela & Lantolf, 2006). Consequently, concept-based approach attracts the attention of teachers and researchers, in which concept model has become one of the topics. This study explores the effect of concept model as mediation in writing instruction. Concept in this study refers to the generalizing language in an argumentative essay such as thesis statement, topic sentence, wrap-up sentence and restatement of thesis. Such language constitutes the basic structure of an essay. Based on Ferreira and Lantolf (2008), a five-week experiment was performed, in which “movement from the abstract to the concrete” approach was used.
2. Concept-Based Approach and Related Research

Gal’perin (1992), one of the most important representatives of sociocultural school in SLA, contended that abstract, theoretical concepts should be treated as minimal units of instruction and be materialized, and that in language teaching the high-quality concept models should be provided to the language learners. Davydov (1999) proposed a more concrete concept-based approach—“movement from the abstract to the concrete (MAC)”, according to which learners are presented with systematic conceptual knowledge in a particular domain and then encouraged to proceduralize with guidance this knowledge in concrete circumstances relevant to their own interests. Overall, in the concept-based approach conceptual knowledge is not merely verbally imparted to the learners, but it must be materialized in an easily accessible and concise form. The goal is to promote the development of holistic conceptual knowledge and to link that knowledge to the action in concrete practical activity.

Much research has shown the effectiveness of this concept-based approach to pedagogy in sociostylistic variation (van Compernolle, 2013), sociopragmatic knowledge (van Compernolle, 2011) and concept of French voice (Swain, Lapkin, Knouzi, & Suzuki, 2009). Since the beginning of this century many researchers such as Negueruela (2003), Ferreira and Lantolf (2008), emphasize the significance of concept model and consider it as a means of externalizing a concept. They maintain that describing a concept facilitates the externalization of the concept and helps to check the comprehension of it and then to modify the comprehension. A concept model is supposed to convey adequate information. Negueruela and Lantolf (2006) taught verb tense and aspect to L2 Spanish learners at intermediate-advanced level. Instead of adhering to the linear six-stage discrete sequence proposed by Gal’perin—motivation, orientation, materialization, overt-verbalization, sub-vocal verbalization, and silent verbalization, they focused on the three points—appropriate pedagogical unit for instruction, materialization through didactic models, and verbalization of concept-based explanations of user performance. After analyzing the data of six verbal activities, they found that the students improved in both the concept development and the knowledge performance. However, verbalization is not the solely way of externalizing knowledge, written work can also be a possible effective way. Ferreira and Lantolf (2008) applied MAC approach to fourteen English learners coming from different counties in the writing course. The experiment involves three genres—invitation letter, cover letter and argumentative texts. The instruction of each genre experienced six stages: the problem situation, modeling, modifying models, applying models, monitoring and evaluation. They showed evidence how the students carried out the activities and understood genre. They found that after the experiment the students improved their concrete writing ability and developed their theoretical thinking as related to the general concept of genre.

Among the researches in concept-based writing instruction, the study of Ferreira and Lantolf (2008) is unique and quite original. However, too many genres are involved in this study and detailed analysis seemed lacking. If focused on one genre, the study would be more meticulous. Moreover, in the first stage “the problem situation” the students were asked to answer the following questions: what is the
context in which the genre is used and how are language and context related in this genre? Actually, it is not necessary to take this question-answer approach so that the students could raise their awareness of problems. Many other more flexible ways could be better choices to make the students find and face their problems. Hence their need to solve the problems would get stronger. Another inadequacy in the study of Ferreira and Lantolf (2008) might be the absence of control group which was supposed to serve as a contrast. Thus, more studies on concept-based approach to writing instruction are needed to fill in the gap.

3. Research Methods

3.1 Procedure

This study is based on the concept model approach of Ferreira and Lantolf (2008). But different from it, the concept in this study is not “genre” but the “generalizing language” in an argumentative essay (e.g. thesis statement, topic sentence, wrap-up sentence and restatement of thesis), since such language constitutes the basic structure of an essay. Moreover, we revised the six steps in Ferreira and Lantolf (2008) so as to make the approach meet the specific needs of our writing instruction of argumentative essays. The fifth and the sixth steps in Ferreira and Lantolf (2008) were omitted in our study because the evaluation of the course was not our goal. Thus, four steps were adopted and carried out in five weeks. The two classes in this study were taught by the same teacher so as to ensure that the difference was limited to the teaching approach with the other things (e.g. the teacher’s style, personality and experience) being equal.

The 1st week: Pre-experimental exam

The two second-year classes majoring in English took a pre-experimental exam in 40 minutes. First, they were shown a ten-minute video about “Guo Meimei Incident” made from “Weekly Li Bo Show”, a popular TV program in China. Then, they were asked to write an essay under the following directions. Write a composition of more than 150 words to comment on the event. You may use the title “My Opinion on Showing off Wealth” or “My Opinion on Corruption”. You may choose to write a title by yourself.

The essays were evaluated by two teachers according to the rubric of Test for English Majors Band 4 (TEM4). Before doing the whole evaluation work, they first evaluated five essays, and then compared and discussed the divergence in evaluation until they reached an agreement. The two teachers just wrote down the scores on the student name list without making any signs on the essay paper. The Pearson correlation between them is 0.61 (p=0.000). The final score of each essay was the average between the two scores given by the two teachers. The mean scores of the two groups were quite close, with the control group 8.69 (24 participants) and the experiment group 8.64 (21 participants). The two-tailed independent sample t-test showed no significant difference (t= 0.22, p=0.83), which means the two groups of the same writing proficiency could participate in the experiment. With the average age 20 years’ old, the two groups had the similar English learning experience: all of the participants had
finished their elementary and secondary schools in China and began to learn basic English writing in high school. In the university the two groups had the same amount of time in learning English writing in class (two hours a week) and had already learnt the same content.

The 2nd week: facing problems and producing initial concept models

The two steps were implemented in the second week. The teacher gave the essays back to the experiment group and made sure that each participant did not get his/her own essay. The participants were asked to read their peers’ essays and find one sentence from each paragraph to summarize it. If they could not find such a sentence they had to write a sentence instead. The goal of this step is to make the participants aware of their problems and eager to solve them, since according to MAC approach the students should be placed in such a situation that they perceive the need for the content to be taught (Ferreira & Lantolf, 2008). The questions for this step designed by Ferreira and Lantolf (2008) were not adopted for the reason that it would be more effective for the students to find or perceive the problems than merely to answer the questions (Zheng, 2010; Wei & Ouyang, 2012). Summarizing paragraphs could enable the participants to follow the thought of their peers. If they failed to summarize they would introspect, re-examine the paragraphs and find out the problems. Additionally, the participants would raise the question in their mind “why does the teacher ask us to do so?” At the end of step 2, each participant got his/her own essay and read the sentences written by a peer and rethink the problems in the essay.

Step 3 is producing initial concept models. A simple model of argumentation (consisting of introduction, body and conclusion) was presented to the participants since some of them might produce nothing because of their lack of idea about model or of adequate understanding of the task. So the practice of Ferreira and Lantolf (2008) was borrowed to offer some hints to the participants. Then the participants drew a concept model of English argumentation. The participants were expected to master the concept, i.e. the “generalizing language” constituting the basic structure of an argumentative essay. To visualize an abstract concept is a kind of materialization. The materialized concept lasts longer than its representation produced by languaging.

The control group was also asked to read their peers’ essays but instead of summarizing paragraphs, they corrected the mistakes and wrote brief comments. Subsequently they did not have to produce concept models, but were learning sentence writing skills and common grammar mistakes.

The 3rd week: revising concept models (1)

“When revising concept models” was done in two weeks and the teacher explained the field, tenor and mode of argumentation. The 3rd week focused on field. The participants formed a group of 3-4 people and discussed the field after they read an argumentative essay “Why I Came to College” selected from Write to Learn compiled by Zheng (2010). Then the teacher explained the thesis statement, the writing purpose of argumentative essay and the components of an essay or a paragraph. All of the three aspects correspond to the three elements of field—theme, goal and move. This teaching method can also be called top-down, since it begins from the general and global level. The teaching goal is not to enable
the students to memorize and identify field, tenor and mode, but to understand the global structure of argumentation.

As for the control group, the teacher taught them explicitly how to write thesis statements and topic sentences and asked them to do the related exercises—identify effective thesis statements and topic sentences.

The 4th week: revising concept models (2)

In the 4th week the teaching activity of the experiment group came down to the local and specific level. First, the teacher explained Tenor and Mode, with the focus on the generalizing language (i.e. Thesis Statement, Topic Sentence, Wrap-up Sentence and thesis restatement). Then, the experiment group read a model essay and discussed its thesis, writing purpose, components of paragraphs, and the linguistic features of the generalizing language. Focusing on grammar, Liang (2007) designed a five-step procedure in writing instruction. In the second step the students’ attention was called to grammar by analyzing the tense in the topic sentences and supporting sentences. This study borrowed this idea that the students’ attention could be raised by a salient task. The participants were asked to analyze the linguistic features so as to pay close attention to the generalizing language.

As for the control group, the teacher taught them explicitly how to write wrap-up sentences and thesis restatements, and asked them to do the related exercises, e.g. find out the thesis restatements in concluding paragraphs.

The 5th week: applying the concept models

After reading an English essay and a Chinese essay, the experiment group compared and discussed the differences in structure (for example, whether there were thesis statements, topic sentences, wrap-up sentences and the thesis restatements and how these sentences were presented). Now that the participants had already formed concept models in their mind in the past few weeks, this week they were asked to apply the models to analyze the essays, since the comparison could make salient the differences and strengthen the concepts and the models in their mind. Finally, the experiment group was asked to draw a concept model again.

However, the control group read only one English essay, and then did group work discussing its Global Structure and the generalizing language. Finally, the control group was also asked to draw a concept model of argumentation. Just as the experiment group in the 2nd week, the teacher first presented a simple model of argumentation (consisting of introduction, body and conclusion) for the purpose of summarizing what they had learnt, and of offering some hints to those who lacked in graphic thinking or failed to fully understand the task.

As Negueruela and Lantolf (2006, p. 37) put it, the goal of concept-based approach “is not simply the internalization of concepts, in the banal sense of memorization, but it is to develop the learner’s capacity to use the concepts to mediate (i.e., self-regulate) their language performances”. Thus, writing activity is an important component. After the experiment, the two groups were asked to write an argumentation on the given topic “Benefits of Travelling” in 40 minutes.
3.2 Data Collection and Analyses

We did comparisons of concept models both qualitatively and quantitatively, including the comparison between the initial and the final concept models of the experiment group, and that between the experiment group and the control group. Considering the fact that the experiment group had drawn two concept models while the control group produced only one, the comparison was focused on the content of the concept models instead of the clarity and the appearance of the figures so as to keep objectivity. The indexes of measurement involve four aspects: Global Structure, Basic Moves, Expanded Moves and Mode. The specific criteria are as follows:

Structure: the model has introduction, body and conclusion
Basic Moves: the model has Thesis Statement, Topic Sentence, Wrap-up Sentence and Thesis Restatement; and they all appear in appropriate places
Expanded Moves: more moves appear in the introductory or the concluding parts besides such words as introduction, conclusion, thesis statement
Mode: the writer illustrates how to write an argumentative essay (e.g. how many paragraphs in the body part), how to write the sentences in the Basic Moves and what to write

Apart from the model, the essays written by the two groups were also compared. In view of the short duration of the experiment which might not cause the scores to increase dramatically but highly probably elicit subtle changes in other aspects, we compared Global Structure, Basic Moves and Expanded Moves in a quantitative way—comparing frequency. The criteria of measuring Global Structure and Basic Moves in concept model were applied to the essays. Since an essay may have more than one topic sentence, the way of measuring it differed from that of measuring Thesis Statement and Thesis Restatement which would appear only once. If there’s a topic sentence for only one paragraph in the body part or each paragraph has a topic sentence, we counted as 1 because the purpose of this experiment was to examine the application of the concept of topic sentence. It was also applied to Wrap-up Sentence for the same reason.

Expanded Moves refer to the sentences other than Thesis Statement and Thesis Restatement in the introduction and conclusion. However, Mode was beyond our study since it is embodied in sentences which might be a result from a long-term training. So it is not an appropriate objective for our short-term experiment.

4. Research Results

4.1 The Comparison between the two Concept Models of the Experiment Group

The experiment group produced two models, with the first being a hypothesized model produced through experience and imagination and the second being a substantive one drawn after retrospection and internalization. Their two models were compared in table 1 which shows a wide gap. Basic Moves and Expanded Moves demonstrate greater difference. Before the experiment only three participants pointed out that the place of Thesis Statement was in the introduction although they did not use the
term Thesis Statement. Since the participants had not learnt such a concept as Thesis Statement and had no idea what should be included in the two parts, most of them simply wrote the words “introduction” and “conclusion” without Expanded Moves. After the experiment, each aspect displays progress, with Basic Moves and Expanded Moves as the most conspicuous aspects. Comparatively, the less obvious difference was shown in Structure owing to the facilitating effect of the rough argumentative model given by the teacher before the experiment. But unfortunately, nearly half of the students failed to remember the model and they drew their inadequate models out of their own experience.

Table 1. Comparison of the two models produced by the experiment group

<table>
<thead>
<tr>
<th></th>
<th>Global Structure</th>
<th>Basic Moves</th>
<th>Expanded Moves</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Thesis statement</td>
<td>Topic sentence</td>
<td>Wrap-up sentence</td>
<td>Thesis restatement</td>
</tr>
<tr>
<td>Pre-experiment</td>
<td>13</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Post-experiment</td>
<td>19</td>
<td>15</td>
<td>18</td>
<td>12</td>
</tr>
</tbody>
</table>

The students’ initial models rest on the level of experience, lacking theoretical consideration. Take Figure 1 for example. St No. 21 reckoned from his own experience that an English argumentation consisted of five parts—what, description, why, how and conclusion. First, the subject under discussion should be defined. And then, the phenomenon could be described, the causes analyzed, the solutions provided and finally expectations should be expressed. That exposed the lack of English concept model, which in turn conducive to the teacher’s adjusting the teaching strategy. At the stage of “revising concept model”, the teacher’s explanation of “register” clarified genre concept and the discussion about the register of the model essay reinforced the concept. After the experiment, the concept models were improved a lot, with the structures more complicated, the generalizing language appearing in place. For example, No. 21 strategically added “phenomenon” to introduce the topic rather than simply define the topic. His second part, the most complicated one, consisted of several levels. This student thought that the thesis should be put forward in the second part whose paragraphs should support the thesis with evidence and facts. This model with a focus on the thesis no longer revealed the Chinese pattern. To sum up, with a radical difference, the second models of the students contain such terms as “thesis statement” and “topic sentence”.

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A Model of Exposition

- **What** (give a definition about what you are going to write)
- **Description** (write down the phenomena)
- **Why** (list some kinds of reasons)
- **How** (how to solve the problems or phenomena)
- **Conclusion** (express your expectations and so forth)

**Figure 1. Initial concept model of No. 21 in the experiment group**

**Start** why the topic comes into being?

**Phenomenon** (hook)

**Body**

Exposition

Thesis statement

- point one
  - topic
  - event, evidence, prove
- point two
  - topic
  - event, evidence, prove
- point three
  - topic
  - event, evidence, prove

**Conclusion**

**Figure 2. Final concept model of No. 21 in the experiment group**
4.2 Inter-Group Comparison of Concept Models

Table 2. Comparison of concept models between the two groups

<table>
<thead>
<tr>
<th>groups</th>
<th>Global structure</th>
<th>Basic moves</th>
<th>Expanded moves</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Thesis statement</td>
<td>Topic sentence</td>
<td>Wrap-up sentence</td>
<td>Thesis restatement</td>
</tr>
<tr>
<td>Experiment group</td>
<td>19</td>
<td>15</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>(21)</td>
<td>90.48%</td>
<td>71.43%</td>
<td>85.71%</td>
<td>57.14%</td>
</tr>
<tr>
<td>Control group</td>
<td>20</td>
<td>17</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>(24)</td>
<td>83.33%</td>
<td>70.83%</td>
<td>45.83%</td>
<td>12.5%</td>
</tr>
</tbody>
</table>

Percentage was used in the inter-group comparison because of the discrepancy in the total number of students in the two groups. Table 2 shows that most of the students in the two groups knew the Global Structure of argumentation. As for Basic Moves, the two groups showed great difference mainly in other moves rather than Thesis Statement. Moreover, more than half of the students in the experiment group were aware of the importance of Expanded Moves while only a few students in the control group did so. However, they showed no difference in Mode. The concept models of the control group were simpler than those of the experiment group. Two students in the latter group and one in the former group included all of the seven indexes in their concept models. Six in the experiment group and none in the control group mentioned six indexes. In addition, the control group used fewer terms and even misused them. Figure 3 serves as an example which consists of complete Global Structure, includes two moves in the introduction, but misuses the term “Wrap-up Sentence”.

![Figure 3. Concept model of No. 15 in the control group](image_url)
4.3 Inter-Group Comparison of the Essays

Table 3. Comparison of essays between the two groups

<table>
<thead>
<tr>
<th>groups</th>
<th>Global structure</th>
<th>Basic moves</th>
<th>Expanded moves</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Thesis statement</td>
<td>Topic sentence</td>
<td>Wrap-up sentence</td>
</tr>
<tr>
<td>Experiment</td>
<td>17</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>group</td>
<td>80.95%</td>
<td>71.43%</td>
<td>85.71%</td>
</tr>
<tr>
<td>Control group</td>
<td>19</td>
<td>16</td>
<td>2</td>
</tr>
</tbody>
</table>

The two groups approximated in the number of students whose essays had complete Global Structures and Expanded Moves (see table 3). What’s worth noting is that the percentage of Expanded Moves is higher than that of Global Structure in both groups, because some of the students did not write conclusions but introduced their topics or provided background information in their introduction parts. Thus, few essays began with putting forward their thesis statements. However, it is another case in the percentage of the students who displayed Expanded Moves in the concept models. Take the control group for example. Only 8.33% students displayed Expanded Moves in the concept models while 91.67% essays had Expanded Moves. That result shows that the students lacked meta-awareness of this move. The greater gap between the model and the essay of the control group corroborated the effect of this experiment in an opposite way.

5. Discussion

The results of this study corroborate that of Ferreira and Lantolf (2008) in a general sense. Moreover, in this study most of the students in both groups could display the complete discourse structure in their concept models. It might be attributed to the suggestive effect of the argumentative model given by the teacher. But that model was too simple to be a perfect one, so that it needed to be mended by the students. The control group began with learning thesis statements and ended with the global structure. Since the knowledge learnt at the initial stage is more impressive, most of the students in this group could realize the importance and put forward their thesis statements in their introduction. But their models revealed that they attached less importance to topic sentence and wrap-up sentence. Chinese thinking pattern and rhetorical mode might be a causing factor. Chinese writers tend to leave some space for the readers to fill in --- to infer the thesis and to induce the topic sentence. The writing of topic sentence is not taught in middle school Chinese class, let alone wrap-up sentence and thesis restatement. In this situation where Chinese rhetorical mode is rooted in the college students’ mind, it is difficult for them to internalize the English discourse concept merely by the teacher’s explanation. In addition, the control
group began with how to write thesis statement—sentence writing, which was consistent with Chinese writing instruction emphasizing florid words and sentences. Although easier for the students to accept, it was apt to stop at this local level and neglect the global one. Despite the control group's proceeding to the global structure in the end, the effect was inferior.

On the contrary, the experiment group began with the discourse structure. Their initial concept models exposed their inadequacies in typical English concept model, but the exposure facilitated the teacher to take proper teaching strategies. At the stage of “revising concept model”, the teacher’s explanation of Register clarified genre concept and the discussion about the register of the model essay reinforced the concept. Their misunderstanding was dispelled quite soon, and it impressed them so deeply that in return it motivated them to pay attention to other differences. Moreover, in the peer review in the 2nd week they were asked to summarize each of their classmates’ paragraphs in one sentence. They unavoidably noticed the situation when they failed to summarize certain paragraphs. They also paid attention to their own paragraphs which could not be summarized in one sentence, and they were eager to seek some ways to solve the problem. With strong motivation, the students focused on acquiring the global structure of English argumentation introduced subsequently by the teacher, and on revising their initial models. In addition, their new models were strengthened by the explicit task that required the students to analyze the generalizing language such as the thesis statement and topic sentences in the argumentative essays. We based that on Thorne et al.’s (2008) hypothesis that a linguistic structure is easy to be internalized by making it salient. Finally, by comparing the Chinese and the English argumentative essays in the structure and the language, the new models in the students’ mind were applied. It can be seen from the post-experiment concept models that the experimental group mastered the concrete “mode” better than the control group although the former began with the abstract and moved from abstract to concrete. Since language output itself is acquisition (Swain, 2001), the application of the new concept model in the comparison of Chinese and English argumentation and in the final composition is the acquisition of English argumentative mode. In general, the implement of concept model observes the rule of “hypothesis generation—hypothesis testing—hypothesis confirmation—hypothesis application.”

6. Conclusion

We’ve explored the effect of concept model in writing instruction. Based on Ferreira and Lantolf (2008), a five-week experiment has been performed, in which “movement from abstract to concrete” approach was used. The experiment procedure consisted of four steps: facing problems, producing concept model, revising concept model and applying concept model. The contents of concept models and the essay structures were compared between the two groups. The results manifest the facilitating effect of concept model on knowledge internalization. The rationale of concept model is as follows: the problem situation which the experiment group was faced with reinforced their motivation to solve the problem; the concept models drawn in the
subsequent step exposed the specific weak points of the students which facilitate the teacher to take effective teaching strategies; the next step “revising the concept model” beginning with “field” was helpful for the students to understand the whole situation of expository writing, and the gradual movement to “mode” strengthened their new concept models; finally, by comparing the structures and language between the English and Chinese expositions, the new concept models were applied.

A new approach might not necessarily lead to a great increase in score within such a short period as weeks. But it is highly probable to elicit some subtle changes in other aspects which cannot be tested statistically by SPSS and which however can make a qualitative difference in the long run. In view of that, we didn’t make a comparison of the essay scores between the two groups; neither did we submit the quantitative data of the concept model to statistical test. That may be the limitation of this study. In the future research a long-term experiment will be made and quantitative analyses will be used.

References


