Learning styles have been identified as an important variable in the school success or failure of ethnic minorities in America. Whole language is compatible with the style of Native American children. Nebraska's Winnebago Public School teachers of Native American students use a method of writing instruction that is compatible with their preference for communal learning, approaching tasks visually, and learning by observation preceding performance (with time for quiet persistent explorations). One strategy is called TOWER, an acronym depicting the writing sequences (Think, Organize, Write, Edit, and Rewrite) and another is EDITS (Embellish, Delete errors, Insert corrections, Tally progress, and Submit for grading). These strategies combine Piaget's four stages of cognitive development with Bloom's Taxonomy of 6 hierarchical classes of learning. For example, of the 112 students taught, one seventh-grade student with a fifth- or sixth-grade level vocabulary increased the number of words in his essays by 5 times, average number of sentences by 3 times, and average length of sentence by more than 2 times, over 4 months. A ninth-grade student also showed improvements, including moving from less than grade 4 level work to grade 6-7 level. (Contains 2 tables of data and 13 references.) (CR)
A visual strategy for teaching written expression: Meeting the challenge presented by students of Native American Heritage

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A Visual Strategy for Teaching Written Expression: Meeting the Challenge Presented by
Students of Native American Heritage

This presentation will: 1) describe the learning characteristics of Native American students; 2) demonstrate the TOWER+EDITS strategy for teaching written expression, 3) explain the theoretical foundation of the strategy, and 4) report the results of the study at the Winnebago Public School.
A VISUAL STRATEGY FOR TEACHING WRITTEN EXPRESSION: MEETING THE CHALLENGE PRESENTED BY STUDENTS OF NATIVE AMERICAN HERITAGE

Introduction

The University of California at Berkeley established the collaborative university/school staff development program in 1973 to improve the teaching and learning of writing (Sterling, 1996). As a result of this project, classroom instruction during the 1980's emphasized written composition in the public school curricula. Unfortunately, comprehensive research and its application for students of various abilities and learning styles were not considered in the curriculum. However, the delivery model for special services has changed toward more inclusion, consequently, the need to study differing learning styles has increased. Today, the most common diagnosis of special youth is language learning disabled; but, other unique language-learning students include the English-as-a-Second Language speaker, culture-specific children, and students with hearing impairment. The need to thoroughly study this academic task is central to the 1990's scholarly endeavors, particularly with students who find this assignment difficult. Today the variations and nature of students' writing ability are the focus of special educators and of concern for general educators.

Learning Characteristics of Native American Students

Learning styles have been identified as an important variable in school success or failure of ethnic minorities in the United States. Bennett (1990) lists five cultural factors that signify the relationship between culture and learning style: the socialization process, sociocultural tightness, ecological adaptation, biological facts, and language. Sleeter and Grant (1993) declare that whole language is compatible with the style of Native American children because whole language emphasizes meaning and process over product, uses cooperative work, capitalizes on oral language, and integrated subject areas. These features are compatible with Native American students' preference for communal learning and personal meaning, use of time, and holistic world view (Kasten, 1992). Deyhle and Deyhle (1987) reported their study regarding learning styles of the Native American and Alaskan Native youth. They found that these students have a common pattern in the way they come to know or understand the world. The Native
American students approach tasks visually, seem to prefer to learn by careful observation that precedes performance, and seem to learn best in their natural settings experientially, with many opportunities to experience quiet, persistent explorations. These authors declare that many Native American students learn differently from that of the mainstream students. Bennett (1990) describes an effective learning environment for Native American students to be one where the individual is not singled out, but has many occasions when the teacher can instruct privately with him/her or in small groups.

A Visual Composition Procedure

The TOWER procedure, used with a college-level student with learning disabilities, was reported in an unpublished manuscript prepared for doctoral course work at The University of Kansas (Wilcox, 1980). Since that time, Wilcox developed the procedure with students and their teachers residing Colorado, North Dakota, Texas, and Nebraska. The long-term field testing resulted in the development of the visual guides and the edit sheets to assist student to become more self-directive. These are incorporated into the EDITS section of the procedure (Wilcox, 1996). Currently it is used by teachers of Native American students at the Winnebago Public Schools, Winnebago, Nebraska.

Field testing conducted by Wilcox (1995) indicates that the TOWER+EDITS strategy is a successful procedure for students with mental retardation, learning disabilities and hearing impairment, and to assist students who find it difficult transferring his/her thoughts to written words. The strategy is based on metacognition, the knowing about knowing (Lefrancois, 1988), allowing students to monitor their progress as they try to understand and learn new material. The acronym depicts the writing sequences, Think, Organize, Write, Edit, and Rewrite (TOWER) and is combined with teacher assistance to Embellish, Delete errors, Insert corrections, Tally progress, and Submit (EDITS) for grading. This sequence of instruction provides the student with tools to visualize and monitor his/her progress toward an adequate composition.

Successful writers produce compositions in stages: 1) thinking, 2) organizing (prewriting), 3) writing (drafting), 4) editing, and 5) rewriting. TOWER+EDITS sequences the writing process through the same stages good authors practice to produce compositions but it is based also on the students' level of cognitive development. It follows the developmental levels of mental growth and the hierarchy of...
Native American: Visual Writing Procedure 3

learning (Phipps, 1982). **TOWER+EDIT** combines Piaget's Four Stages of cognitive development with Bloom's Taxonomy of six hierarchical classes of learning. (See Appendix A)

The instruction begins at the Sensory-Motor stage as a foundation for selecting topics and asks the student to write about only what s/he knows (Knowledge) from personal experience. At this stage of development, the student is responding through an egocentric style of thinking. This style should be expected and accepted by the teacher. However, the student will progress to more advanced stages as mastery occurs.

The Sensory Motor Stage/Knowledge Level component and the Preoperational Stage/Comprehension and Application Levels of the strategy, together, compose the assimilation process of development. The purpose of assimilation is to place in basic, raw, concrete data or information about the concept though direct and repeated experiences (Lefrancois, 1992). At this stage the student is not able to write at a high level of abstraction, but if this stage is soundly developed, the student moves to the second process, accommodation, where more sophisticated skills will develop. At the Concrete Operational/Analysis Level, the students' functioning is decentered. They are no longer self-perception bound. The student can utilize a prepared model such as a text or information resource. Analysis can begin because students can compare their writing to a model (text or resource) and make corrections in their written drafts.

Students reaching the Formal Operational Stage/Synthesis and Evaluation Levels use creative approaches to writing about what they have experienced, understood, and analyzed. The student now uses a modification of the **TOWER+EDIT** procedure. The students can perform writing more automatically and at the abstract level. They have internalized the elements of grammar and punctuation, therefore, they can plan and execute more complex compositions.

The instruction becomes more complex only as the student masters the previous stage and level of instruction. That is, the student is not asked to write a term paper (the Formal Operational stage and the Evaluation level of learning) until s/he has demonstrated competency in the previous three stages of the strategy. Each stage of the strategy is instructed according to the student's underlying developmental and
hierarchical level of learning. This permits students to become proficient according to their own stage of development, rather than responding to a curriculum guide mandate.

Not only does TOWER+EDITS present the instruction according to the students' level and style of learning but it provides a visual presentation of the stages of written production. Templates have been developed from the 15-years of research on the strategy by the author. (See Appendix B for examples) The templates and the procedure were tested in special and general education classrooms by teachers in four geographical locations. The templates enable the reluctant writer to produce a "picture" of his/her writing, enabling even the most delayed writer to compose a larger quantity of written expression, to self-monitor the composition for accuracy, and to reach closure. An error guide has been developed that leads the writer through the maize of grammatical and punctuation rules required for academic assignments. (See Appendix C for example) Progress is recorded on the template for each of the rules.

Case Studies of Two Native American Students

WB was a male student enrolled in the seventh grade. He received special services under the identification label of Mild/Moderate Handicapped (Nebraska Department of Education, 1996). A sample of his writing skills was obtained (with much begging and cajoling on the part of his special educator). An analysis of the vocabulary words, using the Dale-Chall scale on the Reading Analysis software (Gamco, 1995), provided 1) the number of words in the composition, 2) the number of sentences, 3) the average length of sentences, and 4) the reading grade level according to the vocabulary used.

The pre-TOWER sample provided a total of 50 words, four sentences with an average of 12.5 words per sentence. The analysis placed his vocabulary list at the 5th-6th grade level. He wrote the whole composition in one paragraph, using limited punctuation. The special educator received training to instruct the TOWER+EDITS procedure, but before she could start the instruction, WB was sent to the In-School Suspension (ISS) room for disciplinary reasons. The coordinator of the ISS also had received the TOWER+EDITS training. The author and the ISS coordinator planned the "stay" in ISS to require the students to complete an essay of five distinct paragraphs, using the TOWER+EDITS procedure but subsequently, only four paragraphs were required. (See Appendix D). Each ISS student was required to earn the coordinator's approval of the essay before being released from the written assignment.
Consequently, the samples from the Winnebago Public School ISS room contain the same number of paragraphs and are not recorded here.

Table 1 presents the data for WB's written production for each of the four months the procedure was required. Some columns include averaged information.

Table 1.

Data Analyses for Case WB, Grade 7

<table>
<thead>
<tr>
<th>Month of production</th>
<th>Average number of words per essay</th>
<th>Average number of sentences per essay</th>
<th>Average length of sentences</th>
<th>Grade level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-TOWER+EDITS</td>
<td>50</td>
<td>4</td>
<td>12.5</td>
<td>5-6</td>
</tr>
<tr>
<td>Second</td>
<td>123</td>
<td>11</td>
<td>12.05</td>
<td>5-6</td>
</tr>
<tr>
<td>Third</td>
<td>No production</td>
<td>-0-</td>
<td>-0-</td>
<td>-0-</td>
</tr>
<tr>
<td>Fourth</td>
<td>265</td>
<td>13</td>
<td>31.09</td>
<td>5-6</td>
</tr>
</tbody>
</table>

WB wrote three drafts of his first essay while in the ISS room, which produced 59 words; however, the third and final draft contained 90 words. This first draft contained four sentences but the final draft contained 12 sentences, after he completed the EDITS section. Notice that as the number of sentences increased, the average length of the sentences decreased. The vocabulary grade level remained below the 4th grade level during all three drafts of WB's first essay using the procedure.

Over the fourth-month period, WB increased word number five times greater than on the pre-TOWER writing, increased the average number of sentences per essay three times, and the average length of sentences increased two and one-half times. WB maintained a grade level of approximately 5th-6th throughout the four-month period.

The second case, GJ, a male 9th grader, produced 12 essays while making 12 "stays" in the ISS room over a five-month period. He had no pre-TOWER sample because he had been refusing to write anything in his classes. No samples from environs other than ISS were produced. His first essay, using the TOWER+EDITS procedure, contained an average of 191 words, 17 sentences, an average length of 14 words per sentence. He scored at less that fourth-fifth grade vocabulary. A summary of GJ's production is presented in the following table.
Table 1.
Data Analysis for Case GJ: Grade 9

<table>
<thead>
<tr>
<th>Month of production</th>
<th>Average number of words in essay</th>
<th>Number of sentences per essay</th>
<th>Average length of sentence</th>
<th>Grade level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-TOWER</td>
<td>Not available</td>
<td>-0-</td>
<td>-0-</td>
<td>-0-</td>
</tr>
<tr>
<td>First</td>
<td>186</td>
<td>14</td>
<td>13</td>
<td>&lt;4-5</td>
</tr>
<tr>
<td>Second</td>
<td>174</td>
<td>14</td>
<td>13</td>
<td>4-5</td>
</tr>
<tr>
<td>Third</td>
<td>196</td>
<td>11</td>
<td>16</td>
<td>5-6</td>
</tr>
<tr>
<td>Fourth</td>
<td>297</td>
<td>17</td>
<td>17</td>
<td>6-7</td>
</tr>
<tr>
<td>Fifth</td>
<td>287</td>
<td>22</td>
<td>13</td>
<td>5-6</td>
</tr>
</tbody>
</table>

During the first month he had four “stays” in ISS. The essays produced during that month included only one rewrite. He refused to try to improve past the second draft. The table above shows that he maintained the average word production near that of his very first use of the procedure. GJ made only three “stays” in ISS during the second month of the study. His word average decreased somewhat (12 words less) but he maintained the other measure adequately. Only one “stay” was required during the third month, where he produced only a second draft; however, he increased word generation by 20 over the previous writing. (He continued to refuse to write in other classes.) There were three “stays” during the fourth month. His first essay for this month consisted of seven rewrites, averaging 300 words. The word generation rate remained near that level during the whole month. He continued to produce three or four drafts of each essay. Only one “stay” was recorded during the fifth month. He wrote three drafts, maintained the word generation, number of sentences in the essay, grade level, and increased the average number of sentences. During the five-month period GJ was required to use the TOWER+EDITS procedure, he came from no writing production to essays exceeding, individually, over 300 words. His consent to making three to seven rewrites was noted.

Discussion

The TOWER+EDITS procedure was taught to 112 students while serving “stays” in the In-School-Suspension (ISS) room. Only two cases were presented in this paper. The author gave instruction for the procedure to 15 other teachers within the system. Generalization was observed. As the students learned the procedure in one setting, they recognized when to use it in another classroom setting. Teacher, student, and parent comments regarding the procedure were positive.
The author suggests the procedure is appropriate for students who seem to learn better through visualization, are allotted time to work independently before submitting written work for evaluation, and are given appropriate support through the use of a tangible structure to assist the student. The templates used in the procedure enable the student to enter the writing process with a well-planned structure for the essay and the EDITS section guide the student through the maze of grammar, punctuation, and formatting rules of written language.

The TOWER+EDITS procedure continues in the Winnebago Public School system and will include additional teachers to receive the training. The next phase of the study will concentrate on students in the fifth and sixth grades.

References


Wilcox, D. J. (1980). *Composition instruction for a college student with learning disabilities*. Unpublished manuscript. The University of Kansas, Lawrence, Kansas

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