How many of us have struggled with the problem of teaching text understanding and composition development to a classroom full of students who come from diverse cultural and language backgrounds? Visual approaches can help, since they reshape and reinforce the verbal. We'll talk here about how we used photo essays and different types of semantic maps with culturally mixed classes of middle school students. Through the visual-verbal approach, the young people were able to build background knowledge about their own environment and then organize their thoughts into writing. But first let us talk a bit about the learning problems at which the approach was aimed.

There are a number of sources for the difficulties students experience in both understanding texts and organizing their own responses. For one, school-aged youngsters are given little opportunity to see how prose content is structured and organized (Hennings, 1982), but Chall and Jacobs (1983) also reported that students from lower socioeconomic levels have difficulty in organizing their writing because they lack form and sentence sense. Hansen and Hubbard (1984) noted that when information is presented to students in a way that is disconnected from their experience, they will have difficulty retaining it. Furthermore, when experience itself is lacking to provide relevant connections for the understanding of content texts and for the production of coherent
compositions, students must face even greater difficulty in making their knowledge known through language.

Visual literacy, developed in tandem with textual literacy, can help ease these difficulties. What is visual literacy? It is a construct that examines the influence of the visual processing system upon the acquisition of verbal literacy. It is an especially useful construct for teachers working with culturally diverse students.

Visual strategies that a teacher might use operate in three major areas of visual learning. Input strategies, such as picture viewing, present visual messages to the eyes to be processed by the brain for meaning. Output strategies, such as film production, art, and graphic design, allow learners to express visual knowledge and meaning. Integrative strategies, such as forming images and creating metaphors, help learners visualize ideas and meaning. Generally, visual literacy strategies provide concrete experiences that help learners fill blank areas in their background schemata.

Whole language presents a second construct that may greatly benefit the culturally diverse student in language learning. Rather than separate the language components of listening, speaking, reading, and writing to be taught in different lessons and in different contexts, the premise of whole language is that these four language components should naturally support and complement one another in a single lesson. Moreover, students should be in a learning situation whereby they naturally need to use the four aspects of the language arts to communicate and gain knowledge.

When visual literacy strategies provide the concrete base for the four language components to flourish, relevant and meaningful connections are made between experience and language before youngsters are asked to read and write.

Structuring a text
In this article we present a visual literacy approach that incorporates both language and nonverbal thought processes. We have used the visual frameworks of three types of semantic maps (Sinatra, Stahl-Gemake, & Berg, 1984) with the technique of using photo essays (Sinatra, 1981; Stahl-Gemake, Sinatra, & Guastello, 1984).

Semantic mapping is a visual way of applying schema theory in the classroom while teaching students about the organization of text. When the teacher builds the map on the chalkboard or overhead projector prior to or during reading, students see how the ideas they will read about connect with their previous knowledge of the topic.

When the map outline is used as a graphic organizer to plan a composition, students connect the major, minor, and explicit ideas they will soon write about.

The photo essay technique is a way to arrange pictures or photos to tell a complete story. Teachers and/or students construct visual essays that can be explained, written about, or used to represent the meaning of text.

We used the approach with 33 sixth graders and 36 seventh graders from a parochial school in the Williamsburg section of Brooklyn, New York. Ethnically the group was 85% Hispanic, 10% Black, and 5% Oriental. According to standardized tests administered by the diocese, almost all the students were achieving well below grade level in reading.

The written competency levels of both grade level groups were also quite low. The students were asked to write a composition on the topic "A Day with My Family in Williamsburg" before the visual literacy project began. The Diederich rating scale (1974) was used by three independent raters to evaluate each student's composition. The sixth graders averaged raw scores of 10.6 for mechanics, 14.2 for content, and 24.8 for the composition total. Seventh graders averaged 11.5 for mechanics, 14.3 for content, and 25.8 for the composition total. Multiplying each score by 2 allows for percentages to be calculated. Thus the sixth graders were writing at about 50% competency for content and
mechanics compared to an expected sixth-grade population in the U.S., while the seventh graders were writing at about 52% competency.

**Visual essays**

In the visual literacy approach, student pairs initially took photographic essays that had a meaningful, conceptual framework, then reconstructed the developed pictures during storyboarding using the visual framework of semantic maps. (The sixth-grade teacher had 20 small cameras donated by a leading camera manufacturer.)

Because content in the sixth-grade social studies text was about archaeology, the general theme for most of the photo essays was "Wonderful Williamsburg." Williamsburg is a well-known cultural and historical area of Brooklyn, New York. The photo essays provided a way to supply relevant schema for the study of archaeology in a modern way.

Also, because these students generally had problems in speaking and writing standard English, photo essays developed from their common environment provided a universal way to focus on language. The images and ideas captured by the photos transcended the language differences of this diverse student population while providing a common base for communication. Indeed, the "deep" structure of a picture is processed by a viewer for meaning regardless of his or her facility with the "surface" structure of language.

When either the sixth-grade or seventh-grade students used their cameras to collect their photo essays, they had to plan topics or themes, then take photos according to the theme. After picture development, they organized and storyboarded their pictures according to the organizational plan for that theme. Finally, they wrote a composition on the topic while the storyboard was in view.

Three theme topics were planned: one designed to elicit a sequential style of writing, one a descriptive style, and one a writing involving classification. Because of the limited
number of cameras, we decided to use the approach with one grade level at a time, beginning with sixth graders.

Over three 2-week sessions, the sixth graders planned, photographed, storyboarded, and wrote three essays. The topic "A Day with the Principal" was assigned to elicit a visual and written essay arranged in chronological order. The second essay, "Problems in Williamsburg," was planned to produce a general descriptive theme in which students photographed and wrote about the problems they witnessed in their local environment. The third essay, "Community Helpers," was planned so that students could categorize workers in their community and provide visual examples of what each worker did.

When the seventh graders followed the approach, their teacher wanted them to plan, photograph, storyboard, and write about the topics "A Day at School," "How the Parish Helps the Community," and "Architecture in Williamsburg." These themes were once again intentionally assigned to elicit sequential, descriptive, and classificatory styles of thinking.

During each photo essay period, a good amount of time was devoted to planning what to photograph. Students brainstormed the visualized ideas of the photo essay before actual photography. For instance, for "Problems in Williamsburg," students discussed how ruined buildings, abandoned cars, garbage and litter in the streets, unsafe parks, and graffiti on signs and buildings contributed to an unhealthy environment. Working in groups of two students to a camera, they went with their teacher into the environment to photograph their previsualized ideas. When the developed pictures returned some days later, the student pairs arranged the photographs on an organizational storyboard chart.

Storyboarding is a systematic visual development that portrays or summarizes ideas through a combination of words, pictures, diagrams, or slides (Kemp, 1975). This allows a student to express meaning through a visual presentation. The title of the essay appeared on a 2' x 3' (60 x 90 cm) poster chart along with lines drawn between the pictures to show idea connections. Most students also wrote subheadings for their
pictures. The completed storyboard showed an overall visual schema for each discourse style.

Figure 1 shows the visual pattern of the three types of organization. Student groups at each grade level had differing numbers of pictures for each visual essay or for a category of information within the essay. For instance, some had three photos for the category Abandoned Cars in the "Problems in Williamsburg" essay while some had five or six photos.
Figure 1
Three patterns of storyboard organization for photo essay and written composition

(A) Sequential organization

![Sequential organization diagram]

(B) Thematic organization

![Thematic organization diagram]

(C) Organization by classification

![Organization by classification diagram]

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Written essays

We found the results rather interesting and somewhat consistent for each grade-level group when they followed the steps of the whole literacy approach and wrote essays that verbalized their storyboards. The evaluation of the sixth-grade essays by the three independent raters showed that they achieved total writing scores of 72% for narrative writing, 70% for descriptive writing, and 72% for the writing of classification. The seventh graders achieved scores of 68%, 71%, and 71% for the same three writing styles.

The general merit scores of the writing evaluation scale showed the greatest increase over the initial essay "A Day with My Family in Williamsburg"; the mechanics scores increased half again, generally from 6 to 8 percentage points per essay. We attributed the rise in general writing scores to the increased ideas and vocabulary prompted by the photo essaying and to the use of the structural maps depicting the organization of the writing style. Possibly, all the steps of the procedure--from planning what to photograph to organizing the pictures on the storyboard--aided the mechanical aspects of writing as well.

Students submitted the essay after they viewed the storyboard. While the photos and graphic structuring aided ideas and paragraph organization, there were gaps in their use of written English, particularly in their formation of sentences.

Notice sections of essays by sixth-grade writers on the topic "Community Helpers" to see how sentence sense and correct English usage are troublesome areas of development while content is strong in the minds of these young people:

   Student 4A: A community helper is someone who does something important for that community. The police, fire department, library, and post office. Also crossing guards.
Crossing guards help the community by crossing children. A crossing guard’s job is to make sure children cross safely. If a light’s are broken she will carry a sign to tell you when it is safe.

Student 17A: Librarians provide any information available in the subject the child needs for reports. In libraries the have the records of community. Librarians provide the books for the type the people who are reading can feel like if they were part of the person or the character of the book.

Student 21A: Post Office delivers mail. It sorts mail, sell stamps, and give job offers. Weight packages, holds mail if going away, and gives notify cards.

Student 23A: First there is the Fire Department, who put out the fires in our neighborhoods and who helps save our lives in such ways as rescuing people out of burning buildings, giving first aid, putting out burning bushes and trash fires, checking fire alarms, sprinklers and exits, and teach children and grownups about fire safety.

Student 26A: Another important department is the Police department. These men or women patrol the dangerous neighborhood. They persuade robbers and thieves. Sometimes they stop fights. In highways they give out tickets you is passing the speed limit. Men sometimes search for weapons or drugs and they arrest drunk drivers. If any of these men find people for littering they give them a big fine.

**Visual follow-ups**

How might the teacher sustain initial writing development achieved through such a visual literacy approach? The photo essay procedure does present an expense and a potentially troublesome need to get youngsters out of doors. Teachers could follow up with two visual literacy strategies.
First, they could intentionally photograph their own visual essays, or they could arrange and rearrange any combination of slides or photographs in their possession to form a unified essay. Using slide essays projected for whole class viewing is a powerful way to enrich the language and writing capabilities of culturally diverse youngsters.

Second, students can be shown how to organize picture essays from newspapers, magazines, books, and even their own snapshots. It is the process of composing organized visuals to tell or infer a story that is important here.

It is helpful to have students verbalize the meaning of their stories or reports as they prepare their storyboards. The teacher will be able to ascertain the student's level of sentence sense during such verbalization. When students juxtapose pictures, they infer the connections. When they use language to show how the meanings are coordinated, they have to use relational words and phrases, the function or signal words of English that join ideas in cohesive sentences.

If students omit the connections during the oral telling, the teacher has an immediate way to strengthen that student's discourse proficiency. While the student views the concrete meaning of the pictures, the teacher models the connecting function words or phrases in standard English.

Figure 2 indicates how a sequence or other arrangement of pictures allows a perceiver to infer a whole—a visual composition. The whole is made up of pictures juxtaposed by theme and content so as to supply a continuous thread of meaning. Individual pictures stimulate thinking and language production. Student raconteurs or writers search for connected-ness within the display and compose and connect sentences to explain the relationships they perceive.
Since many students have difficulty expressing relationships between ideas, a good technique is to provide them with transition words and phrases, especially the relative pronouns and coordinating and subordinating conjunctions that make the language relationships explicit.

Lists of such connector words and transitional phrases appropriate to particular organizational arrangements can be distributed after students have viewed a storyboard and have begun to write about it. The connectives help them organize relationships and achieve smooth coordination between sentences.

For instance, to aid sequential text understanding, provide students with transition words and phrases like next, meanwhile, furthermore, besides, in addition to, therefore, consequently, which carry the direction of thought forward. Spatial connectors such as nearby, across, above, below, here help students organize features in descriptive scenes and to relate details in proximity to each other. It was these connective threads between
sentences that were absent in the papers written by most of our culturally diverse students.

When teachers use the visual literacy approach described here or follow the additional teaching suggestions offered, they need to be tolerant of the levels of experience, language facility, and conceptualization that students bring to a topic. Yet once they are visually and experientially involved, students can be helped to polish and repolish English language usage. Our approach provided the experience and content connections from which oral and written language should naturally follow. We strove to engage each student's whole mind to see, to predict, to verbalize, to organize, to compose, and to write.

Metz (1980) has indicated that the interaction between language and visual forms cannot represent a complete explanation of one for the other. However, one function of visual input is that it can both inspire and be inspired by the language used to describe the visual experience and that one function of language is that particular words can be used to name the parameters that vision captures.

References


