Technical Report No. 625

AN INTEGRATED THEMATIC UNIT
AT A JUNIOR HIGH SCHOOL
WITH TRADITIONAL SCHEDULING

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Center for the Study of Reading

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Abstract

This report describes the methods used to plan, organize, and teach an integrated thematic unit in the spring of 1994 at Fairmont Junior High School in Boise, Idaho. The unit was planned collaboratively with assistance from preservice teachers and their professors at Boise State University, the principal and teachers of Fairmont Junior High, and members of the Partners in Education board of Fairmont Junior High. The thematic unit—the Mock-Fire Disaster—focused on the dangers and consequences of unplanned fires. Evaluations by the junior high teachers and responses of the secondary students were generally favorable and thoughtful. The collaborative efforts of the school, university, and community organizations alleviated some of the time, materials, and energy blocks to the development of integrated thematic units.
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This report describes a study of an integrated thematic unit that was carried out at a junior high school with a traditional class schedule. First, we establish the background for the study with commentary on integrated thematic units, school-university collaborations, and school and community partnerships. Next, we describe the context of the study, which involved faculty, staff, and students at Boise State University and nearby Fairmont Junior High School. Third, we present a summary of the evaluations by Fairmont students and teachers of the integrated thematic unit. Finally, the appendixes contain sample lesson plans from the thematic unit and responses to the unit by secondary students.

Integrated Thematic Units

Integrated thematic units are one way for students to study a theme from a variety of perspectives and to work with information sources from a variety of disciplines or content subjects. For example, a theme might concern the life cycle of dinosaurs: Understanding the life cycle of dinosaurs requires a careful study of the animals and their environments. To study this theme, students could explore information sources from biology, geology, paleontology, perhaps astronomy, and even fictional literature.

Integrated thematic units may be viewed as a vehicle for "integrated study" as defined by Humphreys, Post, and Ellis (1981): "An integrated study is one in which children broadly explore knowledge in various subjects related to certain aspects of their environment" (p. 11). This basic definition could include all studies that cut across the curriculum, for example an oil spill as viewed through the lenses of history, economics, political conditions, and biology. Some educators have distinguished between "thematic units that study a topic by cross-referencing curriculum fields through conventional lessons" and an "interdisciplinary thematic curriculum" (Martinello & Cook, 1993, p. 47). Perhaps the first kind of unit ("conventional lessons") could be viewed as acknowledging connections among curricular fields, but the second kind of unit ("interdisciplinary curriculum") explores and develops those connections. Applebee (1994) and Lipson, Valencia, Wixon and Peters (1993) also call for a thoughtful reweaving of the curriculum when they discuss integration and thematically organized instruction.

Implementing thematic instruction is greatly facilitated by a supportive school structure that has self-contained classrooms or block scheduling (Peters, Schubeck, & Hopkins, 1995; Vars, 1987). In other words, implementing thematic instruction in elementary schools may be carried out by individual teachers who are responsible for teaching multiple subjects. In middle schools, teams of teachers may have common planning and class times for developing and teaching integrated units.

Traditional school structures can accommodate opportunities for integrated thematic units. For example, at Heritage High School, Littleton, Colorado, a science teacher, a mathematics teacher, and a special-services teacher integrated a general mathematics course and a general science course (Westerberg & Whiting, 1992, p. 306). The general science course and general mathematics course were scheduled back-to-back in a traditional 50-minute period schedule, thus affording a 100-minute period for the integrated course. Significant modifications of the traditional courses were made. At nearly any level, schoolwide thematic events can be connected to curriculum and instruction (Vars, 1987). A single literature source such as the novel My Side of the Mountain can also be linked with a variety of curricular areas, including science, math, art, health, music, and social studies (Roe, 1994, pp. 6-7). Though these thematic units, which are based on schoolwide events or single novels, may be of relatively short duration, they can provide students with opportunities to make thoughtful connections among informational sources and to integrate learning across content areas.
At any grade level, planning an integrated thematic unit requires a great amount of teacher time and effort (Lake, 1994). At traditionally structured junior and senior high schools, the organization and preparation for integrated work can be so demanding that teachers may be discouraged from developing or teaching integrated units. A lack of common planning time, restricted access to suitable source materials for development of the thematic curriculum, and time pressures mitigate against the planning of activities not currently in the existing curriculum. Three junior high school teachers in our area recently reported that the efforts required of them to plan and carry out a single thematic unit were so overwhelming that they would probably not try to repeat the experience. One possible way to relieve some of these problems associated with time and resources is to form a collaborative relationship between a secondary school and a college or university.

School-University Collaborations

At a variety of levels universities are being urged to increase the amount of field experiences that preservice teachers have prior to student teaching (Goodlad, 1990; Bradley, 1991). As a result of these promptings, many universities are currently increasing their involvements in elementary and secondary schools (Burrows & Cooner, 1994; Dunak, 1994; Fowler & Bahney, 1994). Some attention has been given to the factors that will make field experiences valuable (Britzman, 1991; The Holmes Group, 1991). Increased field experience will probably not lead to meaningful improvements in inservice instruction unless the field experience is designed so that preservice teachers are able to observe exemplary practices and have the opportunity to practice the strategies and pedagogical approaches to which they are being exposed in their university courses (Goodlad, 1990; Johnston, 1994; Ziechner & Tabachnick, 1981).

School and Community Partnerships

Collaborative relationships also have existed between school and community organizations. The National Association of Partners in Education, Inc. (NAPE), a non-profit organization, has "the mission of providing leadership in the formation and growth of effective partnerships that ensure success for all students" (NAPE, n.d.). NAPE defines a "partnership in education" as a "collaborative effort between a school(s) or school district(s) and one or more community organizations with the purpose of improving the academic and personal growth of America's youth" (Kranberg, 1993, p. 17). NAPE estimates that there are more than 2.6 million volunteers involved in the nation's 200,000 partnerships (Kranberg, 1993; NAPE, n.d.).

During the 1994-95 school year the Partners in Education (PIE) in Boise, Idaho, celebrated its tenth year and involved more than 80 community organizations in partnerships with 38 public schools in Boise (Independent School District of Boise City, 1994).

Fairmont School's Partners in Education

At Fairmont Junior High School, the PIE board consists of representatives from the Boise Fire Department, Pizza Hut, The Idaho Department of Employment, two professors from Boise State University's Teacher Education Program (currently, the authors), the Fairmont principal, several Fairmont teachers, a parent representative from the PTO, and a student representative from each of the grade levels (seven, eight, and nine).

Our work with the faculty and staff at Fairmont Junior High began in August 1992, when we began to explore opportunities to develop programs that would benefit both the college of education at the university and local elementary and secondary schools. In the fall of 1992 we implemented the Classroom Assistant (CA) Program. Each semester preservice teachers from our content area reading course have served as CAs at Fairmont and other schools. CAs carry out a variety of tasks for
secondary teachers and, to fulfill a university course requirement, CAs work with the secondary curriculum to develop three lesson plans that include instructional strategies in vocabulary acquisition, reading comprehension, and writing. These strategy applications are an extension of the peer-teaching workshops carried out in our university content reading course. Each semester we each schedule one office hour per week at Fairmont. By the spring of 1994 a dozen Fairmont teachers had participated in the CA Program. This ongoing relationship between the school and university built the foundation of trust that facilitated our collaboration on the integrated thematic unit.

Beginning in November 1993, plans for the Mock-Fire Disaster became an item of business at the monthly meetings of the Fairmont PIE team. A scenario was agreed upon by mid-February 1994. The disaster would take place during the last period of the school day (on May 20) in one of the relocatable classroom units, which were behind the main building. The events of the disaster would be announced by a fire marshal to the audience of ninth graders assembled outside the classroom. This relocatable would be described as an apartment where some ninth-grade students were having a party that would include drinking alcoholic beverages and smoking cigarettes. The students inside the building were to be played by ninth-grade drama students. The party guests would fall asleep, and soon fire would break out. An artificial smoke-generating machine would be used to send billows of smoke out of the building. A microphone would also be located inside the building, and sounds of the party and the ensuing fire would be amplified to the audience outside. Then the fire department would be called, and a hook-and-ladder truck and paramedic unit would arrive and perform a rescue. The event would be reported by ninth-grade journalism students.

To this plan we professors suggested adding an instructional component on the dangers and consequences of unplanned fires. Our rationale was that students’ responses to the Mock-Fire Disaster might be deepened if students had recently explored the complex issues surrounding unplanned fires, such as economic, physical, medical, and psychological factors. The Fairmont School representatives decided to implement this instructional unit on a voluntary basis by ninth-grade teachers. On the day of the Mock-Fire Disaster, these lessons could be carried out in any of the following courses: art, English, computers, earth science, mathematics (various levels), music, reading, Spanish, speech, and U.S. history.

At the March meeting of the Fairmont PIE team, the teacher representatives reported that the ninth-grade teachers anticipated being overburdened with their regular work during the final few weeks of the school year. They asked us if our university content literacy classes would agree to develop lesson plans and materials that the Fairmont teachers could use. The preservice teachers in our content literacy course were eager to develop these lessons. The lessons would fulfill required assignments in the content literacy course, and they would actually be used in a secondary classroom!

Finding Materials and Writing Teaching Plans

Once it became apparent that the teachers at Fairmont were willing to participate in a thematic experience, we began the process of collecting fire-related readings appropriate for the various content subjects that would be involved. For the last peer-teaching workshop, we decided to generate specific lesson plans based upon a theme related to the consequences of unplanned fires. Preservice teachers were asked to locate fire-related readings appropriate for their content area and to develop lesson plans using strategies from our course textbook (Readence, Bean and Baldwin, 1992). Examples of the submissions included the following: (a) selections from a first-aid manual for the treatment of burns, (b) an article about a 1968 Chicago school fire in which 92 children and 3 teachers died, (c) an article about the Yellowstone Fire of 1988, (d) a teacher newsletter related to the physics of fire, (e) newspaper accounts of the 1944 Ringling Brothers and Barnum & Bailey Fire, (f) an original journal entry from a woman recounting her husband’s heroic salvation of firefighters in the 1910 Montana fire and a
newspaper account of this fire, (g) a selection telling about the 1949 Mann Gulch fire in Montana, and (h) students' personal photographs of the Boise Foothills fire of 1992 as well as the Yellowstone fire.

From the articles that were submitted, we course professors selected readings to be used in planning the peer-teaching workshop. The preservice teachers met in groups according to content discipline and planned lessons. Each group selected the strategy that seemed most appropriate for use with the assigned reading, but we asked that a strategy be used only once.

Working from a list of Fairmont courses whose teachers had agreed to participate in the thematic experience, we selected readings and strategies that seemed appropriate. In some cases we used our students' plans almost verbatim. In a few cases we had to develop a different strategy for use with an article. In the case of the math/computer science courses we developed completely original plans because our students had not worked with materials from these disciplines. In two cases, long readings were abridged by a graduate assistant and an undergraduate preservice teacher. In the seven junior high courses, a range of instructional strategies was implemented, including cinquains, post-reading graphic organizers, writing to learn, discussion questions, and a post-reading project involving insurance applications. See Appendix A for outlines of the lesson plans used in the earth science and reading classes.

Two weeks prior to the mock disaster we distributed copies of the readings to each of the participating secondary teachers. One week prior to the mock disaster we distributed copies of the lesson plans to teachers. The following day we met with eight of the nine teachers involved with the thematic experience to respond to questions or concerns about the plans or the articles. Few teachers had questions or concerns; however, several asked if they might modify the instructional procedures. We readily assented to this request. Everyone was looking forward to the event.

The Mock Disaster

On May 20, 1994, the ninth-grade class at Fairmont Junior High School spent a good share of their day reading about fires, discussing them, and completing in-class activities on fire-related topics. At the end of the day, during their eighth period class, all ninth graders assembled in back of the school building to witness the mock-disaster, which was staged by the Boise Fire Department, in collaboration with the drama, journalism, and photography classes.

Student Evaluations of the Experience

Two weeks after the mock disaster all ninth graders had final examinations. One of their English teachers asked her students to "Write a letter to the Partners in Education telling them how many classes you had that you discussed fire issues and write your responses to the activity and to the mock-fire disaster." This teacher shared with us the 98 responses of students in her three intact classes (which accounted for 35% of the 286 ninth graders enrolled at Fairmont). To analyze the content of the essays, we removed the names of the student writers and numbered the essays from 1 to 98.

Initially we thought we would analyze their responses in three categories: positive, neutral, and negative. A positive or a negative statement had to include an explicit descriptor such as fun or rotten, and neutral comments included factual reporting of activities or materials.

Once we began to analyze the data, it became obvious that these categories were insufficient to accurately represent the responses. We decided to add a category: thought comments. The thought comments typically reflected a deeper processing of the experience than simple reporting of activities and materials, but without an explicit positive or negative descriptor.
The following statements were categorized as thought comments: "By reading about situations that really happened in real life you realized that it could happen to you" (#63); "I'm not quite the 'wild party person' that was portrayed in 'the disaster' but even, basically innocent fun can lead to a disaster" (#24).

Positive comments typically included such evaluative words as great, fun, and effective. The following were considered to be positive statements: "I learned a lot" (#9); "It was fun for me as a drama participant to be able to have this opportunity to act in front of my peers" (#33).

Neutral comments were often statements of fact about what students did or read. These neutral comments were often used by students to "glue" the other elements of their essays together, such as this opening statement: "The following classes participated in the mock disaster on May 20: English, Reading and Science" (#14). The next comment was also typical of student essays, which usually contained one or more one-sentence summaries of a reading or assignment: "In my English [sic] class we read an article of a Chicago school fire and how it changed fire regulations" (#41)."

Negative comments expressed dissatisfaction with the class assignments or the staged disaster: "I didn't learn anything, though" (#14); "I wasn't really impressed with the special effects" (#21).

By categorizing comments in sentence units, we did not capture some powerful insights that students made over two or more sentences. The following two samples particularly pleased us because they show that some of the students expressed an understanding of one of the overall purposes of the integrated unit: (a) "I had fire safety lessons in English, Science, and Math. Because of these extra presentations, I feel the disaster was more effective, they tied the whole thing together" (#20); (b) "This method of teaching is very effective and I wouldn't mind seeing more of it take place; It really ties all of your classes together and teaches you a lot" (#62). Additional student comments appear in Appendix B.

Analysis. One of us analyzed all the data, and the other analyzed 15% of the essays. Interrater reliability was .85. Differences in analysis by the raters were due almost entirely to the ways that student comma-splices or fragmented sentences were counted. All differences were resolved through discussion.

The mean number of sentences in the 98 student essays was 7.96 (SD = 3.24). Students made very few negative comments (3%), more positive comments (14%) than negative, and still more thought comments (27%). Neutral comments (57%) were frequent, providing coherence in the essays. All of the essays contained thought comments and affective comments (positive, negative, or both). The integrated unit and mock-fire event thus appeared to engage all of the students. They reacted with feeling and critical thought to the complex issue of unplanned fires.

Teacher Evaluations

In the week after the mock-fire disaster experience and accompanying in-class experiences we surveyed the nine teachers who had used fire-related lesson plans. On a 4-point Likert scale, 4 represented the most favorable response. As shown in Table 1 the responses were generally very favorable, with the means of all items exceeding 3.0. The teachers' ratings of the overall thematic experience were very positive (item 7, M = 3.67, SD = .50). All but one teacher indicated a willingness to engage in a similar teaching unit in the future (item 8, M = 3.56, SD = .73). Teachers also responded favorably to the content of the lessons, the interestingness of the reading, and the effectiveness of the activities to develop student comprehension and critical thinking.

Summary

The combined efforts of preservice teachers, university professors, classroom teachers, secondary-aged students, a building principal, and the fire department were successful in developing an integrated
thematic experience that resulted in high levels of satisfaction for all parties involved. That all parties are willing to participate once again in a similar experience speaks loudly in favor of collaborative efforts to alleviate some of the time, materials, and energy blocks to the development of integrated thematic units.

Postscript: In the summer following the Mock-Fire Disaster experience, the Western states were again devastated by large, uncontrolled fires. For the first time since the 1949 Mann Gulch fire, a large number of firefighters lost their lives in a "blow-up" similar to that which caused the loss of life in Mann Gulch. The Forest Service's "let it burn" policy (see Appendix A) was once again the subject of regional debate. Reading and thinking about the Mann Gulch fire and the 1988 Yellowstone fire made it possible for us to understand the complexity of the summer's events. We hope that the Fairmont ninth graders also found May's thematic experience helpful in understanding the fires of 1994.
References


Author Note

The authors gratefully acknowledge Boise State University students, the Partners in Education Board at Fairmont Junior High School, and the ninth-grade teachers and students who participated in the integrated thematic unit and mock-fire disaster. The participating teachers and principals read and approved this paper.

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### Table 1

**Teacher Evaluations of Integrated Thematic Unit on Fire**

<table>
<thead>
<tr>
<th>Mean</th>
<th>SD</th>
<th>Items on Teacher Response Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.19*</td>
<td>.75</td>
<td>1) The readings were of an appropriate length.</td>
</tr>
<tr>
<td>3.63*</td>
<td>.52</td>
<td>2) The reading seemed interesting to my students.</td>
</tr>
<tr>
<td>3.67</td>
<td>.50</td>
<td>3) The activities that accompanied the readings were appropriate for my students</td>
</tr>
<tr>
<td>3.67</td>
<td>.50</td>
<td>4) The activities that accompanied the readings actively involved my students.</td>
</tr>
<tr>
<td>3.25a</td>
<td>.46</td>
<td>5) The activities that accompanied the readings helped develop my students comprehension of the readings.</td>
</tr>
<tr>
<td>3.78</td>
<td>.44</td>
<td>6) The activities that accompanied the readings promoted critical thinking by students.</td>
</tr>
<tr>
<td>3.67</td>
<td>.50</td>
<td>7) My overall response to the reading and activities was positive.</td>
</tr>
<tr>
<td>3.56</td>
<td>.73</td>
<td>8) I would like to participate again in a similar integrated thematic unit.</td>
</tr>
</tbody>
</table>

*Note.* Means are based on $n=9$ unless otherwise indicated. Teacher response means are based on a 1-4 scale, with 1 indicating a low response and 4 indicating a high response.

*$n=8$*
Appendix A
The Fairmont Fire: Sample Lesson Plans

Strategy for Earth Science: Graphic Post-Organizer

**Goal:** Through completion of the reading and subsequent work with a graphic post-organizer students will know the arguments for and against the natural burn policy established by the United State Forest Service.

**Prereading:** Ask the students about their knowledge of the 1988 Yellowstone fire. Many may have been in Yellowstone at the time of the fire or since the fire. Students may also be asked about their knowledge of the burn policy that currently helps Forest Service and Bureau of Land Management officials make policy decisions.

**During reading:** Ask students to look for specific information as they read about the Yellowstone fire to seek information about the following two issues: In what way did the Yellowstone fire have positive effects? In what way did the Yellowstone fire have negative effects? Could the fire have been anticipated and prevented? Should the fire have been stopped?

**After reading:** Students should complete the graphic post-organizer. They may refer back to the reading to do so. After completing the organizer, either small group discussions or a large group discussion can be conducted to debate the current burn policy.
Causes of the Yellowstone Fire:

<table>
<thead>
<tr>
<th>Arguments for &quot;Let it Burn&quot;</th>
<th>Arguments against &quot;Let it Burn&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I believe:
Strategy for Reading Classes: Cinquains

Content Goal: By learning to write a cinquain, students will be able to utilize new vocabulary and ideas presented in the assigned reading, "A Rage Against Dying." The poem format will also allow students to express their feelings in response to the reading.

A. Materials

"A Rage Against Dying," by Stanley L. Englebardt

Information about cinquains

Samples of cinquains

paper and pencils for students to use in making cinquains

B. Suggested procedure for cinquain activity

1. Teacher and students briefly discuss students' experiences with fire and/or burning.
2. Students read "A Rage Against Dying."
3. Students and teacher briefly discuss/respond to reading.
4. Teacher introduces and models the cinquain form.
5. Students work individually or in pairs on cinquains.
6. Students share cinquains.

C. Cinquains

Cinquains are 5-line poems with the following pattern:

Line 1: 1 noun which will be the subject of the poem

Line 2: 2 adjectives that describe the first line

Line 3: 3 verbs that pertain to the subject

Line 4: A 4-word phrase that conveys the feeling of the subject

Line 5: A single word that refers back to the first line, such as a synonym

Example:

Clouds
Dark, heavy
Billowing, gliding, creeping
Soft pillows of rain
Thunderheads
Appendix B

Selected Excerpts From Student Essays

Positive Comments

The disaster that the freshman watched, I thought was great. (#2)

This was good because we learned about fire safety tips. (#3)

I really enjoyed it, it was a very powerful piece [sic] of literature. (9)

I am very glad we had this at Fairmont because it was interesting and we got to get out of class! #35

The whole thing was great to watch, and the only problem was the microphone didn’t work right. #92

They were effective and I learned a lot, and it was nice to do something different in class for a change. #11

Neutral Comments

This girl got some motorcycle fluid near a heater and it burned her real bad. #79

In English, reading and photography we learned things on fire and fire safety. #9

"May 20 was the day of our mock fire disaster." #20

"It talked about if you should let natural fires burn out by themselves or help them. #15

"On May 27th I watched and reported on the Disaster at Fairmont." #30

"It was o.k. when they first started to pump the machines then it got really thick in there I couldn’t see my nose." #38

"In Mrs. R’s class, we all had to give a one minute speech about a personal experience with fire or burns." #40

Negative Comments

I read a story about a school that was burned 25 years ago-- I don’t want to know that. #78

I could tell that not very many people enjoyed it, including myself. #88

I didn’t really learn anything, maybe if it was done when I was in 1st grade I would have. #91

I thought the disaster this year wasn’t very good. #23

But that was short lived because the effect wore off when we had to read several more dry pages about the legal proceedings and lengthy details about the boring facts. #72
Thought Comments

Mine (a cinquain written for reading class) was this:

Fire
Burning, eating, singeing
Monster of black death
The Unforgiving

After most of the other classes had gone in, I had the opportunity to speak personally with the fire fighters and actors. This is where I learned the most about fire safety. The "Disaster" itself didn't teach me as much as the personal interviewing.

One suggestion to make this program work better is to get all the teachers to participate.

I think they should have taken the bodies out in front of the audience, told them what was wrong, and performed first-aid on them.

Unfortunately, we didn't do anything concerning the mock disaster in any of my other classes.

If more hands on or visual illustration were done it would have been more fun.

Maybe next time do something we don't know about. Or just have us read more of those real life stories.