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ABSTRACT

Solano Community College (California) developed interdisciplinary, team-taught classes. The program included three classroom components administered in each of the six semesters to both program-supported integrated classes and to content area control class sections: a standardized reading test, an essay writing test, and a student survey. Subjects were 147 students enrolled in English 1, history, biology, social science, political science, and nutrition classes. In addition, summative fill and retention data were gathered to compare the program sections with all other sections of the same course, and a follow-up study surveyed students who completed the program's integrated classes. Results indicated that the essay writing evaluation produced some evidence for the success of the pedagogical method, but the reading evaluation did not reveal substantive changes in students' abilities. Although no formal mechanism was used to evaluate it, a "tremendously positive" collegiality developed among the faculty involved in the program. (Contains four tables of data; appendixes contain pre- and post-essay topics, essay scoring rubrics, sample student survey forms, sample follow-up survey forms, and an evaluation activities summary.) (RS)

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**FIPSE PROJECT:
TEAM TEACHING OF ENGLISH INTEGRATED WITH CONTENT AREA COURSES**

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**FINAL EVALUATION REPORT
1992-1995**

Prepared by Susan Messina, Robert J. Simas, and Diane White

The evaluation of this FIPSE Project has included three classroom components administered in each of the six semesters to both the Project-supported integrated classes and to content area control class sections: a standardized reading test, an essay writing test, and a student survey. In addition, summative fill and retention data have been gathered to compare the Project sections with all other sections of the same course, and a follow-up study has surveyed students who have completed the Project integrated classes.

Classroom Evaluation

This project has supported the teaching of two integrated courses in each of six semesters. Each pair of instructors has repeated the integrated course in a subsequent semester; during the second offering the courses have been evaluated by comparison with one or more control sections of the same content area course. I wish to thank the following instructors for participating in this evaluation:

SEMESTER	COURSES	INSTRUCTORS
Fall 1992	History 17	Control Sections: Katie Graham Van Forsyth
	History 17 + English 1	Integrated Class: Diane White Susan Messina
Spring 1993	Biology 15	Control Sections: Jim Mills
	Biology 15 + English 1	Integrated Class: John Nogue Nan Wishner
Fall 1993	Social Science 22	Control Section: Anne Bevilacqua
	Social Science 22 + English 1	Integrated Class: Lucy DuPertuis Lue Cobene
Spring 1994	History 5	Control Section: Jerry Korte
	History 5 + English 1	Integrated Class: Richard Bunch Laurie Duesing
Fall 1994	Political Science 1	Control Section: David Pyle
	Political Science 1 + English 1	Integrated Class: Jean Baxter Sarah Phelan
Spring 1995	Nutrition 10	Control Section: Carol Bishop
	Nutrition 10 + English 1	Integrated Class: Nancy DuPuy Susan Messina

All of these instructors modified their instruction in the evaluation semester to accommodate the standardized reading tests, the in-class surveys, and the teaching of curriculum units on which the pre and post essay tests were based; we are grateful to them for their contributions to the success of this

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evaluation. In addition, thanks are due to the faculty from all of these disciplines who joined the essay scoring teams: Richard Green, Jim DeKloe, Paul Hardy, Bill Hughes, Judy Kabica, and Sharyn Stever.

Evaluation Methods

In all of the six semesters, the classroom evaluation consisted of three pre and post semester administrations:

1. Degrees of Reading Power standardized critical reading test (Forms R-2 and S-2)
2. Locally constructed essay writing test based on a short curriculum unit
3. Short open-ended student survey (several different forms).

Participating Students. The community college students participating in this evaluation consisted of those enrolled in the Project-supported integrated classes listed above (an aggregate of 147 enrolled at the beginning of the six semesters) and the students enrolled in the content area control classes. The integrated classes were limited to 30 students which is the English department maximum for English 1, even though this meant a reduced number of students from the content area perspective, where lecture classes typically enroll 50 students or more. The History 17 cohort had two control sections, and the Biology 15 lecture had the equivalent of four control sections all taught in a single lecture hall. For the four remaining cohorts, there was just one control class, in each case a lecture class that began with about 50 students per section.

Although all students in the control class did the tests and surveys regardless of their English status, only those students who were simultaneously taking the same composition course, English 1, as the integrated class students, were included in the data reported for the reading and essay tests. Thus, comparisons made in the reading and writing components of this evaluation are based on similarly qualified students (there are specific prerequisites for English 1) taking the same two courses in English composition and a specific content area.

As can be seen in Table 1, the number of such students completing both English and the content area class was very small in some control sections. The evaluation was designed based on a previous classroom research project with a History 17 class in which the number of students taking English 1 in 2 History 17 sections equalled the number in an integrated class, as was the case in the History 17 cohort in this project, but we did not find an equivalent number of students taking English 1 simultaneously in other content area classes. Thus, our exact control students (those taking the same composition course simultaneously but in separate classes) did not equal the number in the Project classes in any of the last 3 semesters of the Project.

Furthermore, some students (both exact control and integrated) took only one of the two reading or writing tests, but not both; thus the number of students listed in Table 1 as earning a final grade in both integrated and control classes is not the same as the number who took both reading tests or both writing tests. (See the specific number of students in both groups for each component in Table 1.) Only students who took both reading tests are included in the DRP data reported in Table 1, and only students who took both essay writing tests are reported in the essay data in Table 1. And only students who got a final grade that was not a W (withdrawal) in both English 1 and the content area course were included; this meant some control students who completed the content area course but dropped English 1 were dropped from the evaluation data base. Thus, because of the small number of control students in some semesters, our aggregated data are more valid than those for any individual class, and tests of statistical significance are reported only for the aggregate data.

The in-class surveys were also problematic: not all students completed a survey, and anonymity prevented any match-up of pre and post student opinions. In addition, because there is the mix of English levels in the survey data, it cannot be said to represent students who are all comparable to the students in the integrated project classes. In general, it is fair to say that students in the integrated classes wrote more and more substantive comments on the surveys than did the students in the control classes.

Reading Evaluation Materials and Procedure. The students' critical reading skills were assessed with the Degrees of Reading Power (DRP) tests in forms R-2 and S-2. In this test, students are asked to read passages that are approximately one full page in length and choose appropriate main idea statements for paragraphs, draw inferences and generalizations, and make comparisons; they are not asked factual detail questions. Scores are reported on a DRP constructed scale of reading difficulty. TASA, the publisher of the DRP, also has a software program which measures the reading difficulty of text passages; passages from reading assignments in all six semesters were measured by this means, so students could compare their personal test scores with the level of the assigned readings. Topics in the DRP passages are of an academic nature and cover a wide range of curriculum areas, including business, history, science and literature. These tests are untimed so that slow, but good readers--especially ESL students--are not at a disadvantage. Arrangements were made for students who did not complete the test within the class time to do so after class. The DRP tests were given in 50-minute class periods in the first 3 weeks and last 3 weeks of the semester; the experimental and control classes took the tests within one or two days of each other so that there is no substantive time difference between the two evaluation groups.

Reading Evaluation Results. As can be seen in Table 1, the Project students scored statistically significantly higher on both the DRP pre-test and post-test. The significant difference in reading gain score is due more to a decline in mean control group scores than to increase in mean integrated class group scores, which increased less than one point. Based on my observation of control class students taking this test and on comments made by control class instructors, I suspect that control class students took these tests less seriously than they did the writing tests because the score earned on the DRP did not affect their grade, whereas the score earned on the essay test did. Although standardized tests have the advantage of comparison with other students across the country, students may not be motivated to do well on these tests.

One issue of concern is that despite the semester of reading and writing instruction in English 1, these students--especially the students in Project classes, which emphasized substantial reading--did not show more improvement. A second, related issue is the instructors' concern that the mean scores are well below the level of difficulty of typical reading assignments in all of the content area courses included in the Project. Using the DRP software, passages from textbooks and all of the articles chosen for the curriculum units on which the essay tests were based were analyzed for difficulty level; most fell into the 70-78 range on the DRP scale, with only a few in the high 60's. Thus, the average student reading skill level in the Project classes was 10-15 points below the assigned readings. This gap may explain why neither group scored at an average level on the synthesis subscore in the writing test. Students' ability to comprehend and synthesize multiple readings appears to be not yet adequately developed.

Writing Evaluation Materials and Procedure. The essay writing tests were based on curriculum units taught in both classes for 1 to 3 weeks on topics that were normally covered in the semester in each course. Along with the reading test and survey, this instruction and the essay writing test also occurred in the first three and last three weeks of the semester. Six faculty comprised the essay scoring team: the English and content area instructors from the integrated class and the control class, an instructor who has taught the specific course in both English and the content areas but who was not teaching a FIPSE Project supported class, and I as English 1 instructor and evaluation director. This team met several weeks before the evaluation semester began and planned administration dates and the curriculum unit topics and readings. It took considerable discussion to get the content area instructors of both classes to agree on exactly what would be taught, but everyone involved--especially part-time instructors--said it gave them a better idea of what other people thought was important to teach. An outline of topics to be covered was developed and followed in each class, so all students were exposed to the same content information. Three to six readings were chosen so that all students had the same assigned reading. One reading in each curriculum unit was left undiscussed in class, so we could see how students could handle reading which had not been covered in class.

Table 1. Mean Scores for Reading Tests (Degrees of Reading Power), Essay Totals and Subscores, Reading and Writing Gains, and Final Course Grades

Value	Max. Score	HIST 17		BIOSC 15		SOCSC 22		HIST 5		POLSC 1		NUTRI 10		Aggregate	
		Exp	Ctrl	Exp	Ctrl	Exp	Ctrl	Exp	Ctrl	Exp	Ctrl	Exp	Ctrl	Exp	Ctrl
<i>n</i>		22	18	7	6	7	6	19	1	17	2	10	2	82	35
<i>DRP1</i>	85.0	60.6	57.9	60.9	47.2	54.9	52.7	60.2	61.0	60.6	59.5	60.2	53.5	60.0*	55.1
<i>DRP2</i>	85.0	63.6*	51.3	66.7	46.7	58.7	53.0	53.2	67.0	63.1	57.0	61.3	52.5	60.7*	51.6
<i>GainR</i>		3.0*	-6.7	5.9	-0.5	3.9	0.3	-7.1	6.0	2.5	-2.5	1.1	-1.0	0.7*	-3.5
<i>n</i>		22	23	8	7	8	5	15	3	21	2	11	5	85	45
<i>ESSAY1</i>	40.0	15.8	17.0	10.4	6.2	13.1	11.8	29.1	27.5	13.5	8.8	21.2	17.0	17.5	15.1
<i>Content</i>	12.0	4.8	5.4	3.2	1.7	3.6	4.2	8.7	8.5	4.1	3.0	6.5	5.4	5.3	4.8
<i>Synth.</i>	8.0	2.9	3.3	1.1	0.7	2.3	2.2	6.2	6.0	2.6	1.0	3.8	2.4	3.3	2.8
<i>Analysis</i>	8.0	2.9	3.3	2.1	1.1	2.1	2.0	5.6	4.3	1.8	1.0	4.7	4.0	3.2	2.9
<i>Organ.</i>	8.0	3.1	3.0	2.3	1.4	3.1	2.0	5.9	6.3	3.0	2.0	4.0	3.4	3.6*	2.8
<i>Mechan.</i>	4.0	2.0	2.0	1.8	1.2	2.1	1.4	2.6	2.3	2.0	1.8	2.3	1.8	2.1*	1.8
<i>ESSAY2</i>	40.0	20.8	18.5	19.4	9.9	21.2	18.1	28.3	23.5	16.0	10.8	19.7	12.5	20.7*	16.5
<i>Content</i>	12.0	6.8	6.3	6.6	3.9	7.1	6.0	9.0	8.5	5.1	3.0	6.1	3.3	6.7*	5.5
<i>Synth.</i>	8.0	4.0	3.5	2.9	1.1	4.3	4.0	5.7	4.0	2.4	2.5	3.6	2.4	3.8	3.0
<i>Analysis</i>	8.0	4.0	3.5	3.8	1.6	4.3	3.2	5.5	4.3	3.0	1.5	4.1	2.4	4.0*	3.0
<i>Organ.</i>	8.0	3.8	3.3	4.3	2.1	3.5	3.0	5.4	4.7	3.4	2.5	3.8	2.4	4.0*	3.0
<i>Mechan.</i>	4.0	2.2	2.1	2.0	1.1	2.1	1.9	2.7	2.0	2.0	1.3	2.0	2.0	2.2*	1.9
<i>GainW</i>		5.1	1.5	9.0	3.6	8.1	6.3	-0.8	-4.0	2.5	2.0	-1.5	-4.5	3.2	1.4
<i>n</i>		23	22	10	8	11	6	23	2	27	4	13	5	107	47
<i>EngGr</i>	4.0	2.1 ¹	2.5	2.2	2.0	2.7	2.7	2.9	3.0	2.3	2.8	2.1	1.4	2.4	2.4
<i>ConGr</i>	4.0	1.9	1.9	2.0	1.0	2.8	3.7	3.1	3.0	2.7	2.5	2.2	1.4	2.5*	2.0

*Exp v. Ctrl comparison sig. at $\alpha < .05$ level.

Note 1: Grade converted to a 5-point scale — A = 4, B = 3, C = 2, D = 1, F = 0.

What was different, of course, was the method of instruction. Most of the control class instructors presented the material in typical lecture style, although small groups were used in the nutrition control class to discuss the readings after the lecture. The FIPSE Project classes have emphasized small group discussion of the readings, so that was the dominant method of instruction in the integrated classes.

After the curriculum unit had been taught and the readings discussed, the scoring team of six faculty met to compose the specific question on which the students would write their essays. Although there was considerable time pressure, the groups met before the next day's essay writing. Writing the question in this manner assured that none of the faculty could teach to the question, which is very hard to avoid when it is known while instruction and discussion are going on.

Two members of the scoring team (English instructors Messina and Stever) worked on all six essay teams, so there was continuity in the types of questions created for each semester. All but one of the faculty teams were adamant that the essay topics be analytical in nature, not just information repetition, and the same groups wanted students to be able to read a variety of sources, pull out important points to use in supporting the claims made in their essays, and be able to apply important concepts to new situations. All teams wanted students to create a coherent framework within which to present their information and claims. Faculty were pleased to hear that other instructors expected a similar quality of thinking, though we all recognized that students' abilities often fall far short of our expectations.

To score the essays, an analytic rubric was developed by the scoring team of six faculty. Since they were the first group, the History 17 group set a pattern that included content, synthesis and analysis, organization, and mechanics as the primary criteria for scoring, with more points to be allocated to content, and fewest to mechanics. The next group, Biology 15, spent some time starting "from scratch" just to see what they thought were the important criteria for evaluating writing, but they came up with very similar criteria. Thus, after 9 separate faculty members from disciplines as divergent as English, social science, and science agreed that the same criteria were important, we settled on those five items for analyzing student writing; the only change was to separate synthesis and analysis, which had been in one category in the History scoring. Subsequently, the History papers were rescored so that those scores would fit into the cumulative data base (see Table 1). The rubrics were changed slightly as each scoring group defined exactly what they mean by "content," "synthesis," etc., and they were changed to reflect the different topics at the beginning of the semester and the end of the semester. Essay topics from all six semesters are included in Appendix A, and rubrics appear in Appendix B.

The essay scoring was done in one six-hour session or two three-hour sessions on adjacent days. Robert Simas removed the students' and instructors' names so that papers were identified only by a code number. Susan Messina led each six member scoring team in a discussion of sets of five papers to establish norms for scoring so that we were all evaluating the essays similarly. Each essay was read by one English instructor and one content area instructor. Agreement in scoring was defined as both readers' scores falling within a 20% spread (8 points on our 40 point scale). If the two readers did not agree, a third--and occasionally, a fourth--reader scored the essay until agreement was reached between at least one English and one content area instructor. (We were unable to reach agreement on two papers at most of the more than 80 in the typical scoring session.) Score sheets were then removed by Robert Simas and scores entered into the data base. Name sheets were reattached and essays returned to the instructors for their own grading. All instructors counted these essays as a significant part of the students' semester grades.

Writing Evaluation Results. Aggregate group means for the total essay scores and the five subscores appear in Table 1. Although the FIPSE Project integrated classes scored higher in all categories on Essay 1, that difference is statistically significant (using t-test) only on organization and mechanics subscores. This difference may indicate that students who were already somewhat more skilled in these two aspects of writing were more likely to choose the integrated class to further

develop their writing competence. However, on the writing score as a whole, there was no significant difference between the groups on Essay 1 (pre-test) scores; thus we can assume that both groups were about equal in initial writing abilities. However, it is interesting to note that both groups were below the score of 20, which was regarded as "average."

The FIPSE integrated class group did score statistically significantly higher on the post-test, Essay 2, on the overall score and on all subscores except synthesis. Each of these scores, except synthesis, is above the midpoint score defined as "average," while the overall score and the subscores of the control classes remain below "average," on Essay 2. Although the writing gain score is not statistically significant, its trend is to show greater gain for the integrated class students. These are rewarding results for those of us who have worked very hard to create a meaningful context in which to embed writing instruction.

Another way of analyzing the essay writing results is to consider how many students' essays fell into four qualitative categories: Weak, Low, Good, Excellent. Table 2 displays the number and percentage of students falling into each category on Essay 1 and Essay 2.

There is no statistically significant difference in the percentages of students in each category on either Essay 1 or Essay 2 total scores. However, one goal of the FIPSE supported writing instruction is to try to improve students' ability to synthesize and analyze, and there does seem to be some measurable improvement in those subcategories. On the Essay 2 synthesis subscore, there is a statistically significant higher percentage of students from the integrated classes who have moved into the Excellent category (Z score = 1.979), while the percentage of control class students in that category remains the same.

On the analysis subscore, the difference in percentage of integrated class students in the Excellent category is approaching statistical significance, and the percentage of integrated class students in the Weak category is significantly smaller than the percentage of control students (Z score = 2.255). (The z score is a non-parametric test for significant difference between two percentages.)

Discussion of Reading and Writing Evaluation. The results of the essay writing evaluation show that there are some statistically significant differences between the writing performance of students in the FIPSE- supported integrated classes compared with students taking the same courses separately. Given the faculty desire to have students analyze and synthesize the content area ideas and information, this result is encouraging. It supports an instructional methodology which gets the students actively engaged in reading, thinking, and discussing the course topics, as opposed to the more passive learner role students usually adopt in a lecture class, where their main role is to listen.

One concern both faculty and FIPSE staff had before we began this project was whether students would learn the content of the courses just as well in the integrated environment. The course grade results seem to show that they learn content even better than their counterparts in separate classes. While the mean English grade is the same, the mean content grade earned by integrated class students is significantly higher (See Table 1). One additional issue addressed by the course grade data is that there is little evidence in these courses of the grade inflation so commonly decried in other courses. This could be due to the substantive amount of reading and writing that were a necessary part of the two curriculum units.

Despite the encouraging signs of developing writing competence, the failure of the DRP to show evidence of reading improvement, data which is supported by the below-average writing synthesis subscores, is of great concern as we look at our students' potential for academic success. Good reading skills become increasingly important in mastering the content of sophomore level courses; perhaps further required critical reading courses should be required along with the second level writing courses needed to transfer to upper division colleges.

Student Survey Materials and Procedures. We have surveyed students in both integrated and control classes in all six semesters; however, only data from the last three semesters will be reported here. There were three major difficulties: getting students to take the survey seriously, getting students to return the surveys, and matching pre and post surveys for individual students while

Table 2. Essay Quality Categories by Group

Essay 1	0-9.9 Weak	10-19.9 Low	20-29.9 Good	30-40 Excellent	Number
Exper. n	19	34	20	12	85
%	22.4	40.0	23.5	14.1	
Control n	10	25	7	3	45
%	22.2	55.6	15.6	6.7	
Essay 1: Syn.	0-1.9 Weak	2-3.9 Low	4-5.9 Good	6-8 Excellent	
Exper. n	20	32	15	18	85
%	23.5	37.6	17.6	21.2	
Control n	11	19	10	5	45
%	24.4	42.2	22.2	11.1	
Essay 1: Anal.	0-1.9 Weak	2-3.9 Low	4-5.9 Good	6-8 Excellent	
Exper. n	20	26	26	13	85
%	23.5	30.6	30.6	15.3	
Control n	8	21	11	5	45
%	17.8	46.7	24.4	11.1	
Essay 2	0-9.9 Weak	10-19.9 Low	20-29.9 Good	30-40 Excell.	
Exper. n	9	36	24	16	85
%	10.6	42.4	28.2	18.8	
Control n	10	21	9	5	45
%	22.2	46.7	20.0	11.1	
Essay 2: Syn.	0-1.9 Weak	2-3.9 Low	4-5.9 Good	6-8 Excellent	
Exper. n	12	30	21	22	85
%	14.1	35.3	24.7	25.9*	
Control n	10	16	14	5	45
%	22.2	35.6	31.1	11.1	
Essay 2: Anal.	0-1.9 Weak	2-3.9 Low	4-5.9 Good	6-8 Excellent	
Exper. n	7	32	23	23	85
%	8.2*	37.6	27.1	27.1	
Control n	10	17	12	6	45
%	22.2	37.8	26.7	13.3	

Table 3. Student Communication In / Outside of Class from Student Survey

	History 5 Integrated Class	History 5 Control Class	Political Science 1 Integrated Class	Political Science 1 Control Class	Nutrition 10 Integrated Class	Nutrition 10 Control Class
% of Enrolled Students Responding at Semester End	46%	61%	55%	42%	65%	44%
Average. Times/Week Respondents:						
Talk to Teacher In Class	6.15	.78	2.59	2.58	1.68	.95
Talk to Teacher Outside Class	.62	.42	1.26	.53	.36	.59
Teacher Talked to Student in Class	3.69	.53	2.94	2.05	1.55	.51
Talked with Students in Class	5.77	2.3	3.38	3.13	2.27	2.27
Talked with Students Out of Class	3.23	.85	2.12	1.89	1.27	1.27
Asked/Contrib. In Class	4.77	.85	2.79	2.84	1.64	.78
Group Work In Class	5.23	.17	2.62	1.58	1.59	1.04
Group Work Out of Class	1.46	.30	.56	.16	.09	.32

retaining anonymity. The latter problem was unsolvable; FIPSE Project Director Nan Wishner opted for anonymity in hopes of getting some honest student feedback. The survey she designed was used in the last three semesters and is attached in Appendix C.

Faculty had their choice as to whether they wanted to administer the surveys in class or out. Surveys in History 5 were done out of class, while Political Science and Nutrition were done in class. Even in class, a number of students will be absent on any given day, and if surveys are anonymous, it is hard to get absent students to complete the survey later. Thus, we have considerably fewer surveys than students enrolled in some classes (See Table 3). Further, we cannot tell which students' surveys in the control classes come from students taking English 1; indeed, the number of control students in the last three semesters has been so small that the preponderance of survey data in the control classes comes from students who have already--or not yet--taken English 1. For all of these reasons, we can get a sense of student opinion from the surveys, but they do not offer statistically sound evidence.

Student Survey Results. The survey question analyzed for Table 3 deals with a major concern of this FIPSE Project: active student participation in class and out. We hoped this classroom approach would foster student/teacher and student/student interactions. Our goal was to create more of a sense of an academic community than is usually found in lecture classes. Evidence that that occurred appears in the History 5 student survey results. The control class was a strictly lecture style class, and we much less talk in this class compared to its integrated class counterpart. It must be noted, however, that the percentages of talk in the integrated History 5 class were influenced by three students of the 13 responding, each of whom reported 10 to 20 instances of talk in each week. Thus, we can see how different student interpretations of the question resulted in vastly different responses. Since this class met three times a week, these students were counting their multiple participation throughout the class hour. The frequency with which other students responded that they talked once, twice, or three times a week suggests that they recalled participating in every class period, but without counting each instance. Still, the contrast in participation is greatest in this pair of classes.

Where the control classes were typical lecture classes, but with some group work included frequently, as in the Nutrition 10 control class, the students' sense of participation is more nearly equal to that found in the integrated class. Whether the fact that the control met three times a week and the integrated class met twice a week influenced student recollection of participation is unknown. The instructor of the Political Science control class pointedly makes his class a discussion-based rather than lecture-based class. Student comments on what is valued frequently noted they like that quality about this political science class. It did make this control class more similar in nature to the integrated class than in either of the other two classes in this survey.

In addition, there are the cases when students don't do what the instructors expect them to. In my integrated Nutrition 10/English 1 class, there were two debate assignments, where students were expected to plan their debate strategy and information with other students on their team. Yet only one student in our class reported working with the group outside of class! The students did not make the outside of class connections that we expected them to.

Further student comments from the surveys will be included in the Final Discussion.

Fill and Retention Analysis

When this Project was in the planning stages, two questions we had were whether students would be interested in enrolling in the integrated classes and whether this integrated format would influence student retention. The following data will show that students enroll in integrated classes at a somewhat lower rate, but are retained at approximately the same rate as in the total of all sections of English 1 and of the content area courses.

For this analysis, all of the non-integrated sections of following content courses were included during the semester in which the integrated section was offered: History 17, Human Development 38, Biology 15, Social Science 22, History 5, Political Science 1, Nutrition 10, CIS 1, and Art History.

Courses	Number of Sections	Percent of Fill	Percent Retention
Total Separate English 1	200	94.4	71.7
Total Integrated English 1	12	81.4*	70.3
Total Separate Content Areas	87	100.7	72.4
Total Integrated Content Areas	12	81.3*	69.3

"Fill" means the number of students who are enrolled at the first census week about the fifth week of the semester as a percentage of the contractual class maximums. There is a statistically significant difference in fill rate (t-test). "Retention" means the number of students who earned a grade of A, B, C, D, F, CR, or NC; it does not include the number of students who dropped. The retention rate for the integrated classes is not significantly different from the separate class retention rates. Given that there has been considerably more reading assigned in the Project integrated classes, and that some students have viewed these classes as harder and more work than separate classes, maintaining an equal retention rate is quite good. One additional factor is that students may be more reluctant to drop six units worth of courses than the three units of one separate course.

Follow-up Study

After chance meetings on campus with early integrated class students yielded great reports of their further academic success, we wanted to discover whether participation in an integrated class led to a higher level of re-enrollment in college courses and a greater degree of success in subsequent English and related content area classes. Diane White did mail and telephone surveying of former students in the second year of the FIPSE Project, unfortunately, without getting much feedback. A second try in this third year yielded somewhat more information.

Re-enrollment in College Courses.

Diane White and Susan Messina tracked students who had completed an integrated class through subsequent semesters and found the re-enrollment patterns listed in Table 4. Although students did continue to re-enroll at Solano in varying numbers of later semesters, data was too sparse and irregular to record for semesters beyond the one immediately following the semester in which the integrated class was taken. Thus, the enrollment patterns in Table 4 reflect enrollment in the semester immediately following the one in which the integrated or control class was taken.

We wanted to know whether students became more interested in taking further courses in the content area and whether they took more English courses as a result of their experience in an integrated class. Examination of the specific courses students took in these two areas revealed that College General Education Requirements probably have a greater influence on course choice than personal interest does. In general, the content area courses chosen by students reflected the breadth demanded by the General Education Requirements and the advanced level English courses required by near-by four-year colleges to which our students frequently transfer rather than a more advanced history or biology course.

The data in Table 4 show that there is little difference between the re-enrollment patterns of integrated class students and the control class students; indeed, in total, a somewhat higher percentage of control class students re-enrolled at Solano College, in another content area course, and in more English courses.

Follow-up Survey Results.

In Spring Semester 1995, the last semester of this FIPSE Project, Diane White mailed 135 follow-up surveys to students who had completed an integrated class or a Project control class in the previous five semesters. Thirty surveys were returned, 21 from integrated class students, and 9 from

Table 4. Percentage of Project Students Who Re-Enrolled in Semester Following FIPSE Evaluation

	Fall 1992	Spr. '93 % Enrolled SCC	Spr. '93 % Enrolled in Other History	Spr '93 % Enrolled in Other English
History 17 Exp.	22	96%	4%	39%
Control	23	77%	23%	50%
	Spring 1993	Fall '93 % Enrolled SCC	Fall '93 % Enrolled in Other Biology	Fall '93 % Enrolled in Other English
Biology 15 Exp.	10	40%	10%	0%
Control	8	75%	0%	50%
	Fall 1993	Spr. '94 % Enrolled SCC	Spr. '94 % Enrolled in Other Sociology	Spr. '94 % Enrolled in Other English
Social Science 22 Exp.	10	80%	10%	50%
Control	6	67%	17%	0%
	Spring 1994	Fall '94 % Enrolled SCC	Fall '94 % Enrolled in Other History	Fall '94 % Enrolled in Other English
History 5 Exp.	23	82%	18%	59%
Control	1	0%	0%	0%
	Fall 1994	Spr. '95 % Enrolled SCC	Spr. '95 % Enrolled in Other Poli. Sci.	Spr. '95 % Enrolled in Other English
Political Science 1 Exp.	27	70%	7%	44%
Control	5	80%	0%	60%
Average of 5 Semesters Exp.	92	68%	8%	33%
Average of 5 Semesters Con.	43	74%	22%	40%

control class students, a 22% return rate. See Appendix C for sample surveys.

All but one of the 30 students are currently enrolled in college. Three-quarters of the control group students have transferred to other colleges, while 85 % of integrated class students are still enrolled at Solano College. This finding somewhat contradicts the first semester after enrollment patterns described above. Students from both groups responded that their English class has helped them in other English and content area classes and that the content area classes have provided useful background in other classes.

Both integrated and control class responders have about two-thirds "discussers" and one-third who don't like to contribute to class discussion. Thus, willingness to discuss issues in class does not seem to be related to class instructional method. All but one of the thirty responders felt either "somewhat" or "very" comfortable expressing ideas and asking questions in class. One former integrated class student said, "At first it was uncomfortable to express my ideas, but it became second nature." It is possible, though, that only the people who are comfortable expressing ideas were motivated to respond to this survey.

An average of 85% of both groups said they would like to read more about the content area subject, and over 90 % said yes to reading more about English. Approximately two-thirds of both groups would like to take more courses in the content areas related to the FIPSE Project and in English.

Thus, what we found is a great deal of similarity in the responses from former integrated class and control class students. It may well be that there is more motivation to respond to a survey in people who are enthusiastic about the courses they have taken and the learning they feel they have gained than in those who are less positive. Still, it is encouraging to hear so many positive responses about their Solano College experiences from these students. And the fact that twice as many former integrated class students as control class students made the effort to respond says a great deal about the long lasting positive effect of the Project classes.

Follow-up Writing Samples. As part of our evaluation of the effectiveness of the integrated courses we collected writing samples from the instructors of students who had participated in the evaluation in previous semesters. Specifically, we asked both English and content area instructors to photocopy at least one piece of substantive writing produced by a student who had been in either the experimental or control group. In addition, we told instructors that we preferred to have a piece of writing that contained their comments and that had been assigned a grade. Students who agreed to allow their work to be reviewed by our evaluation team signed release forms authorizing the photocopying and assessing of their papers.

Our first efforts at obtaining writing samples were not successful for several reasons. One reason for the lack of samples was that we originally made our requests near the end of the semester. We learned that many instructors, particularly in the content areas, assigned most of the writing for their courses by mid-term and had already given papers back to students. This is understandable given that the average class size in many content areas is fifty students. Assigning papers at the end of the semester would make it difficult for instructors to complete their final grades on time. Another reason why we had difficulty obtaining students' writing samples from content area instructors is that these teachers often did not actually have students write substantive essays. Very often the type of writing required in content area courses is very short pieces (e.g., the short answer "essay" or identification of terms). In addition, many samples that content area instructors submitted contained few, if any, comments. For English instructors who often do assign essays at the end of the semester, this request put an additional end-of-the-semester burden on them. Thus, it was not surprising that we had few instructors volunteer to submit student samples.

In the final semester of the project the requests were sent out in the thirteenth and fourteenth weeks of the semester. Not surprisingly, our rate of return was higher. We received fifteen essays in this last semester. However, upon assessing these writing samples and examining the distribution of grades, we found that no conclusions about student performance could be reached. There were several major issues that made a comparative analysis impossible, including the following:

a wide variation in topics; the diversity of instructors' expectations and evaluation criteria; a range of conditions and assignment parameters under which the work was produced (e.g., in-class exam or term paper).

First, there were wide variations in the topics that different instructors posed that made it impossible to compare students' writings. These variations were easily detected by examining two essays; one from a History of Western Civilization course, and one from an English Literature course. The instructor of Western Civilization asked students to explain how and why patriarchal societies developed in western culture. By contrast, one English instructor asked for an essay in which the student was to describe several themes in a short story. The nature of these assignments is considerably different, as the history essay required a specific type of analysis, while the English essay was more descriptive. This basic difference made it hard to compare the two students' work, because they were being asked to perform two different intellectual tasks.

The comments that instructors wrote at the end of these papers reflect both the differences in the nature of the topics and the instructors' varying expectations. At the end of the student essay on the development of patriarchy in the west, the instructor wrote, "You use the varying sources of evidence...but need to include more discussion of the actual causes of these changes, such as complex agriculture, population growth, invasions." Clearly, this instructor assigned a cause-effect essay and expected to see a cause-effect analysis. On the other hand, at the end of the essay describing a short story, the instructor wrote, "You include important points in your paper.... Don't be afraid to fully examine them. Learn to trust your Instinct and intelligence." The instructor also observed that literary analysis should be presented in the "present tense." These comments suggest that perhaps the instructor was more concerned about allowing the student to shape the assignment in a way that developed the student's confidence, rather than in creating a specific analytical task. Again, these are fundamental differences in topic that relate to instructor approach but which make comparisons of students' work difficult.

Another type of "essay" assignment that we encountered via students' writing samples reflects huge variations in instructors' definitions of an essay. For example, in one final exam assignment sheet that was submitted along with a writing sample for a Philosophy class, students were asked to write on ten out of a possible twenty topics. The instructor used words like "state" and "identify" as directives for these topics. Clearly, these kinds of instructions allow students to relay bits and pieces of information, but do not call upon the student to analyze the material. Thus, it would be pointless to attempt to compare an essay that "states the five fundamental concepts or ethical principles of Confucianism with the essay that required students to explain how and why patriarchy developed in western cultures. The nature of the two topics can and did produce two extremely different types of writing that defied comparison..

Some of the writing samples submitted did not allow us to determine the topic posed or the assignment given. For example, one sample that was collected was a "research paper" on the "middle passage" (i.e., the transporting of slaves from Africa to the American colonies). However, the information presented was extremely general in nature and no sources were documented. Thus, determining the exact task the instructor had posed to the student was impossible.

This research paper sample also reflects huge variations in instructor expectations and evaluation criteria. This paper contained no thesis statement, did not document any sources used, offered no analysis of the topic, and contained numerous errors in basic grammar, academic format, and punctuation. The assigned grade for this paper was 100 points out of 100 possible, an "A." The instructor commented that it was "well written" and "what writing ought to be." On the other hand, another student who submitted a research paper on the causes of the American Civil War began with a clear thesis, was well organized, contained few errors in grammar or format, documented most of the sources used, and attempted to follow through on the line of reasoning offered in the thesis. The grade assigned to this essay was 92 points out of 100 possible. The instructor commented that the primary sources used were not documented correctly and that the impact of some of the causes mentioned were not fully explained. Obviously, by examining these two research papers we can see significant differences in instructor expectations and evaluation criteria.

Another significant problem in comparing students' essays was the difference in conditions and parameters under which they were to write. For example, one student sample was a final exam for a Journalism class. Students were to write on three essay topics in a two-hour final exam session. Understandably, the conditions under which this student wrote would not allow him to produce an essay that would be as fully developed as the student who had a week to write an essay explaining the structure of a specific poem. Again, comparison would be impossible.

Student comments from the surveys were quite revealing. Much of what students from the linked classes reported reflected a positive learning experience. For example, students were asked to describe ways in which the skills and/or information that they learned in the linked classes helped them in other areas. One student reported that "essay writing and research was easier." Another student reported that "they gave me better writing skills and helped me with my own desires and motivations." Students also responded positively when asked about discussing ideas with other students. Many from the linked courses commented upon the high degree of student interaction. For example, one student reported that there was "great camaraderie among classmates." Other students who were surveyed made very similar remarks noting that they "felt more comfortable" speaking and that "others who normally would not have spoken up in class did speak up in this class." A few reported that they had become more involved with group learning after taking the linked courses. However, it was very apparent that many did not have this sense of community in other academic settings. One student who now attends UC Davis remarked that Solano was a "more comfortable environment."

These comments clearly show that we did succeed at helping students create a productive and positive learning environment in which they develop both skills and confidence. Therefore, even if the academic environment in general is not conducive to creating "community" and "confidence," students leave the linked courses with an alternative paradigm for learning, and as Parker Palmer has said, "a way of being in the world." So, if ever again presented with a community oriented environment, it is likely that students from the linked classes would thrive.

Conclusions

We began this Project with great optimism and energy, and during the course of its six semesters we have experienced some wonderful moments of learning with our students. We are happy that our essay writing evaluation produced some evidence for the success of this pedagogical method, though disappointed that the reading evaluation did not reveal substantive changes in our students' abilities, especially since a close reading of texts has been such an important feature of all of the integrated classes. Still, we each saw the individual students whose scores showed great increases and shared their joy when they realized what they had accomplished.

As experienced teachers we recognize that students do not always reveal what they have learned during the single semester that we see them; often the skills emerge in subsequent semesters, though we could not necessarily see it in our small sample of papers written by former integrated class students. All of us who have taught these integrated classes have experienced hearing from "alums" how much they learned, how much more thoughtful they have become about their learning.

However, the one factor that we have not explored in this evaluation is an explanation of why this approach to teaching and learning did not work for some students. Two factors I can hypothesize from my own two classes in this Project are students' inadequate reading skills and inadequate time to devote to study. Perhaps further study of the students' learning process in this integrated learning environment can identify some evidence to explain the lack of success some students felt.

On the whole, students ended the classes with an enthusiastic call for more integrated classes: "Why aren't there more coordinated studies programs?"

"I have had a lot of fun and gotten an education at the same time. If any other coordinated study classes are made available, I would take them."

"Great class. Hope to see and take more in the future."

Perhaps we will see more of the positive learning experiences started in these integrated classes as we develop our coordinated studies (our new name for theme-based, integrated classes) program and expand it to developmental and sophomore level classes. The evidence of pedagogical success found through this evaluation strengthens our surety that integrated studies offers opportunities for real learning. As students have a chance to take more than one such class, they will be able to develop their literacy and learning in more visible ways.

One final note that must be added, though we did not have a formal mechanism for evaluating it, is the tremendously positive collegiality that developed among the Project faculty. Unexpected friendship, respect, and rejuvenation came out of the various partnerships: teaching pairs, essay scoring teams, part-timers and full-timers. And I am deeply indebted to Rob Simas and his secretary, Carol Duley, for the imagination and help they contributed to this evaluation. Most importantly, we appreciate the support of the Fund for Post-Secondary Education; without it we could not have embarked on this learning journey.

APPENDIX A:
PRE AND POST ESSAY TOPICS

DIRECTIONS:

In the videotape "Roanoke," the two Native Americans Manteo and Wanchese eventually take different views of the English settlement on Roanoke Island, with Manteo becoming a stronger friend to the English. We hear them and White, an Englishman, expressing the following views:

Manteo: "We can flourish together--whites and natives alike."

White: "Have we not done some wonders here--Englishmen [and] native of this land, living side by side."

Wanchese: "We cannot live together on this island."

Considering the nature of the English and Native American cultures and the experiences the two groups had on Roanoak, did the relationship between the English and the Native Americans necessarily have to turn out the way Wanchese described it, or was Manteo and White's dream possible? In your essay, take a position and support it with evidence from the article "Roanoke Lost," the video "Roanoke," and other class readings, materials, and discussion.

DIRECTIONS

Write an essay on the following topic on the attached lined pages. If you need more room, ask the instructor for more lined paper and staple it to the back of your essay; be sure to number any added pages. You may use your one page of notes; also staple it to the back of your essay when finished. Please write in ink if possible; neat cross-outs and corrections are acceptable.

TOPIC

Both the video "Ethnic Notions" and the article "The Lives of Slave Women" examine images and experiences of female slaves. Take a position on the following question and use evidence from these sources as well as from class discussion and other class readings in developing your essay.

Was the "Mammy" image an accurate or inaccurate reflection of the real lives of slave women in the antebellum South? What does this image reveal about the relationships between blacks and whites in antebellum America? Support your position with reasons and examples.

DIRECTIONS:

Using information from class notes, your biology text, "A Crossbill's Twist of Fate" by Benkman, "The Science That Reasons Why" and "Every Species Has its Niche" by Colinvaux, and other class readings, write an essay on the topic below.

Write your essay on the attached lined paper. If you need more room, ask the instructor for more lined paper and staple it to the back of your essay; be sure to number any added pages, but don't write your name on them. You may use your one page of notes; also staple it to the back of your essay when finished. Please write in ink if possible; neat cross-outs and corrections are acceptable.

TOPIC:

"The Genetics of the Garter's Getaway" describes different coloration patterns found in a single species of garter snake.

Explain the selective processes and ecological principles that are at work in the polymorphism of the northwestern garter snake; in other words, in what way has natural selection produced color patterns that seem to suit the western garter snake to its niche? In addition, how is the adaptation of the northwestern garter snake similar to or different from other examples you have studied?

DIRECTIONS:

Using information from "Russian Wheat Aphid" by Gonzalez, Summers, and Qualset, "Why All the Fuss about Preserving Wild Stocks of Salmon and Steelhead?" by Higgins, "The Biological Control of Dung" by Waterhouse, your biology text, and your class notes, write an essay on the topic below.

Write your essay on the attached line paper. If you need more room, ask the instructor for more line paper and staple it to the back of your essay; be sure to number any added pages, but don't write your name on them. You may use your one page of notes; also staple it to the back of your essay when finished. Please write in ink if possible; neat cross-outs and corrections are acceptable.

TOPIC:

Identify and explain the biological problems involved in the Russian Wheat Aphid infestation of single varieties of grains. Evaluate the possible solutions to this problem according to their biological consequences. Compare this problem and its solutions to other examples you have studied.

DIRECTIONS:

Write an essay on the topic below using information from class discussion, the video about Sherrie Pietranico (the Rutgers University graduate student), the reading selections from Schaefer's Racial and Ethnic Groups, Betances' "Race and the Search for Identity," and Piper's "Passing for White, Passing for Black," and--if you wish--your own experience or observations.

Write your essay on the attached lined pages. If you need more room, ask the instructor for more lined paper and staple it to the back of your essay; be sure to number any added pages, but don't write your name on them. You may use your one page of notes; also staple it to the back of your essay when finished. Please write in ink if possible; neat cross-outs and corrections are acceptable.

TOPIC:

In the last century in the United States, the concept of "race" has emerged and been used to categorize people. This categorization has produced both negative and positive consequences for social groups and for individuals.

Considering the concepts of "race" discussed by Schaefer and Betances, contrast a) how Piper and Sherrie Pietranico perceive **themselves** racially and b) how **others** perceive them racially. Additionally, you may include one example from your own life or observation to support your points.

DIRECTIONS:

Write an essay on the topic below using information from class discussion, the short video selection from Where the Spirit Lives, the reading selections (Saidell, "Growing Up in Linguistic Limbo," Fordham and Ogbu, "Black Students' School Success: Coping with the 'Burden of Acting White,'" and Tan, "Mother Tongue") and--if you wish--your own experience or observations.

Write your essay on the attached lined pages. If you need more room, ask the instructor for more lined paper and staple it to the back of your essay; be sure to number any added pages, but don't write your name on them. You may use your one page of notes; also staple it to the back of your essay when finished. Please write in ink if possible; neat cross-outs and corrections are acceptable.

TOPIC:

Our class discussion, the video, and the three articles have all focused on education, language, and the family as we explored various dominant group strategies to control minority group assimilation into mainstream American society.

(a) Contrast the strategies used by minorities as they either resist or accept assimilation. (b) Also describe specific consequences for minorities, their families, and their friends. Be sure to support your points with examples from the articles and video. Additionally, you may include one example from your own life or observation to support your points.

DIRECTIONS:

Write an essay on the topic below using information from your textbooks, class notes, the Voltaire essay, and other class readings and discussions.

Write your essay on the attached lined pages. If you need more room, ask the instructor for more lined paper and staple it to the back of your essay; be sure to number any added pages, but don't write your name on them. You may use your one page of notes; also staple it to the back of your essay when finished. Please write in ink if possible; neat cross-outs and corrections are acceptable.

TOPIC:

The thinkers of the Scientific Revolution challenged and replaced the medieval view of the universe and laid the groundwork for the fundamental innovations in political and religious theories of the Enlightenment.

Write an essay in which you 1) explain how the thinkers of the Scientific Revolution replaced the medieval view of the universe and then 2) explain how Enlightenment thinkers shaped political and religious thought according to the concepts produced by the Scientific Revolution.

Organize your essay and make an effort to be as specific as possible, offering details and examples to support your answers. Be sure to mention specific thinkers and their contributions. Include Voltaire in your answer.

DIRECTIONS:

Write an essay on the topic below using information from your textbooks; class notes; the three handouts: Churchill, "Blood, Toil, Tears, and Sweat," Hoess, "Commandant of Auschwitz," Wiesel, "Reflections of a Survivor"; and other class readings and discussions.

Write your essay on the attached lined pages. If you need more room, ask the instructor for more lined paper and staple it to the back of your essay; be sure to number any added pages, but don't write your name on them. You may use your one page of notes; also staple it to the back of your essay when finished. Please write in ink if possible; neat cross-outs and corrections are acceptable.

TOPIC:

The policy of appeasement pursued in the 1930's by the British and French failed to prevent World War II in Europe. This failure eventually led to the "Final Solution."

Write an essay in which you identify and explain the key events of appeasement resulting from this British and French foreign policy and explain how these events and policies led to the "Final Solution."

In your essay be sure to define the terms "appeasement" and "Final Solution." Include and explain how examples from the readings support your points.

DIRECTIONS:

Write an essay on the topic below using information from your textbook; class notes and discussion; and the handouts: Locke, "Of the Beginning of Political Societies" from The Second Treatise of Civil Government, Jefferson, "The Declaration of Independence," Stanton, "The Seneca Falls Declaration," Truth, "Ain't I a Woman?" and Henry, "In Defense of Elitism."

Write your essay on the attached lined pages. If you need more room, ask the instructor for more lined paper and staple it to the back of your essay; be sure to number any added pages, but don't write your name on them. You may use your one page of notes; also staple it to the back of your essay when finished. Please write in ink if possible; neat cross-outs and corrections are acceptable.

TOPIC:

Several types of "equality" have been discussed in class and in the readings. We have considered political equality, human equality, equality of opportunity, equality of power, and intellectual equality.

Compare these different conceptions of equality using the assigned readings and your own views to illustrate your points.

DIRECTIONS:

Write an essay on the topic below using information from your textbook (Chapters 4 and 5); class notes and discussion; the video on the Dolfman case; and the handouts: Nat Henthoff, "Free Speech on the Campus," B. Ehrenreich, "Teach Diversity with a Smile," and W. Henry, III, "The Politics of Separation."

Write your essay on the attached lined pages. If you need more room, ask the instructor for more lined paper and staple it to the back of your essay; be sure to number any added pages, but don't write your name on them. You may use your one page of notes; also staple it to the back of your essay when finished. Please write in ink if possible; neat cross-outs and corrections are acceptable.

TOPIC:

The history of the United States has often reflected the tension between civil liberties and civil rights. The writers of the assigned readings address this tension as they consider issues of discrimination, diversity, political correctness, and equality.

In "The Politics of Separation," William A. Henry, III says, "In place of freedom of speech has come a demand for freedom from speech, if that speech is deemed offensive by any victim group."

How does this quotation exemplify the tension between the civil liberties guaranteed by the First Amendment (free speech and press) and the civil rights guaranteed by the Fourteenth Amendment (equal protection of the law)? Support your position with specific examples from all of the assigned readings, the Dolfman video, and class lectures and discussions.

DIRECTIONS:

Write an essay on the topic below using information from your textbook (Chapter 1); class notes and discussion; the videos on the food advertisements and Eat, Drink, and Be Wary; and the handouts: "Nutrition and Modern Lifestyles," "A Nation Playing with its Food," "Fat Times," "Are You Feeding Your Baby Too Much?" "The Changing American Diet," and "When Food is Love."

Write your essay on the attached lined pages. If you need more room, ask the instructor for more lined paper and staple it to the back of your essay; be sure to number any added pages, but don't write your name on them. You may use your one page of notes; also staple it to the back of your essay when finished. Please write in ink if possible; neat cross-outs and corrections are acceptable.

TOPIC:

The food choices we make are influenced by cultural, psychological, economic, and health factors. We microwave ready-to-eat food, get and give our loving from the Sara Lee oven, spend \$.99 for a McDonald's special, but hope to be healthier than our parents' generation. Changes in American family structure, individual self-image, and lifestyles have led us to demand more convenient food choices.

In your essay, explain how and why our demand for convenience foods is related to these cultural, psychological, economic, and health issues. Use specific examples from the readings, the videos, class discussion, and your own experience.

DIRECTIONS:

Write an essay on the topic below using information from your textbook; class notes and discussion; and the handouts: "Hunger and Global Issues," "Hunger and Undernutrition in America," "Hunger in California," "Lifeboat Ethics," "Nutrition and World Hunger," "World Hunger: Chronology and The Issues."

Write your essay on the attached lined pages. If you need more room, ask the instructor for more lined paper and staple it to the back of your essay; be sure to number any added pages, but don't write your name on them. You may use your one page of notes; also staple it to the back of your essay when finished. Please write in ink if possible; neat cross-outs and corrections are acceptable.

TOPIC:

The articles and our class discussion point out that the adequacy of the food supply has major nutritional consequences ranging from good health to hunger, disease, malnutrition, even starvation. Recall that we discussed the influences of politics, government, culture, technology, population, and economics on food demand and supply.

In your essay, explain how poverty is related to food demand and supply in California in contrast to at least one of the following countries: Russia, Bosnia, Rwanda, or Somalia. Use specific examples from the readings, class discussion, and your own experience.

APPENDIX B:
ESSAY SCORING RUBRICS

SCORING RUBRICS:

History 17: Survey of U. S. History to 1877
Biology 15: Introduction to Biology
Social Science 22: Minority Group Relations
History 5: Western Civilization

The scoring rubric is developed by the faculty team of integrated and control class instructors, the Evaluation Director, and two faculty--one English instructor, one content area instructor--who often teach the course being evaluated but are not teaching one of the project courses in the semester of the evaluation.

The analytic categories and percentage of total score remain the same across all classes in the six-semester evaluation so that data can be compared across the curriculum. Note: The History 17 rubric is slightly different because it combined Synthesis and Analysis. That proved to be too difficult to score accurately, so those two categories were separated in all subsequent semesters.

Each group specifies the exact criteria for its evaluation; some teams have wanted more detail, others less.

CONTENT

This criterion includes 1) accuracy, 2) sufficiency, and 3) logical relevance and appropriateness of historical facts and concepts.

0	3	6	9	12
Lacking	Low	Average	Good	Excellent

An excellent or good essay is accurate in thesis and support, offers a sufficient number of supports to convince the reader, and uses a variety of types of support which are appropriate for, and relevant to, the argument being made; lower rated essays are inaccurate to varying degrees, have insufficient or irrelevant support.

1. Historical accuracy

- Plausible, supportable position (even if it is not well-supported in this paper, give credit if it could have been accurately supported based on historical information)
- Accurate supporting details (give credit on sliding scale based on proportion and importance of any inaccuracies)

2. Sufficient number of examples and explanation given in development to convince reader of thesis position

3. Relevance and appropriateness as support for thesis

- Examples and explanation may include historical chronology, general characteristics of time period, cultures, and of the belief systems, significant themes and concepts, an understanding of issues and cause/effect relationships, precise terminology

SYNTHESIS AND CRITICAL ANALYSIS

This criterion includes 1) use of information and ideas from readings, video, and class discussion as well as writer's own ideas 2) integrated in support of a logical, thoughtful, and evaluative explanation why the position taken in the thesis is or could have been true.

0	3	6	9	12
Lacking	Low	Average	Good	Excellent

An excellent or good essay will make explicit exactly how and why the support proves the validity of the thesis through explanation and use of supports from the various sources; a lower rated essay may simply state historical facts or concepts in a supporting position, but not explain why they support, or it may use only lecture material.

1. Inclusion of materials from all of the unit sources: video "Roanoke," reading "Roanoke Lost," themes and concepts from class discussion, writer's background knowledge, and other assigned class materials and texts. [Changed to include slavery readings for Essay 2.]

--A good paper may take pieces of information bearing on a single aspect of the topic from several of these sources and weaves them together in a logical grouping.

2. Explanation of why events occurred as they did, or why people acted as they did based on their beliefs and knowledge, either unique to a particular historical figure or common in time period

--Lesser papers focus more on narrative of events, while superior papers explain why what happened did happen or could have happened in this particular time and place.

--Good essays use explanations that are logical.

--Excellent essays will demonstrate critical thinking that evaluates the participants, events, and themes rather than just reporting them and will contain original manipulation of ideas, not just parroting information and concepts from class sources.

STRUCTURE AND ORGANIZATION (GLOBAL EXPRESSION)

This criterion includes the 1) clarity, 2) specificity, and 3) logical coherence of the structure of the essay (i.e. thesis, support, and conclusion).

0	3	6	9	12
Lacking	Low	Average	Good	Excellent

An excellent or good essay will take a specific position based on the prompt, develop that argument logically, specifically, and creatively, and conclude with a point that follows logically from the thesis and support. Lower rated essays will lack clarity, specificity, or coherence, and may even lack one or more essential structural components (thesis, support, or conclusion).

1. Has organization and structure that is appropriate for argumentative essay to convey position clearly

--Uses logical arrangement of support

--Signals structure and coherence appropriately with reader in mind

2. States a position which responds to prompt specifically, precisely, logically, and completely

3. Shows logical consistency and coherence in developing line of thought so that position runs clearly throughout essay, logical and meaningful flow of ideas

--Main idea statements may be present in topic sentence or conclusion of paragraphs which explain how material in each paragraph supports and develops thesis statement, relevance

of support to thesis

--Conclusion which logically follows from thesis and development

SENTENCE LEVEL EXPRESSION

This criterion includes diction; sentence structure; and grammar, punctuation, and mechanics.

0	1	2	3	4
Lacking	Low	Average	Good	Excellent

An excellent or good essay will include precise, appropriate word choices; variety, complexity, correctness, and appropriateness of sentence structure; and correct grammar, punctuation, and spelling. Lower rated papers will have incorrect or imprecise diction, errors in or simplistic sentence structure, or errors in grammar, spelling, punctuation, or mechanics which interfere with reader's easy comprehension of essay.

1. Sentence structure

--Logical coordination and subordination

2. Correct grammar

--Appropriate consistent verb tenses, subject-verb agreement, clear pronoun reference and agreement, correct modifier forms

3. Correct mechanics which do not interfere too much with reader's understanding of writer's intended meaning

--Correct spelling, keeping in mind that essays are written without dictionaries and within a fifty-minute time limit.

--Correct essay and paragraph format

--Careful proofreading

The notes following the criteria above are intended to be guidelines, not prescriptions. Individual papers will differ, and the reader must use his/her own judgment about the extent to which creative and other variant papers merit scores in each range. Not all characteristics listed must be present in every paper.

CONTENT AND TERMINOLOGY

Accurate knowledge of basic concepts
 Accurate terminology used fluently
 Sufficient, relevant, accurate details
 Sufficient, relevant, accurate examples, evidence
 Completeness of answer

0 3 6 9 12
 Lacking Low Average Good Excellent Score_____

SYNTHESIS

Connecting different concepts accurately
 Using different sources, integration of sources

0 2 4 6 8
 Lacking Low Average Good Excellent Score_____

ANALYSIS

Application of concepts to new situation
 Drawing inferences
 Accurate cause-effect explanations

0 2 4 6 8
 Lacking Low Average Good Excellent Score_____

ORGANIZATION

Clear focus, thesis, either explicit or implicit
 Line of thought clear and well-developed
 Logical sequencing, transitions
 Cohesiveness

0 2 4 6 8
 Lacking Low Average Good Excellent Score_____

MECHANICS

Correct sentence structure clearly conveying meaning
 Clear, correct syntax
 Correct punctuation

0 1 2 3 4
 Lacking Low Average Good Excellent Score_____

READER'S INITIALS_____

TOTAL SCORE_____

SCORING RUBRIC for SOCIAL SCIENCE 22/ENGLISH 1 ESSAYS Fall 1993

Course/Unit Content (30 %)

Understanding concepts

Factual knowledge

summaries
references to materials of unit
examples

Completeness/sufficiency

Frame=quality=frame + appropriate examples; prioritize relevant details.
Completeness + sufficiency means either multiple relevant examples or variety of perspectives on an extended example.

Accuracy

Correct factual information, correct use of terminology

Synthesis (20 %)

Use of all (or multiple) sources and materials: readings, video, class lecture and discussion, and personal experience; range in scope of references

Connecting the different sources to show the conceptual relationships among them (related to Frame in organization).
Relate concepts (link)--to outside-of-class reality.
Integrating what they know--desired but not required.

Analysis (20%)

Analyze personal experience by relating to concepts.

Analysis includes:

1. Systematic definitions of specifics of the cases
Defining features
Relating features into structures
Relating structures to context
2. Explain how the theory accounts for data, which means that something has to come from the outside--the theoretical frame--how to sub-group working people, for example.
3. Take a critical stance, make evaluations and judgments based on a structure of values, standards, assumptions which are explicitly explained/articulated within the frame.
4. Create/reevaluate frame/structure--desirable but not required.

Organization (20%)

Frame: establish a theme and a structure in introduction and conclusion; create thesis and follow throughout essay; component parts of essay in balance (more attention to development than to introduction, for example); show control of whole plus parts.

Thesis--either stated or implied

Paragraphing based on units of thought

Logical sequencing based on frame

Transitions showing shifts and relationships

Introduction and Conclusion

Mechanics (10%)

Spelling--most commonly used words spelled correctly--few errors in general vocabulary

Essential punctuation identifying sentence boundaries

Clear syntax (word order within sentences)

Correct sentence structure

In scoring, consider number and importance of errors and degree to which they interfere with smooth reading and comprehension of essay.

For example, if there are 1-2 mechanical errors, score 4 points in rating.

Without explicitly counting errors, reduce score as number of mechanical errors increases.

CONTENT AND TERMINOLOGY

Accurate knowledge of basic concepts
 Accurate terminology used fluently
 Sufficient, relevant, accurate facts
 Sufficient, relevant, accurate examples, evidence
 Completeness of answer

0 3 6 9 12
 Lacking Low Average Good Excellent Score_____

SYNTHESIS

Connecting different concepts and facts accurately
 Using different sources, integration of sources

0 2 4 6 8
 Lacking Low Average Good Excellent Score_____

ANALYSIS

Application of concepts to the question(s)
 Drawing inferences
 Accurate cause-effect explanations

0 2 4 6 8
 Lacking Low Average Good Excellent Score_____

ORGANIZATION

Clear focus, thesis, either explicit or implicit
 Line of thought clear and well-developed
 Logical sequencing, transitions
 Cohesiveness

0 2 4 6 8
 Lacking Low Average Good Excellent Score_____

MECHANICS

Correct sentence structure clearly conveying meaning
 Clear, correct syntax
 Correct punctuation

0 1 2 3 4
 Lacking Low Average Good Excellent Score_____

READER'S INITIALS_____

TOTAL SCORE_____

SCORING RUBRIC FOR POLITICAL SCIENCE 1 ESSAY
Fall 1994

CONTENT AND TERMINOLOGY

Clear, elaborated definition of terms
 Use of terms logically in discussion
 Accurate knowledge of basic concepts
 Accurate, relevant, sufficient examples
 Accurate facts, dates, events
 Answers all parts of topic
 0 3 6 9 12
 Lacking Low Average Good Excellent

SYNTHESIS

Inclusion of all materials from unit
 Concept similarities and differences
 Bringing ideas from unit together
 0 2 4 6 8
 Lacking Low Average Good Excellent

ANALYSIS

Use definitions to explain concepts/ex.
 Apply defs. and concepts to other examples
 0 2 4 6 8
 Lacking Low Average Good Excellent

ORGANIZATION

Clear presentation of main point(s)
 Line of thought expressed, leads to concl.
 Paragraphs with clear concept,
 advancing line of thought
 Adequate development using concepts,
 terms, examples; more attention to
 development than to introduction
 Intro. sets up idea to be developed
 Transitions show shifts and relationships
 Conclusion follows from line of thought
 0 2 4 6 8
 Lacking Low Average Good Excellent

MECHANICS

Correct spelling of common words
 Few errors in general vocabulary
 Essential punctuation identifying
 sentence boundaries
 Clear syntax (word order within sentence)
 Logical sentence structure
 0 1 2 3 4
 Lacking Low Average Good Excellent

READER'S INITIALS _____ **TOTAL SCORE** _____



NUTRITION 10 / ENGLISH 1 FIPSE EVALUATION
 SPRING 1995

Essay I Scoring Rubric

CURRICULUM UNIT CONTENT (30%)

Define and focus on primary theme:
 convenience
 Inclusion and explanation of cultural,
 psychological, economic, and
 health issues
 Specific explanations of the
 relationship between convenience
 and the four issues
 Use of accurate facts and examples

Lacking	Low	Average	Good	Excellent
0	3	6	9	12

SYNTHESIS (20%)

Integration of sources to support
 assertions
 Connecting the four issues to concept
 of convenience and to each other

Lacking	Low	Average	Good	Excellent
0	2	4	6	8

ANALYSIS (20%)

Accurate causal relationships
 Application of concepts to specifics
 from readings, ads, and/or
 experience
 Extension of concepts to aspects of
 culture not covered in class

Lacking	Low	Average	Good	Excellent
0	2	4	6	8

ORGANIZATION (20%)

Clear line of thought throughout essay
 Introduction establishing main point
 Well-developed paragraphs based on
 related units of thought
 Specific support for assertions
 Logical sequencing indicated by clear
 transitions
 Conclusion relating to main point

Lacking	Low	Average	Good	Excellent
0	2	4	6	8

MECHANICS (10%)

Generally correct sentence structure
 which does not hinder meaning
 Generally accurate spelling--most
 commonly used words spelled
 correctly--few errors in general
 vocabulary
 Generally accurate punctuation

Lacking	Low	Average	Good	Excellent
0	1	2	3	4

Reader's Initials _____ Total Score _____

APPENDIX C:
SAMPLE STUDENT SURVEY FORMS
SAMPLE FOLLOW-UP SURVEY FORMS

Beginning-of-Semester Anonymous Questionnaire

To make sure classes at Solano are the best possible, we would like information about this English 1/Political Science 1Coordinated Studies class. Please help us by filling out this questionnaire. Your instructors will return it to the college Institutional Researcher. They will not read this form but will receive a typed report of students' comments after the semester ends. Please do not put your name on this form.

1. Circle how many semesters you have attended college, including this semester:
one two three four more (please indicate) _____
2. How long had you been out of school prior to this semester? Check one:
 continuing student (was enrolled in school during spring 1994) have been out of school 3-4 years
 was in school within the past year have been out of school 5-10 years
 have been out of school 1-2 years have been out of school more than 10 years
3. Why did you take **this section** and/or **these instructors** for this course?
4. Please list three of the main reasons why you took this class and rank them, with #1 being most important:

1.

2.

3.
5. What information did you use to select this class (please check all that apply)
 counselor advice catalog description
 other students' advice other; briefly describe _____
6. If you spoke with a counselor, what did s/he tell you about this class?

End-of-Semester Anonymous Questionnaire

To make sure classes at Solano are the best possible, we would like information about this English 1/Political Science 1 Coordinated Studies class. Please help us by filling out this questionnaire. Your instructors will return it to the college Institutional Researcher. They will not read this form but will receive a typed report of students' comments after the semester ends. Please do not put your name on this form.

1. Name at least **3** of the most important things you learned in this coordinated studies English 1/Political Science 1 class:

2. Name at least **3** advantages of taking English 1 & Political Science 1 together in coordinated studies:

3. Name at least **3** disadvantages of taking English 1 & Political Science 1 together in coordinated studies:

4. Please estimate how many **times per week** you did the following for this English 1/Political Science 1 class:

- talked to your instructor in class
- talked to your instructor outside of class
- experienced the instructor talking to you individually in class
- talked in class with other students about class material
- talked outside of class with other students from the class about class material
- asked questions or contributed ideas in class
- worked in groups in class with other students
- worked or studied in groups on class material outside of class

5. Have the reading and writing skills you learned in your English 1/Political Science 1 coordinated studies class this semester helped you in other classes you are taking?

yes no

If yes, please give an example of how these skills have helped you in another class:

45 please continue on the back...

End-of-Semester Anonymous Questionnaire

To make sure classes at Solano are the best possible, we would like information about this Political Science 1 class. Please help us by filling out this questionnaire. Your instructor will return it to the college Institutional Researcher. S/he will not read this form but will receive a typed report of students' comments after the semester ends. Please do not put your name on this form.

1. Name at least **3** of the most important things you feel you learned in this Political Science 1 class:

2. Please estimate how many **times per week** you did the following for this Political Science 1 class:

- talked to your instructor in class
- talked to your instructor outside of class
- experienced the instructor talking to you individually in class
- talked in class with other students about class material
- talked outside of class with other students from the class about class material
- asked questions or contributed ideas in class
- worked in groups in class with other students
- worked or studied in groups on class material outside of class

3. Are you completing any English classes this semester? yes no (if no, skip to #5)
If yes, which one(s)

- English 4 (Critical Thinking)
- English 1 (College Composition)
- English 62 (Analytical Reading)
- English 2 (Intro. to Literature)
- English 350/355 (Basic Reading/Writing Skills)
- English 370 (English Fundamentals)
- other; please name _____

4. If you are taking English this semester, do you think the reading and writing skills you learned in your English class have helped you in other classes? yes no
If yes, please give an example of how these skills have helped you in another class:

5. Please make at least **3** suggestions for improving this class:

6. Please list at least **3** features of this class that you think we should keep the same in future:

7. Please add, on the back of this form, any other comments about this class and/or your experience in it.

e/cc f 94

Thank you very much for your help!

[Sent to Experimental Group]

FOLLOW-UP SURVEY

During the _____ semester of 199_ you were enrolled in a linked course which paired _____ And English 1.

We are trying to do a follow up survey of students who have taken these courses, and we would appreciate your input. Please answer the questions below and mail this survey in the envelope provided. Thank you for your participation!

SURVEY QUESTIONS:

1. Are you enrolled in college now? (Circle response) yes no
a. At Solano? Yes No
b. At another institution? _____

2. If you are not enrolled in any institution, do you plan to return to school?
Yes _____ / When? _____ No _____

What we are trying to determine through our survey is whether students' experiences in certain kinds of courses have made a difference in their experiences in subsequent classes they take. So, the next few questions are aimed at having you compare what you experienced during one semester with what you experienced during other semesters.

3. Describe any ways in which the skills and/or information that you learned in your linked class have helped you in....

Other English courses?

Other History, Social Science, Biology, or Political Science classes you may have taken?

- 4.a. In your English 1 class, did you discuss ideas and assignments outside of class with your classmates?
Yes No

Comments:

4.b. Since taking your linked class, have you discussed ideas and assignments outside of class with your classmates more than you had before taking a linked class?

Yes No

Comments:

5. A. How comfortable were you expressing your ideas and asking questions in your linked class? (Circle response.)

Not at all not very somewhat very

Comments:

B. How comfortable were you in other courses expressing your ideas and asking questions?

Not at all not very somewhat very

Comments:

6. Did your experience in U.S. History/ Biology/ Minority Group Relations/ Western Civilization/ Political Science stimulate your interest in

A. Reading more about the subject? Yes No

B. Taking more courses in this subject area? Yes No

7. Did your experience in your English 1 course stimulate your interest in...

A. The subject matter? Yes no

B. Taking more courses in English? Yes no

Code No.: _____ Control: _____

[Sent to Control Group]

FOLLOW-UP SURVEY

During the _____ semester of 199_ you were enrolled in an English 1 course and a _____ course.

We are trying to do a follow up survey of students who have taken these courses, and we would appreciate your input. Please answer the questions below and mail this survey in the envelope provided. Thank you for your participation!

SURVEY QUESTIONS:

1. Are you enrolled in college now? (Circle response) yes no

a. At Solano? Yes No

b. At another institution? _____

2. If you are not enrolled in any institution, do you plan to return to school?

Yes _____ / When? _____ No _____

3.a. Describe any ways in which the skills and/or information that you learned in your English 1 course have helped you in any courses that you have taken.

3.b. Describe any ways in which the skills and/or information that you learned in your _____ course have helped you in any other courses you have taken.

4.a. In your English 1 class, did you discuss ideas and assignments outside of class with other students from your English 1 class?

Yes No

Comments:

4.b. Did you discuss ideas and assignments outside of class with other students from your _____ class?

Yes No

Comments:

4.c. In the courses that you have taken since your English 1 and _____, did you or do you now discuss ideas and assignments outside of class with other students? (Circle response.)
Yes No
Comments:

5.a. How comfortable were you expressing your ideas and asking questions in your English 1 course? (Circle response.)
Not at all not very somewhat very
Comments:

b. How comfortable were you expressing your ideas and asking questions in your _____ course?
Not at all not very somewhat very
Comments:

c. After completing your courses in English 1 and _____ how comfortable have you been expressing your ideas in other courses that you have taken?
Not at all not very somewhat very
Comments:

6. Did your experience in U.S. History/ Biology/ Minority Group Relations/ Western Civilization/ Political Science stimulate your interest in
A. Reading more about the subject? Yes No
B. Taking more courses in this subject area? Yes No

7. Did your experience in your English 1 course stimulate your interest in...
A. The subject matter? Yes no
B. Taking more courses in English? Yes no

Code No.: _____ Control: _____

APPENDIX D:
FIPSE PROJECT EVALUATION ACTIVITIES SUMMARY

Evaluation Activities for FIPSE Project

Fall 1992-Spring 1995

ACTIVITY	WHO	WHEN	TIME
1. Degrees of Reading Power Critical Reading Test	Integrated Class + Control Class	Week 1 or 2 + Week 16 or 17	50 m. each
2. Student Survey	Integrated Class + Control Class	Week 1 or 2 + Week 16 or 17 In-Class or Out-of-Class*	20 m. each
3. Essay Curriculum Unit	Integrated Class + Control Class	Week 1, 2, or 3 + Week 15, 16, or 17	2-3 classes each
4. Essay Question Writing	Faculty Team of 6	After last curriculum unit class	1-1.5 hours each
5. Essay Scoring Rubric Development	Faculty Team of 6	Before Essay 1 Norming only	1-2 hours
6. In-Class Essay	Integrated Class + Control Class	Week 2 or 3 + Week 16 or 17	50 m. each
7. Essay Norming & Scoring	Faculty Team of 6	2 to 7 days after essays Week 2 or 3 + Week 16 or 17	6 hrs each

The following activities can be done either in a meeting or informally, depending on the desires of the faculty team.

8. Planning Schedule
Instructors of Integrated + Control Classes + Susan M.
Set in-class dates before semester.
Set faculty team work sessions before or during semester.
9. Planning Curriculum Units for Essays
Instructors of Integrated + Control Classes + Susan M.
Determine curriculum concepts and readings for essays.

Thus the total class time devoted to the evaluation is 4 hours and 40 minutes if the survey is done in class, or 4 hours if the survey is done out of class, plus the teaching time for the curriculum units.

* The instructors of the integrated class + control class(es) decide whether they want to administer the survey in or out of class; if out of class, the instructors will be responsible for collecting all surveys from students. Instructor questions can be added.

**The days devoted to instruction of the curriculum unit before the essay vary depending on the desires of the team, but there will be a minimum of two days--one for presentation of material, one for discussion of readings. This is material you would normally teach in the class. Both classes present same material, concepts, readings.



SCHEDULING & SYLLABUS PARAMETERS:

In general, activities need to be done at the same time and for the same amount of time in both the integrated and control classes.

1. Complete Survey 1, DRP 1, Curriculum Unit and Essay 1 within first three weeks of class. Complete Survey 2, DRP 2, Curriculum Unit and Essay 2 within last three weeks of class.
2. Both integrated and control classes need to schedule DRP tests within one week so there is no difference in amount of time for learning; the Surveys in integrated and control classes should also be scheduled within one week of each other.
3. The integrated and control classes need to schedule pre and post curriculum units and in-class essay writing on same or adjacent days so that there is equal time for learning and forgetting, and the least likelihood students will pass the essay topic to friends in the other class.
4. The essay question needs to be written after the last curriculum unit class of instruction so that no instructor is "teaching to the test." Susan has to prepare the question and attach to the essay forms for the next class session's essay writing. The question needs to be within the range of questions (similar type involving synthesis and analysis of reading and discussion) that have been used thus far in the FIPSE Evaluation so that results can be compared across semesters.
5. Norming and scoring sessions need to be set up with 2 days lead time for Rob and Susan to prepare the essays and norming packets.
6. Since faculty will be grading the essays for their own class use after the FIPSE norming and scoring, the group norming and scoring needs to be done within one week of date essay was written.
7. Norming and scoring can be divided into two sessions if team desires for convenience; if so, these need to be on adjacent days so that we don't get "un-normed."
8. The essays and DRP tests need to count for class credit so that all students take them seriously. Instructors are also encouraged to offer some credit for doing the surveys. If the faculty take these essays, tests, and surveys seriously, the students will also.



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