

DOCUMENT RESUME

ED 346 051

SP 033 801

AUTHOR Fraenkel, Jack R.
 TITLE Joint vs. Single Supervision.
 PUB DATE Apr 92
 NOTE 33p.; Paper presented at the Annual Meeting of the American Educational Research Association (San Francisco, CA, April 20-24, 1992).
 PUB TYPE Reports - Research/Technical (143, -- Speeches/Conference Papers (150) -- Tests/Evaluation Instruments (160)

EDRS PRICE MF01/PC02 Plus Postage.
 DESCRIPTORS Cooperating Teachers; English Teacher Education; Higher Education; Mathematics Teachers; Music Teachers; Physical Education Teachers; Preservice Teacher Education; Secondary Education; Secondary School Mathematics; *Student Attitudes; Student Teachers; *Student Teacher Supervisors; *Student Teaching; *Supervisory Methods; *Teacher Attitudes
 IDENTIFIERS *San Francisco State University CA

ABSTRACT

San Francisco State University experimented with a form of joint supervision of student teachers during 1989-90 and 1990-91. Results of joint supervision by a member of the education faculty and a subject area faculty member were compared to results of traditional supervision carried out by a single education professor. Data from questionnaires and interviews were collected from student teachers, cooperating teachers, and supervisors. Most student teachers indicated that joint supervision had a positive effect on their teaching performance although a sizable minority indicated that it had no significant effect. For the most part, student teachers perceived no difference in the quality of advice received from their education and subject area supervisors. While most student teachers, cooperating teachers, and subject area faculty viewed the project as a positive influence, supervisors from the education faculty were essentially neutral. This project defined joint supervision as parallel supervision--the two supervisors supervised student teachers independently. This type of shared supervision appeared to work, however the question of whether cooperative supervision is effective has yet to be tested. (IAH)

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ED346051

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(Paper prepared for presentation at the annual meeting
of the American Educational Research Association
April, 1992)

Jack R. Fraenkel
San Francisco State University

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JOINT VS. SINGLE SUPERVISION

Jack R. Fraenkel
San Francisco State University

Traditional practice and word-of-mouth reports suggest that the university supervision of secondary-level student teachers in most teacher education programs in the United States is performed by a single individual, usually a Professor of Education. Descriptions of programs utilizing more than one supervisor in some form of joint or shared supervision remain rare.¹ A review of the teacher education literature over the last ten years revealed only a few reports of joint or shared supervision of student or intern teachers by university professors (Bickel & Artz, 1984; Hayes, 1990; Kirchhoff, 1989; Peters, 1985; Keese, 1987). Unfortunately, most of these were descriptions of what might be done rather than empirical studies of what happened when a joint supervision model of some form or another was instigated.

Accordingly, the Departments of Secondary Education, Music, Physical Education, Mathematics and English at San Francisco State University (SFSU), supported by released time (for participating faculty) decided to experiment with a form of joint supervision during the academic years 1989-90 and 1990-91.

After consultation with an advisory group of representatives from each of these participating departments, the author developed a variety of instruments to use in order to collect both quantitative and qualitative data. After a series of meetings, the advisory group agreed to the following assessments:

¹ I am referring here to university supervision. All teacher education programs of which I am aware (certainly the programs at San Francisco State) involve the use of resident (often called cooperating or "master") teachers at the school site who also supervise and who work with student teachers as a regular part of the student teaching experience.

• Quantitative assessment. A questionnaire² was administered to all of the students (n=20) who were jointly supervised, as well as to all of those (n=85) who were not jointly supervised, during during the Spring semester. The only students that could be compared directly, however, were those doing their student teaching in the areas of Mathematics and English (jointly supervised, n=12; non-jointly supervised, n=34), since none of the students in other subject areas were jointly supervised. A mailed questionnaire was also sent to all of the cooperating teachers (n=42) and university supervisors (n=15) participating in the project, 22 (52%) and 15 (100%) respectively being returned.

• Qualitative assessment. In-depth interviews, using a standardized interview schedule form, were conducted with randomly selected samples from the following groups:

- four cooperating teachers (CT), one each in the areas of Music, Physical Education, Mathematics, and English;

- five student teachers (ST), one each in the areas of Music, Physical Education, Mathematics, plus two in English, who were supervised jointly during the Spring semester;

- four general education university supervisors (Edsups) teaching in the Department of Secondary Education; and

- four subject area university supervisors (SAsups), one each from the Departments of Music, Physical Education, Mathematics, and English.

Each interview was conducted by the author and lasted for approximately 20 minutes.

² Copies of any of the evaluation instruments may be obtained by writing the author c/o the Research and Development Center, School of Education (Burk Hall 238), San Francisco State University, San Francisco, CA 94132.

RESULTS: JOINTLY SUPERVISED PARTICIPANTS

1. Student Teachers

A. Distributed Questionnaire Responses (n=20). During the month of May, a questionnaire was administered to all of the ST who were in the program during the Spring, 1991 semester (n=105). Twenty of these were jointly supervised (9 in English, 7 in Physical Education, 3 in Mathematics, and 1 in Music). Of the 85 remaining who were not jointly supervised, 34 were supervised in the subject matter areas of Mathematics and English, and constituted a comparison group with the 12 students in Mathematics and English who were jointly supervised. There were no PE or Music students who were not jointly supervised.

Using a scale of 1 to 4, students were asked to respond to 20 questions that the joint supervision advisory committee felt were important topics that would be covered by the University supervisors during the course of the academic year. The questionnaire given to the jointly supervised student teachers (JSST) is reprinted below as Figure 1, with the number checking each option shown in the boxes following the option, or, for question #4, in parentheses following the question.

For the most part (n=14), the JSST reacted positively to the fact of having two supervisors, although it should be noted that six of the 20 (30%) checked "not at all," or "not enough to make any difference" in responding to question #1. Likewise, 16 (80%) indicated that they liked being supervised jointly (at least somewhat), with only 4 (20%) indicating they did not like it or liked it only a little.

Figure 1

Questionnaire
Joint Supervision Project—Student Teachers

What is the subject area in which you are student teaching?

Social studies Mathematics English Science PE Music Art
 Business Languages

Directions: During the past semester, you were supervised jointly by both a Professor of Education and a Professor in your subject area. In the questions which follow, please indicate your feelings about such joint (as opposed to single) supervision by circling the alternative that best indicates your views.

1. I felt that it affected my teaching performance

1 <input type="checkbox"/> 1	2 <input type="checkbox"/> 5	3 <input type="checkbox"/> 0	4 <input type="checkbox"/> 14
not at all	not enough to make any difference	negatively	positively

2. To what extent did you like being supervised jointly?

1 <input type="checkbox"/> 1	2 <input type="checkbox"/> 3	3 <input type="checkbox"/> 7	4 <input type="checkbox"/> 9
not at all	a little	somewhat	very much

3. To what extent were you satisfied with:

(a) the content module that you took with your subject area supervisor?

1 <input type="checkbox"/> 0	2 <input type="checkbox"/> 7	3 <input type="checkbox"/> 8	4 <input type="checkbox"/> 5
not at all	a little	somewhat	very much

(b) the Secondary Education 652 Student Teaching Seminar?

1 <input type="checkbox"/> 1	2 <input type="checkbox"/> 4	3 <input type="checkbox"/> 7	4 <input type="checkbox"/> 8
not at all	a little	somewhat	very much

4. Approximately how often did each of your supervisors see you teach?

secondary education supervisor (x=No. of times) 2x=4; 3x=4; 4x=3; 5x=1; 7x=3; 8x=4

subject area supervisor (x=No. of times) 2x=1; 3x=5; 4x=6; 5x=2; 6x=2; 8x=2; 12x=1; 15x=1

The JSST were also, in the main, satisfied with the content module they took with their subject area supervisor, although not overwhelmingly so. Only five (25%) checked "very much," while 8 (40%) checked "somewhat" and 7 (35%) checked "a little." They seem to be somewhat more satisfied with their student teaching seminar (SE 652), in that 15 (75%) checked either "very much" or "somewhat," with four checking "a little" and one checking "not at all."

The number of times that both the Edsups and the SAsups observed these students teach varied considerably, ranging from a low of 2 to a high of 8 times for the Edsups (7 students indicated they were observed either 7 or 8 times by their education supervisors), and a low of 2 times to a high of 15 times for the SAsups (2 students indicated they were observed 8 times by their subject area supervisor, 1 student indicated 12 times and another 15 times). The mean number of times the JSST were observed by their Edsups was 4.737; by their SAsups, 5.455.

The remainder of the JSST questionnaire is shown in the continuation of Figure 1 which follows

Figure 1 (continued)

Questionnaire
Joint Supervision Project--Student Teachers

5. Listed below are a number of topics on which ST might receive advice during student teaching. Please place a check in the box following the topics on which you received such assistance from one or both of your supervisors (education and/or subject area). Then, for the areas of assistance you have checked, rate the quality of the advice using the following scale:

1 2 3 4
 poor fair good excellent

Topic	I received help from my Education supervisor on this topic	My rating of the quality of the advice I received				I received help from my subject area supervisor on this topic	My rating of the quality of the advice I received			
		1	2	3	4		1	2	3	4
a. personal feelings about Education	<input type="checkbox"/> y18 <input type="checkbox"/> n2	0	2	6	10	<input type="checkbox"/> y13 <input type="checkbox"/> n7	0	1	6	6
b. classroom management	<input type="checkbox"/> y19 <input type="checkbox"/> n1	0	5	6	8	<input type="checkbox"/> y13 <input type="checkbox"/> n5	1	1	6	7
c. individual student learning problems	<input type="checkbox"/> y16 <input type="checkbox"/> n4	0	3	4	9	<input type="checkbox"/> y18 <input type="checkbox"/> n2	0	3	9	6
d. organization of content (long range planning)	<input type="checkbox"/> y14 <input type="checkbox"/> n6	0	2	7	5	<input type="checkbox"/> y14 <input type="checkbox"/> n6	0	1	6	7
e. daily lesson planning	<input type="checkbox"/> y15 <input type="checkbox"/> n5	0	2	6	7	<input type="checkbox"/> y12 <input type="checkbox"/> n8	0	1	3	8
f. accuracy of subject matter presented in lessons	<input type="checkbox"/> y9 <input type="checkbox"/> n11	0	2	1	6	<input type="checkbox"/> y16 <input type="checkbox"/> n4	0	2	5	9
g. subject matter selection	<input type="checkbox"/> y11 <input type="checkbox"/> n9	0	3	3	5	<input type="checkbox"/> y12 <input type="checkbox"/> n8	0	2	4	6
h. evaluation of student achievement	<input type="checkbox"/> y14 <input type="checkbox"/> n6	0	1	9	4	<input type="checkbox"/> y13 <input type="checkbox"/> n6	0	2	4	7
i. adjusting lessons to account for cultural differences	<input type="checkbox"/> y15 <input type="checkbox"/> n5	0	0	5	10	<input type="checkbox"/> y7 <input type="checkbox"/> n13	0	2	2	3

Topic	I received help from my Education supervisor on this topic	My rating of the quality of the advice I received				I received help from my subject area supervisor on this topic	My rating of the quality of the advice I received			
		1	2	3	4		1	2	3	4
j. teaching methods or techniques	y18 n2	0	1	7	10	y17 n3	0	1	5	11
k. resource identification	y15 n5	0	1	5	9	y13 n7	0	0	5	8
l. classroom learning environment -its effect on instruction	y18 n2	0	3	6	9	y13 n7	0	2	4	7
m. professional self-evaluation	y16 n4	0	1	8	7	y12 n8	0	0	6	6
n. relationship w/cooperating teacher(s)	y14 n6	0	0	6	8	y10 n10	1	1	2	6
o. individual student behavior problems	y18 n2	0	2	9	7	y14 n6	1	2	6	5

If you have any other comments that you wish to make, please write them on the back of this page. Thank you.

Figure 1 reveals that student teachers at SFSU did receive advice on the topics listed, and rated the advice they received highly. A sizable majority of the JSST indicated that they received advice on almost all of the topics listed from both their Edsups and their SASups. The only topic on which a majority of the JSST indicated they did not receive advice from their Edsup was "accuracy of subject matter presented in lessons;" the only topics on which a majority indicated they did not receive advice from their SASups were "adjusting lessons to account for cultural differences" and "relationship with cooperating teacher," and even in these three instances, 35 to 50 percent indicated that they did receive advice. Regarding the quality of the advice they received, the JSST rated both their Edsups and their SASups high (a majority

of "3s" and "4s") on every item on the questionnaire, a truly impressive response!

Furthermore, the Edsups had a majority of the ratings on the quality of their advice marked "excellent" on eight items, including personal feelings about Education, individual student learning problems, the accuracy of the subject matter presented in lessons, adjusting lessons to account for cultural differences, teaching methods or techniques, resource identification, the effects of the classroom learning environment on instruction, and the relationship with CT.

Similarly, the SAsups had a majority of the ratings on the quality of their advice marked "excellent" on eight items, including daily lesson planning, the accuracy of the subject matter presented in lessons, evaluation of student achievement, teaching methods or techniques, resource identification, the effect of the classroom learning environment on instruction, and the relationship with CT.

Neither group of supervisors were ranked low (i.e., receiving, on the average, more 1s and 2s than 3s and 4s) on any topic.³ The only topic that received anything near a sizable number of low responses was the topic of classroom management (5 individuals checked "fair" for this topic) for the Edsups.⁴

It is instructive to compare how the jointly supervised students rated the quality of supervision by their Education and subject area professors. Table 1 presents a comparison of overall student satisfaction with their student teaching seminar and their subject area module. Table 2 presents a

³ This was a marked improvement over the previous year when there were several items ranked low for both education and subject area advisors.

⁴ This was somewhat surprising, since the topic is one that is frequently cited by Education professors as one of the areas in which their expertise would be most apparent.

comparison of the number of times the Education and subject area professors observed their ST.

Table 1 Student Ratings of Extent of Overall Satisfaction with Student Teaching Seminar and Subject Area Module Spring 1991 Semester ⁵		
<u>Student Teaching Seminar</u>	<u>Subject area content module</u>	<u>Difference</u>
3.1 (.912)	2.9 (.788)	.20 E.S.=.25 ⁶

Table 2 Student Ratings of Number of Times Supervisors Observed Spring 1991 Semester		
<u>Education Supervisor</u>	<u>Subject area supervisor</u>	<u>Difference</u>
4.737 (2.377)	5.3 (3.262)	.563 E.S.=.17

The difference in satisfaction and times observed as shown in Tables 1 and 2 is not statistically significant. Put differently, there appears to be no real difference in how satisfied the JSST were with their student teaching seminar and subject area content module, or in how often they were observed by their two supervisors.⁷The comparative ratings for each of the remaining items on the questionnaire are shown in Table 3.

⁵Mean ratings are shown, with standard deviations in parentheses.

⁶E.S. stands for effect size. Effect size is calculated by dividing the difference in means by the standard deviation of the comparison group. An E.S. of .50 or higher is considered to be important, and indicative of a real difference (as opposed to one produced by chance fluctuations in the data).

⁷Whether an average of approximately five times is good or bad so far as the number of observations goes could not be determined, since all of the supervisors interviewed were not clear as to the number of times they were expected to observe by the project.

Table 3 Student Ratings of the Quality of Supervision by Education and Subject Area Professors Spring 1991 Semester			
Topic	Jointly Supervised Mathematics & English Student Teachers (n=12) Mean ratings of the quality of advice they received from Education professors	Jointly Supervised Mathematics & English Student Teachers (n=12) Mean ratings of the quality of advice they received from subject area professors	Diffrence Btwn Ed/SubM ratings (E.S.) ⁸
Personal feelings about Education	3.444 (.705)	3.385 (.65)	.059 (.91)*
Classroom management	3.15 (.834)	3.267 (.884)	-.117 (.13)
Individual student learning problems	3.375 (.806)	3.167 (.707)	.208 (.29)
Organization of content (long range planning)	3.214 (.699)	3.429 (.646)	-.25 (.33)
Daily lesson planning	3.333 (.724)	3.583 (.669)	.25 (.37)
Accuracy of subject matter presented in lessons	3.444* (.882)	3.444 (.727)	0 (0)
Subject matter selection	3.182 (.874)	3.333 (.778)	-.151 (.21)
Evaluation of student achievement	3.214 (.579)	3.385 (.768)	-.171 (.22)
Adjusting lessons to account for cultural differences	3.667 (.488)	3.143* (.9)	.524 (.58)*
Teaching methods or techniques	3.5 (.618)	3.588 (.618)	-.088 (.14)
Resource identification	3.533 (.64)	3.615 (.506)	.082 (.16)
Classroom environment -its effect on instruction	3.333 (.767)	3.385 (.768)	.052 (.07)
Professional self-evaluation	3.375 (.619)	3.5 (.522)	-.125 (.24)
Relationship. with CT	3.571 (.514)	3.3 (1.059)	.271 (.256)
Individual student behavior problems	3.278 (.669)	3.071 (.917)	.207 (.23)

⁸ An asterisk (*) after a difference indicates it is deemed important.

As Table 3 reveals, on none of the topics on the questionnaire did either group of professors receive a mean rating lower than 3.00. There were only two items on which the ratings of Education and subject area professors differed significantly. These were personal feelings about Education, and adjusting lessons to account for cultural differences. In both instances, students rated the advice of Education professors higher than they did the subject area professors. In all other instances, there were no statistically significant differences between how students perceived the quality of the advice they received from the two groups of professors.

B. Responses during the one-on-one interviews (n=4). A randomly selected sample of five of the ST⁹ was also asked to respond to four questions. The questions, with a brief summary of the responses to each, are presented below:

1. In what subject area are you student teaching? English=2, PE=1, Mathematics=1, Music=1

2. To what extent has joint supervision been beneficial to you?

a major hindrance	a minor hindrance	no effect	a minor asset	a major asset
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Comments: Three checked "a major asset," two checked "a minor asset." Similar to last year, all five respondents indicated that having two supervisors was beneficial to them in that they were observed by someone who knew the subject they were teaching and hence could respond to specific content-related questions, whereas the general (education) supervisor was not always able to do this (this was emphasized especially by the Music and PE ST). Of some concern is the statement, also revealed in some of the comments on the questionnaire, that the English supervisor only observed twice, although the quality of her remarks were considered quite good.

3. To what extent were you satisfied with:

(a) the content module that you took with your subject area supervisor?

1	2	3	4
not at all	a little	somewhat	very much

Comments: No consistency was shown here. One student checked "not at all;" one checked "a little;" one checked "somewhat;" and two checked "very much." The major criticism was that the subject area professor was not practical enough, and did not know what the real world of public school teaching was like.

⁹ To ensure that at least one student teacher from each of the four content areas was interviewed, at least one individual was randomly selected from each of the four areas.

(b) the Secondary Education 652 Student Teaching Seminar?

1	2	3	4
not at all	a little	somewhat	very much

Comments: Responses were not only more consistent here, but overall slightly more positive. Four students checked "somewhat," and one checked "very much." The chief complaint here was that the professor did not have enough time to offer specific comments and advice.

4. Approximately how often did each of your supervisors see you teach?
 my secondary education supervisor? Range: 2-8; mean=4.6
 my subject area supervisor? Range: 2-12; mean=5.4

5 What specific advantages, if any, do you see resulting from joint supervision?

Comments: The response here was exactly the same as last year, with general agreement here on two points: they would be observed more often, and they would receive more than one viewpoint as to how to teach effectively. One ST remarked that having two supervisors meant that she could have her questions answered more quickly than might otherwise be the case.

6. Please give some specific illustrations, if you can, of how joint supervision has been helpful to you

Comments: Respondents offered a variety of examples, ranging from "dealing with a hyperactive child," to "advice on my conducting style" (Music) to "giving me tips of how to maintain discipline" to "assistance with setting up activity drills" (PE). The comments about help on conducting and setting up activity drills were also made last year.

7 What specific disadvantages or problems, if any, do you see resulting from joint supervision?

Comments: Three said they felt there was a lack of coordination between their education and subject area supervisor. One remarked that her subject area supervisor (English) only visited her twice. One felt that the remarks of his Education supervisor were too general. Two answered "none" when asked this question.

2. Cooperating Teachers

A. Mailed Questionnaire Responses (n=22). The CT were asked to respond to three questions using a scale of 1 to 4. The questions were as follows (number checking each option is shown in box below that option):

1. To what extent have your views on supervision changed as a result of this project?

1	2	3	4
not at all	not enough to make any difference	enough to affect my supervision	substantially
<input type="checkbox"/> 4	<input type="checkbox"/> 10	<input type="checkbox"/> 4	<input type="checkbox"/> 1

2. To what extent has this project affected your supervisory behavior?

1	2	3	4
not at all	not enough to make any difference	enough to affect my supervision	substantially
<input type="checkbox"/> 1	<input type="checkbox"/> 11	<input type="checkbox"/> 7	<input type="checkbox"/> 0

3. How would you judge the impact of this project on the supervision of student teachers?

1	2	3	4
a negative impact	virtually no impact	some improvement	major improvement
0	4	11	4

Means for each question are shown in Table 4.

Question	Total Group (n=22)	English## (n=9)	Physical Education (n=7)#	Mathematics (n=2)*	Music (n=2)*	Other (n=2)*
Views changed	2.105 (.809)	2.286 (.756)	1.833 (.753)	1.50 (.707)	3.00 (1.414)	2.0 (0)
Suprvsory behavior affected	2.316 (.582)	2.571 (.535)	2.00 (.632)	2.5 (.707)	2.5 (.707)	2.0 (0)
Project impact	3.105 (.567)	3.0 (.577)	3.167 (.408)	3.5 (.707)	3.5 (.707)	2.33 (.222)
Times Suprvsd**	3.818 (0-12)	4.667 (0-12)	3.714 (0-12)	1.00 (0-2)	5.5 (1-10)	

#One respondent did not mark any of the questions

##Two respondents did not mark any of the questions

*Note that the number of students in these groups is only two, and hence any conclusions drawn must be tentative at best.

**The numbers in parentheses in this row indicate the range.

The data in Table 4 reveal that the CT did not, on the average, feel that their views on supervision were changed as a result of the project, nor that the project affected their supervisory behavior. They did feel that the project produced some improvement in the supervision of ST overall.

Furthermore, there is no significant difference between the responses of the group as a whole, and any of the disciplinary sub-groups. To a considerable extent, this was due to the fact (as revealed in the one-on-one interviews) that the CT felt they were not asked to behave any differently than they behaved when they supervised singly, nor that the logistics of the

project required them to behave differently than they always had.¹⁰ In essence, all of the CT stated that the way in which they were actually supervising their ST was not any different than it had ever been.

By way of contrast, the CT did feel that the impact of the project on the supervision of student teachers had resulted in some improvement in supervision. Although they felt that the project had not affected their views on supervision or their supervisory behavior, they did feel, for the most part, that the ST received better supervision in that they were getting more supervision from the university. Again, there is no statistically significant difference between the responses of the group as a whole, and any of the disciplinary sub-groups

It should be noted that there were several comments written on the returned questionnaires that revealed some ambivalence among the CT as to the impact of the project, however. These comments were also brought out in the one-on-one interviews. Five of the CT responding to the mailed questionnaire felt that the program was not as well organized as it might be, that some of the ST were not well-enough prepared to deal with today's students, and that the content of the program was too theory-oriented (although they were not always clear as to what they meant by "theory"). Of some concern was the fact that four CT reported that they had little contact with their subject matter supervisor--one said that she had never seen the subject matter supervisor, while another said the supervisor came only twice, both times without notice (both of these comments pertained only to professors supervising in the area of English). These comments by CT were reinforced by ST during the one-on-one interviews. Supervision in the areas

¹⁰This can be explained somewhat perhaps by the fact that the definition of "joint supervision" in this project was two supervisors observing the same student, but not necessarily jointly or even separately at different times on the same date.

of PE and Music were commented on most favorably by both CT and ST. Three CT did not respond to any of the questions on the questionnaire.

B Responses during one-on-one interviews (n=4). A randomly selected sample of four of the CT¹¹ was also asked to respond to four questions. The questions, with a brief summary of the responses to each, are presented below:

1. What specific advantages, if any, for university supervision of student teachers do you think this project provides?

Comments. Similar to the previous year, respondents unanimously stated that the major advantage of joint supervision was that the ST received more than one point of view, and hence more than a single set of insights from university people concerning how to teach. In addition, the PE and Music CT stated (again, repeating what was said last year) that supervision by a content specialist was essential in their areas since the EdSup was unlikely to know much about (for example) conducting (in Music), or specialized activity movements and drills (in PE)

2. What specific advantages, if any, for your own on-site supervision of student teachers do you think this project provides?

Comments. Responses were more positive here than they were during the previous year. Three felt that it helped them to upgrade their skills since they received more input from the university; one felt it enabled her to focus in more on classroom management since the student teacher would have more subject matter help from the university content person. One felt it helped him to be more aware of what was happening in a greater number of areas related to teacher education at SFSU.

3. What specific disadvantages or problems, if any, do you see resulting from this project?

Comments. Comments were mixed here. Two stated that they could not think of any disadvantages. One stated that he had not had any orientation to joint supervision, and that this would have been a big help. Similar to remarks made last year, all of the CT stated that they had never observed their student teacher jointly with either the Edsup or with the SAsup, nor had they had any joint meetings with the two university supervisors together.¹² One stated that she had never seen the subject matter supervisor; another that the SAsup came very infrequently (twice), and both times without notice.

4. How would you judge the impact of this project on the supervision of ST?

a negative impact	virtually no impact	some improvement	major improvement
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¹¹ To ensure that at least one cooperating teacher from each of the four content areas was interviewed, one individual was randomly selected from each of the four areas.

¹² This comment was also made last year, but it could not be ascertained during the interviews as to how the university supervisors were (or even if they were) expected to coordinate their supervision both between themselves and with the cooperating teachers. It also was not clear as to how many times the university supervisors were to visit the schools. As a result, the cooperating teachers might also have been unclear in this regard.

Comments: One circled "virtually no impact;" the other three circled "some improvement." All stated that they though joint supervision could have an impact, but two felt there had not been as much this year as last.

3. Education Supervisors

A. Mailed Questionnaire Responses (n=9). Participants were asked to respond to the same three questions as the CT, using a scale of 1 to 4. The questions were as follows (number checking each option is shown in box below that option):

1. To what extent have your views on supervision changed as a result of this project?

1	2	3	4
not at all	not enough to make any difference	enough to affect my supervision	substantially
1	6	1	1

2. To what extent has this project affected your supervisory behavior?

1	2	3	4
not at all	not enough to make any difference	enough to affect my supervision	substantially
4	4	1	0

3. How would you judge the impact of this project on the supervision of student teachers?

1	2	3	4
a negative impact	virtually no impact	some improvement	major improvement
0	2	6	1

Comments: In general, the education supervisors did not feel that their views on supervision were changed by participating in the project (a similar conclusion was reached last year), or that the project had affected their supervisory behavior¹³

B. Responses during the one-on-one interviews. Four general education supervisors from the Department of Secondary Education were asked to respond to six questions. The questions, with a brief summary of the responses to each, are presented below:

1. To what extent have your views on supervision changed as a result of this project?

¹³Again, one explanation for the statements of the Edsups in this regard might be that the project did not require either the Edsups or the SAsups to observe together, or to meet with each other or together with the CT to discuss the progress or lack thereof of their student teachers. The Edsups did not appear to be clear how (of if) they were expected to coordinate their supervision with either the SAsups or with the CT. It also was not clear as to how often either group of university supervisors was expected to visit the schools.

not at all not enough to make enough to affect substantially
 any difference my supervision

Comments. One respondent checked 'not at all;' and three checked "not enough to make any difference." All stated that the project did not produce any changes in their views of supervision; all four said that they had had little formal contact with the subject matter supervisor, although one said he did talk with his subject area counterpart on the telephone a few times. None stated that they observed together with the content supervisor, nor had they had any joint meetings with the content supervisor, the cooperating teacher, and the ST. All stated that there was no requirement in this regard, however, and that they did not entertain doing so.

2. To what extent has this project affected your supervisory behavior?

not at all not enough to make enough to affect substantially
 any difference my supervision

Comments. Two checked "not at all;" the other two checked "not enough to make any difference." All stated that their behavior, per se, was largely unaffected by the project. Reasons for this assessment were varied: they were overloaded, having a heavy load of ST to supervise (the same comment was made last year); they had little time to get together with or contact the subject area supervisor; they had not received any directions as to how, or if, they were to supervise (i.e., behave) differently than they had previously, and hence did not think that this was expected (a similar comment was made last year); one remarked that the project did reaffirm for him that anyone working with ST needed to have spent some time him/herself in the classroom recently.

3. How would you judge the impact of this project on the supervision of ST?

a negative virtually some major
 impact .no impact improvement improvement

Comments: Three checked "some improvement; one checked"virtually no impact." The general consensus, again similar to last year, was that having another source of ideas (i.e., a second supervisor) would be beneficial to the ST involved.

4 Have you supervised before? All four were experienced supervisors, and had observed many student teachers over many years (well over 100 each).

5 What specific advantages, if any, do you see resulting from joint supervision?

Comments: The general consensus was that students, ideally, would receive two differing sets of ideas about how to teach, they would be observed more frequently, and they would thus get more feedback.

6 What specific disadvantages or problems, if any, do you see resulting from joint supervision?

Comments:Remarks here included that it was costly, time-consuming, and difficult to schedule. One remarked that it really was not "joint" supervision, but rather "additional" supervision. One remarked that the expectations were not clear, and that coordination of efforts needed to be improved.

4. Subject Area Supervisors

A. Mailed Questionnaire Responses (n=6). Participants were asked to respond to the same questions as the Edsups, using a scale of 1 to 4. The questions were as follows (number checking each option is shown in box below that option):

1. To what extent have your views on supervision changed as a result of this project?

1	2	3	4
not at all	not enough to make any difference	enough to affect my supervision	substantially
<input type="checkbox"/> 1	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1

2. To what extent has this project affected your supervisory behavior?

1	2	3	4
not at all	not enough to make any difference	enough to affect my supervision	substantially
<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 0

3. How would you judge the impact of this project on the supervision of student teachers?

1	2	3	4
a negative impact	virtually no impact	some improvement	major improvement
<input type="checkbox"/> 0	<input type="checkbox"/> 0	<input type="checkbox"/> 2	<input type="checkbox"/> 4

Comments: In general, the SASups were more positive than the Edsups. Two felt that their views on supervision were changed by the project, that the project had affected their supervisory behavior, and all six felt that the project did bring about improvement in the supervision of student teachers.

B. Responses during the one-on-one interviews. Participants were asked to respond to the same six questions asked of the education supervisors. The questions, with a brief summary of the responses to each, are presented below:

1. To what extent have your views on supervision changed as a result of this project?

not at all	not enough to make any difference	enough to affect my supervision	substantially
------------	--------------------------------------	------------------------------------	---------------

Comments. One respondent checked "not at all;" two checked "not enough to make any difference;" and one checked "enough to affect my supervision." All indicated that they had supervised in the past, and they were not doing anything differently than they had before. One indicated that she had participated at another university in a joint project, but she did not consider what was being done at SFSU to be joint supervision..

The Edsups and the SAsups did not differ in their views of the extent to which their views on supervision were changed, or the extent the project affected their supervisory behavior. The SAsups, however, did feel that the project had more of an impact on the supervision of ST than did the Edsups.

RESULTS: THE NON-JOINTLY SUPERVISED STUDENTS

Distributed Questionnaire Responses (n=85). In contrast to the 1989-90 academic year, the responses of the jointly supervised students were compared with a similar group of students who were not jointly supervised. An identical questionnaire was administered to all of the students (n=85) who were not jointly supervised during the 1990-1991 academic year.

Students were asked to respond to the same questions as those asked of the jointly supervised students, using a scale of 1 to 4. The questionnaire given to the non-jointly supervised student teachers is reprinted below as Figure 2, with the number checking each option shown in the boxes following the option.

Figure 2

Student Teacher Questionnaire

What is the subject area in which you are student teaching? _____
 31 Social Studies 13 Mathematics 21 English 7 Science 6 Art
 1 Business 6 Languages 0 PE

Directions: During the past semester, you were supervised by a Professor of Secondary Education. In the questions which follow, please indicate your feelings about such supervision by circling the alternative that best indicates your views.

- I felt that it affected my teaching performance

<input type="checkbox"/> 9	<input type="checkbox"/> 19	<input type="checkbox"/> 1	<input type="checkbox"/> 56
not at all	not enough to make any difference	negatively	positively
- To what extent was supervision beneficial to you?

<input type="checkbox"/> 11	<input type="checkbox"/> 19	<input type="checkbox"/> 28	<input type="checkbox"/> 27
not at all	a little	somewhat	very much

3. To what extent were you satisfied with the Sec. Ed. 652 Student Teaching Seminar?

16	21	24	24
not at all	a little	somewhat	very much

4. Approximately how often did your supervisor see you teach? (x=number of times)

0x 1 1-2x 17 3-4x 31 5-6x 20 7-8x 10 10x 1 15x 4

In the main, the non-jointly supervised student teachers (NJSST) felt that supervision by their Education professor positively affected their teaching performance, although it should be noted that 29 of the 85 (34%) checked "not at all," "not enough to make any difference;" or "negatively," although only one checked "negatively" in responding to question #1. The response to question #1 was supported by the responses to question #2, with 55 (65%) indicating that they felt supervision was beneficial to them at least somewhat, and 30 (35%) indicating they did not feel it was beneficial, or that they benefitted only a little.

The NJSST were also, more often than not, satisfied with their student teaching seminar (Sec Educ. 652), although not overwhelmingly so. Twenty-four (28%) checked "very much," 24 (28%) checked "somewhat," 21 (25%) checked "a little," but 16 (9%) checked "not at all."

The number of times the Edsups observed these students teach varied considerably, ranging from a low of 0 (n=1) to a high of 15 (n=4). The mean number of times the NJSST were observed was 4.8.

The remainder of the JSST questionnaire is shown in the continuation of Figure 2 which follows

Figure 2 (continued)

Questionnaire
Joint Supervision Project (NJSST)

5. Listed below are a number of topics on which student teachers might receive advice during student teaching. Please place a check in the box following the topics on which you received such assistance from your secondary education supervisor. Then, for the areas of assistance you have checked, rate the quality of the advice using the following scale:

1 2 3 4
 poor fair good excellent

Topic	I received help from my Education supervisor on this topic	My rating of the quality of the advice I received			
		1	2	3	4
a. personal feelings about Education	<input type="checkbox"/> y51 <input type="checkbox"/> n32	0	9	19	22
b. classroom management	<input type="checkbox"/> y71 <input type="checkbox"/> n11	4	15	32	22
c. individual student learning problems	<input type="checkbox"/> y54 <input type="checkbox"/> n30	3	14	24	12
d. organization of content (long range planning)	<input type="checkbox"/> y41 <input type="checkbox"/> n43	2	11	19	9
e. daily lesson planning	<input type="checkbox"/> y61 <input type="checkbox"/> n22	2	14	29	16
f. accuracy of subject matter presented in lessons	<input type="checkbox"/> y23 <input type="checkbox"/> n61	1	6	9	8
g. subject matter selection	<input type="checkbox"/> y18 <input type="checkbox"/> n65	1	3	10	16
h. evaluation of student achievement	<input type="checkbox"/> y52 <input type="checkbox"/> n31	3	8	22	20
i. adjusting lessons to account for cultural differences	<input type="checkbox"/> y52 <input type="checkbox"/> n30	2	14	18	19
j. teaching methods or techniques	<input type="checkbox"/> y76 <input type="checkbox"/> n7	4	11	29	33
k. resource identification	<input type="checkbox"/> y36 <input type="checkbox"/> n46	2	9	17	11
l. the classroom learning environment -its effect on instruction	<input type="checkbox"/> y65 <input type="checkbox"/> n17	2	18	25	22
m. professional self-evaluation	<input type="checkbox"/> y61 <input type="checkbox"/> n22	3	12	22	26
n. relationship with cooperating teacher(s)	<input type="checkbox"/> y54 <input type="checkbox"/> n28	1	7	22	26
o. individual student behavior problems	<input type="checkbox"/> y62 <input type="checkbox"/> n20	3	14	21	26

If you have any other comments that you wish to make, please write them on the back of this page. Thank you.

As was the case with the JSST, the non-jointly supervised students¹⁵ are receiving advice on the topics listed, although on most of the topics large numbers of students also indicated they did not receive advice. Furthermore, on four topics ("organization of content," "accuracy of subject matter presented in lessons," "subject matter selection," and "resource identification," more students indicated they did not receive advice from their supervisor that indicated they did. As to the quality of the advice they received, the supervisors of the NJSST were also rated high (a majority of "3s" and "4s") on every item on the questionnaire. Also encouraging is the fact that no more than four students (5%) rated the quality of the advice they were receiving from their Education supervisors as "poor," although this must be tempered somewhat by the previous observation that many students indicated they did not receive advice on many of these topics. In general, however, the conclusion seems inescapable that students at San Francisco State University rate the quality of the supervision they are receiving, whether they are jointly or non-jointly supervised, very high.

The supervisors of the NJSST were not ranked low (i.e., receiving, on the average, more 1s and 2s than 3s and 4s) on any topic. The only topics that received anything near a sizable number of even "fair" ratings were the topics of classroom management (15 students checked "fair" for this topic),¹⁶ individual student learning problems (n=14), daily lesson planning (n=14),¹⁷ adjusting lessons to account for cultural differences (n=14), the classroom learning environment (n=18), and individual student learning problems (n=14).

¹⁵Remember, these students were supervised by Education professors only.

¹⁶ Again, this is surprising, since the topic is one that is frequently cited by university professors as one of the areas in which the expertise of Educationists would be most apparent.

¹⁷Also somewhat of a surprise, for the same reason mentioned in footnote #16.

RESPONSES OF THE JOINTLY AND NON-JOINTLY SUPERVISED STUDENTS COMPARED

The only students that could be compared directly were those who did their student teaching in the areas of Mathematics and English (jointly supervised, n=12; non-jointly supervised, n=34) since no students in any of the other subject areas were jointly supervised. Table 6 presents a comparison of these students' ratings of the quality of the supervision they received from their Education supervisors.

Table 6 Jointly Supervised Student Ratings of Education Supervisors Compared with Non-Jointly Supervised Student Ratings (Mathematics and English Student Teachers Only) Spring 1991 Semester			
Topic	Jointly Supervised Mathematics & English Student Teachers.(n=12) Ratings of Quality of Supervision by Education Professors	Non-Jointly Supervised Mathematics & English Student Teachers.(n=34) Ratings of Quality of Supervision by Education Professors	Difference between JS/NJSs ratings (E.S.) ¹⁸
Felt supervision affected my teaching performance	3.25 (1.138)	3.206 (1.149)	.04 (.04)
Extent liked being supervised/felt it beneficial	3.083 (.993)	2.824 (1.086)	.259 (.24)
Extent satisfied with SE 652 Student Teaching seminar	3.583 (.669)	2.706 (1.115)	.877 (.79)
Number of times Education supervisor saw me teach	5.455 (1.968)	4.324 (2.421)	1.131 (1.01)*
Personal feelings about Education	3.583 (.669)	3.096 (.768)	.487 (.63)*
Classroom management	3.455 (.82)	2.815 (.834)	.64 (.77)*
Individual student learning problems	3.75 (.707)	2.857 (.793)	.893 (1.13)*
Organization of content (long range planning)	3.375 (.518)	2.692 (.855)	.683 (.80)*
Daily lesson planning	3.444 (.527)	2.864 (.889)	.58 (.65)*
Accuracy of subject matter presented in lessons	3.5 (.837)	3.00 (.816)	.50 (.61)*

¹⁸Again, E.S. stands for effect size, and an E.S. of .50 or higher is deemed to be important. An asterisk (*) after a number in the column below indicates the E.S. is important to consider.

Subject matter selection	3.25 (1.035)	3.00 (.682)	.25 (.37)
Evaluation of student achievement	3.222 (.667)	3.176 (.809)	.046 (.06)
Adjusting lessons to account for cultural differences	3.667 (.492)	2.864 (.774)	.803 (1.04)*
Teaching methods or techniques	3.667 (.651)	3.067 (.98)	.60 (.61)*
Resource identification	3.667 (.651)	2.769 (.927)	.898 (.97)*
Classroom learning environment -its effect on instruction	3.5 (.674)	2.923 (.845)	.577 (.68)*
Professional self-evaluation	3.556 (.726)	3.091 (.811)	.465 (.57)*
Relationship. with cooperating teachers	3.8 (.422)	2.957 (.825)	.843 (1.02)*
Individual student behavior problems	3.5 (.707)	3.00 (1.00)	.5 (.5)*

On 15 items, the Mathematics and English JSST were more satisfied than the Mathematics and English NJSST with the quality of the supervision given them by their Education Professors. They were more satisfied with the CE 652 student teaching seminar, personal feelings about education, classroom management, individual student learning problems, organization of content, daily lesson planning, accuracy of subject matter presented in lessons, adjusting lessons to account for cultural differences, teaching methods or techniques, resource identification, the effect of the classroom learning environment on instruction, professional self-evaluation, relationship with cooperating teachers, and individual student behavior problems.

Why the above differences should exist cannot be determined from the existing data. Some speculative possibilities can be suggested, however. It might be that the presence of another supervisor motivated the Education professors who jointly supervised to do more than they otherwise might, and that their students perceived this. Another possibility is that the JSST, having two supervisors, transferred the fact of having more supervision into a

feeling of satisfaction with their supervision in general, no matter from whom they were receiving it. Lastly, of course, it may simply be a fact that the Mathematics and English students who were jointly supervised did actually receive better supervision than the Mathematics and English students who were not jointly supervised. This speculation is somewhat borne out by the fact that the difference in satisfaction with the quality of advice they were receiving is not nearly so marked for the remaining students, as Table 7 reveals.

Table 7 Comparative Ratings (Means and Standard Deviations) Joint and Non-Joint Supervision by Education Professors (All Other Subject Areas Other Than Mathematics & Science) Spring 1991 Semester			
Statement	Jointly Supervised All other subject areas (n=8) Ratings of Education Professors Supervision	Non-Jointly Supervised All other subject areas (n=51) Ratings of Education Professors Supervision	Difference between JS/NJSs ratings (E.S.)
Felt supervsn affected my teaching performance	3.5 (.926)	3.235 (1.124)	.265 (.24)
Extent liked being supervised	3.375 (.744)	2.843 (.987)	.532 (.54)*
Extent satisfied with SE 652 ST seminar vs. cont. module	2.375 (.744)	2.267 (1.076)	(.108 (.10)
Number of. times ED supervisor saw me teach	3.75 (2.659)	5.16 (3.437)	-1.41 (.41)
Personal feelings about Education	3.167 (.753)	3.379 (.728)	-.20 (.29)
Classroom management	2.75 (.707)	3.087 (.865)	.34 (.39)
Individual student learning problems	3.00 (.756)	3.394 (3.278)	-.394 (.21)
Organization of content (long range planning)	3.00 (.894)	2.929 (.813)	.071 (.09)
Daily lesson planning	3.167 (.983)	3.026 (.743)	.141 (.19)
Accuracy of subject matter presented in lessons	3.333 (1.155)	3.00 (.935)	.333 (.36)
Subject matter selection	3.00 (0)	3.071 (.917)	.071 (.08)
Evaluation of student achievement	3.2 (.447)	3.083 (.906)	.117 (.13)

Adjusting lessons to account for cultural differences	3.667 (.577)	3.129 (.957)	.538 (.56)*
Teaching methods or techniques	3.167 (.408)	3.255 (.793)	-.09 (.11)
Resource identification	3.00 (0)	3.038 (.824)	-.038 (.05)
Classroom environment -its effect on instruction	3.00 (.894)	3.049 (.865)	-.049 (.06)
Professional self-evaluation	3.146 (.378)	3.146 (.937)	0 (0)
Relationship with cooperating teachers	3.00 (0)	3.515 (.617)	-.545 (.88)*
Individual student behavior problems	3.00 (.535)	3.146 (.853)	-.146 (.17)

The only items which registered a significant difference were adjusting lessons to account for cultural differences and relationship with cooperating teacher. Interesting, the latter registered a negative difference, that is, the NJSST were more satisfied here than were the JSST.

Summary

In sum, the general reactions of the CT, the ST, and the SASups participating in the joint supervision project during the Spring semester of the 1990-1991 academic year were positive. The Edsups were essentially neutral. For all groups, the idea of the project was one they endorsed, although some confusion over the expectations of the project remained for some CT.

All of the ST applauded the idea of having more than one supervisor,¹⁹ although they stated they were never supervised by both of their university supervisors together. All of the subject area supervisors were in favor of the idea, although they admitted that they had not supervised with the education supervisor so much as they had supervised in addition to the

¹⁹This endorsement needs to be taken with a grain of salt, however, since it seems only logical that for a ST to get more advice (as would be the case with two supervisors) would most likely be perceived positively.

education supervisor. Some individuals in all groups were still unclear as to what the specific expectations of the project were.

One disturbing note was that some of the CT and ST remarked that the subject area supervisor had not observed the ST (or had only observed them twice) over the course of the semester.

As used in this project, the term "joint supervision" was assumed to mean that STs would be observed by two supervisors. As revealed in the one-on-one interviews with all groups, however, many participants were not clear as to whether such observation was to occur at the same or different times, and/or if they were to confer with their counterparts on a regular basis. As it happened, all of the JSSTs were observed at different times by their supervisors, and for the most part, it appears, with considerable approval by many of the individuals in all four of the groups involved (the CT, the ST, the Edsups, and the SAsups).

Conclusions

A number of conclusions were drawn by the project evaluator, based on an overall analysis of both the qualitative and quantitative data obtained. The more salient include the following:

- Student teachers in the Secondary Education program at SFSU, whether jointly or non-jointly supervised, rated the quality of their supervision by both Education and subject area professors highly.

- Most of the student teachers who participated in the project indicated that joint supervision affected their teaching performance in a positive way, although there was a sizable minority who indicated that it did not affect their performance enough to make any difference.

- Students participating in the project did not perceive any significant difference in the quality of their Education seminar and subject matter

module that dealt with pedagogy, although there were a few more "very satisfied" with the Student Teaching Seminar than with the subject area content module.

- With only minor exceptions, students participating in the project did not perceive any significant difference in the quality of the advice they received from their Education and subject area supervisors.

- There was no statistically significant difference in the number of times the Education and subject area supervisors observed their student teachers.

- Some student teachers as well as cooperating teachers stated that there were some subject area professors who either did not observe at all, or observed only twice.

- A greater percentage of the jointly supervised student teachers than the non-jointly supervised student teachers received advice on the topics listed in Figures 1 and 2 in this paper.

- Most of the participating student teachers, cooperating teachers, and subject area supervisors viewed the project as a positive influence, although there were a few dissenters among the students and the cooperating teachers; the Education supervisors were essentially neutral.

- No statistically significant differences in the ratings of their supervision were found between the group of jointly supervised student teachers as a whole, and any of the disciplinary subgroups (English, PE, Mathematics, and Music).

- Almost all of the Education supervisors, and some of the subject area supervisors, remarked that the project did not change the way they supervised. One explanation for this remark may be due to the fact that joint supervision, as defined in this project, meant parallel supervision--that is, a

student teacher was given two supervisors (one in the subject area, one in Education) who supervised independently. As a result, a majority of the cooperating teachers (and some of the Education supervisors) who were interviewed indicated that they had no regular, systematic interchange with the subject matter supervisor with whom they shared a student teacher.

In essence, the efficacy of joint supervision of secondary student teachers remains untested, if by such a term we mean two or more supervisors jointly observing (and otherwise cooperating) a student teacher together, that is, at the same time. Due to a flaw in the design of the current study (or perhaps due to the definition of joint supervision conceptualized and agreed to by the planning committee), this kind of supervision was not investigated. Shared supervision, however, as the results of this study suggest, does appear to "work," in the sense that it received high praise from almost all of those who participated. As was mentioned previously, however, this finding is in keeping with common sense. One would be much surprised to find that student teachers did not react positively to having an additional supervisor. Whether they would react the same way to having two supervisors observing them jointly remains to be seen.

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