

1995 NASA/ASEE SUMMER FACULTY FELLOWSHIP PROGRAM
JOHN F. KENNEDY SPACE CENTER
UNIVERSITY OF CENTRAL FLORIDA

512-80
7752
p. 30

EVALUATION METRICS OF
EDUCATIONAL PROGRAMS FOR TEACHERS

Dr. Gwendolyn D. Mitchell
Assistant Professor
Vocational and Adult Education Department
Auburn University
Auburn, Alabama

KSC Colleague - Steve Dutczak
Public Affairs

Contract Number NASA-NGT-60002
Supplement 19

August 23, 1995

ACKNOWLEDGMENTS

This summer experience has been both personally and professionally rewarding. Several people are responsible. To Kari Stiles and Dr. Ray Hosler, thanks for implementing an organized and comprehensive program. To Dr. Steve Dutczak, thank you for providing a comfortable work space and assistance with an interesting project. Thanks Holly for all of your assistance, especially with the computer. To the entire ESB staff, thanks for providing a pleasant work environment.

ABSTRACT

A system for evaluating the teacher programs and services in the Education Services Branch was developed. The primary stakeholder was interested in determining the worth or usefulness of these services to educators. Therefore, two instruments were developed to collect the data. One questionnaire was administered. Data was collected, analyzed and reported. The other questionnaire was pilot tested and will be administered to teachers during the school year.

SUMMARY

Each year, the Education Services Branch (ESB) provides educational services to nearly 1500 educators. Program evaluation is needed to insure that these services continue to meet the needs of teachers.

Two instruments were designed to evaluate the workshops, curriculum updating materials, and Educator's Resource Center (ERC). Questionnaire #1 was designed to gather data on teachers' attitude toward the workshop and ERC. The second questionnaire was developed to gather data on teachers' usage of resource materials and desire for additional training.

The first questionnaire was administered to the Summer Teacher Enhancement Program (STEP) and the University of South Florida (USF) groups on the last day of their workshops. The evaluation data revealed that both groups had a positive attitude toward the workshop and ERC. Both groups also shared several common responses and recommendations for program improvement.

The second questionnaire was field and pilot tested, not administered. There was a low return rate from the educators. Since the pilot test may be representative of the actual study, measures should be taken to induce a high response rate.

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
	ACKNOWLEDGMENTS	ii
	ABSTRACT.....	iii
	SUMMARY	iv
	TABLE OF CONTENTS	v
I.	INTRODUCTION AND DESCRIPTION	1
1.1	Teacher Workshops	1
1.1	Curriculum Updating Materials	1
1.1	Educator's Resource Center	1
II.	EVALUATION MODEL	2
2.1	Step 1. Formulate Evaluation Questions	2
2.2	Step 2. Construct Evaluation Designs	3
2.3	Step 3. Plan Information Collection	3
2.4	Step 4. Collect Evaluation Information	3
2.5	Step 5. Conduct Information Analysis	4
2.5.1	STEP	6
2.5.2	USF	10
2.6	Step 6. Report Evaluation Information	12
2.7	Step 7. Manage the Evaluation	12
III.	CONCLUSION AND RECOMMENDATIONS.....	14
IV.	REFERENCES	15
	APPENDIX A	
	Aerospace Workshop Evaluation	16
	APPENDIX B	
	Aerospace Teacher's Kit Evaluation.....	18
	APPENDIX C	
	Cover letter to the pilot group	20
	APPENDIX D	
	Cover letter to the pilot group	22

INTRODUCTION AND PROGRAM DESCRIPTION

KSC has many resources available to current and future educators. The Public Affairs Office, Education Services Branch (ESB) provides aerospace workshops, curriculum updating materials, and an Educator's Resource Center to help teachers gain practical aerospace information and experiences. A description of these services is as follows:

Teacher Workshops

Various workshops are offered to help teachers gain a greater understanding of space and aeronautics. The length of these workshops ranges from one to four weeks in the summer and as short as four hours during the school year. Some workshops are held for local teachers. Other workshops include participants from all over the country.

The NASA Education Workshop for Math and Science Teachers (NEWMAST) is targeted toward math, science and technology teachers of grades 7-12. The NASA Education Workshop for Elementary School Teachers (NEWEST) is geared toward teachers of grades 1-6. The Pre-teacher Program is for college students who plan to become teachers. The Summer Teacher Enhancement Program (STEP) is designed for teachers of all subjects and grades.

Other workshops are held for professionals who are interested in being certified to teach. This group includes students from the University of South Florida (USF) and other institutions.

Curriculum Updating Materials

A teacher kit is available to all educators. This kit contains numerous brochures, booklets and audio-visual information on the American space program and the Kennedy Space Center. These publications are designed to help educators update textbook materials as well as provide new aerospace-related information. The purpose of disseminating this information is to assist teachers with incorporating aerospace into their classroom activities and lessons.

Educator's Resource Center

The Educator's Resource Center (ERC) houses a variety of aerospace information. Educators can duplicate all materials, including videotapes, slides, books and other publications, audio cassettes, photographs, laser disks, computer software, and lesson and activity plans. There is no charge for this service.

Each year, ESB provides services to nearly 1500 educators. To insure that these workshops and resource materials continue to meet the needs of teachers, evaluations must be conducted.

EVALUATION MODEL

During the summer, my role was to serve as an external evaluator with the task of creating a system for evaluating the teacher workshops, curriculum updating materials and Educator's Resource Center. Development of an evaluation system requires a model or series of steps. I used Fink & Kosecoff's (1978) model to guide the evaluation. They suggest the following steps:

1. Formulate evaluation questions;
2. Construct evaluation designs;
3. Plan information collection;
4. Collect evaluation information;
5. Conduct information analysis;
6. Report evaluation information; and
7. Manage the evaluation.

Step 1. Formulate Evaluation Questions

The evaluation questions were developed from previous evaluations and meetings with the primary stakeholder, Dr. Steve Dutczak, Chief, ESB. The questions were categorized into four main areas:

Training

1. What are teachers' attitude toward the workshop (topics, activities, instructors and length of time)?
2. What workshop topics did teachers find most useful?
3. What workshop topics did teachers find least useful?
4. Is follow-up training desired?
5. What are teachers' suggestions for improving the workshop?

Materials

1. To what extent are teachers utilizing the resource materials from the teacher kit in their classrooms?
2. What are some examples of #1?
3. Which materials are most useful?
4. Which materials are least useful?
5. What additional materials are needed in the kit?

ERC

1. What services were most helpful?
2. What services were least helpful?
3. Was assistance with using the center readily provided?
4. What are teachers' suggestions for improving the ERC?

Participants' Demographics

1. Gender;
2. Age;
3. Educational background (highest degree obtained, prior knowledge of aerospace before workshop);
4. Grade(s) taught;
5. Subject(s) taught; and
6. School Name and Location.

Step 2. Construct Evaluation Designs

Since the primary stakeholder wanted to know teachers' attitude toward the services after participation or usage, a summative evaluation design was developed for this project. Summative evaluation is conducted to determine the value of a program after completion.

Step 3. Plan Information Collection

Two instruments were developed to gather data. Questionnaire #1, *Aerospace Workshop Evaluation*, was designed to assess participants' attitudes toward the workshop and ERC. Questionnaire #2, *Aerospace Teacher's Kit Evaluation*, was designed to assess teachers: 1) usage of the materials in the kit; and 2) desire for follow-up or additional training. Examples of these questionnaires are located in Appendices A and B.

Step 4. Collect Evaluation Information

Questionnaire #1 was administered to two groups (STEP and USF) on the last day of their workshops. To ensure validity of the instrument, field and pilot tests were conducted before it was administered. The field test consisted of a panel of experts (measurement and content). The two measurement experts were Dr. Andrew Zekeri of Tuskegee University in Tuskegee, Alabama and Dr. Annette Ellis of Morehouse School of Medicine in Atlanta, Georgia. They assessed the instrument to insure that all variables were measurable. Dr. Dutczak and Peggy Ross, Program Management Specialist, were the content experts to insure appropriate use of terminology and clarity of information relative to ESB.

A four-point Likert scale ranging from strongly disagree to strongly agree was used to determine attitudes toward the workshop and materials. Open-ended questions were included to gain more insight into the scaled responses.

The test-retest method (Carmines and Zeller, 1979) was utilized to assess reliability of the instrument for the pilot test. Five STEP participants were asked to serve as the pilot group. They assessed the instrument for overall clarity, length and wording. They were given the first questionnaire and cover letter (Appendix C) on July 17, 1995. One week later, July 24, the pilot group was given the second questionnaire. The questionnaire was revised based on their comments.

A reliability coefficient of 100% was computed by performing the following steps:

- responses on the first questionnaire were compared with responses on the second questionnaire;
- two columns (alike and different) were created;
- responses that were similar on both instruments were recorded in the alike column;
- dissimilar responses were recorded in the different column;
- responses within one point were considered to be similar;
- the alike column was totaled, then divided by the total number of possible points if all responses were similar, and multiplied by 100.

Questionnaire #2 was field tested using the same panel of experts. The pilot test consisted of mailing the instruments and cover letter (Appendix D) to 37 STEP participants from the 1994 workshop. They were asked to complete the questionnaire, comment on overall clarity, length, and wording and return it in the enclosed envelope by August 18, 1995. Eight questionnaires were returned yielding a 22 percent response rate. An open-ended format was used to gather the data. Therefore, the instrument was deemed valid after revisions.

This questionnaire will be administered to all teachers who participated in workshops during the summer of 1995. Surveys will be mailed approximately three months (November 1995) after workshop completion to allow teachers time to use the materials. A second questionnaire will be mailed approximately three months later (February 1996) to the non-respondents.

Step 5. Conduct Information Analysis

Descriptive statistics were used to analyze the data for the two groups (STEP and USF) who completed Questionnaire #1. Frequency tables and column graphs were constructed to display the data. Table and Figure 1 display data results from the STEP participants.

Table 1. STEP responses to Part I of the Aerospace Workshop Evaluation.

		RESPONSE SCALE			
		1	2	3	4
		Strongly Disagree	Disagree	Agree	Strongly Agree
STATEMENT	# responded (%)	# responded (%)	# responded (%)	# responded (%)	# responded (%)
1 Instructors were well prepared for class.	1 (3)		15 (47)		16 (50)
2 Workshop topics were relevant to the subjects that I teach.	1 (3)	1 (3)		12 (38)	18 (56)
3 I received practical ideas for applying the information in my class.	1 (3)			12 (38)	19 (59)
4 Instructors stimulated my interest in aerospace.			2 (6)	8 (25)	22 (69)
5 Between workshops, I had ample time to explore the areas that were of special interest to me.	2 (6)		9 (28)	12 (38)	9 (28)
6 Assistance with using the ERC was readily provided.			2 (6)	7 (22)	23 (72)
7 Materials and services in the ERC were useful to me.			1 (3)	10 (31)	21 (66)
8 I plan to share the new information that I acquired with fellow teachers.			1 (3)	5 (16)	26 (81)
TOTAL	5 (2)	16 (6)	81 (32)	154 (60)	

STEP

Thirty-three people participated in the STEP Workshop. One questionnaire was incomplete and deemed unusable; therefore, 32 questionnaires were analyzed. Overall, the STEP group had a positive attitude toward the workshop and ERC. Table 1 (TOTAL columns 3 & 4) indicate that 92 percent of the STEP group agreed and strongly agreed with the statements. Only 8 percent disagreed and strongly disagreed with the statements (TOTAL columns 1 & 2).

Figure 1 shows that at least 50 percent of the STEP participants strongly agreed with seven statements. However, statement 5 indicated that 28 percent disagreed as well as strongly agreed.

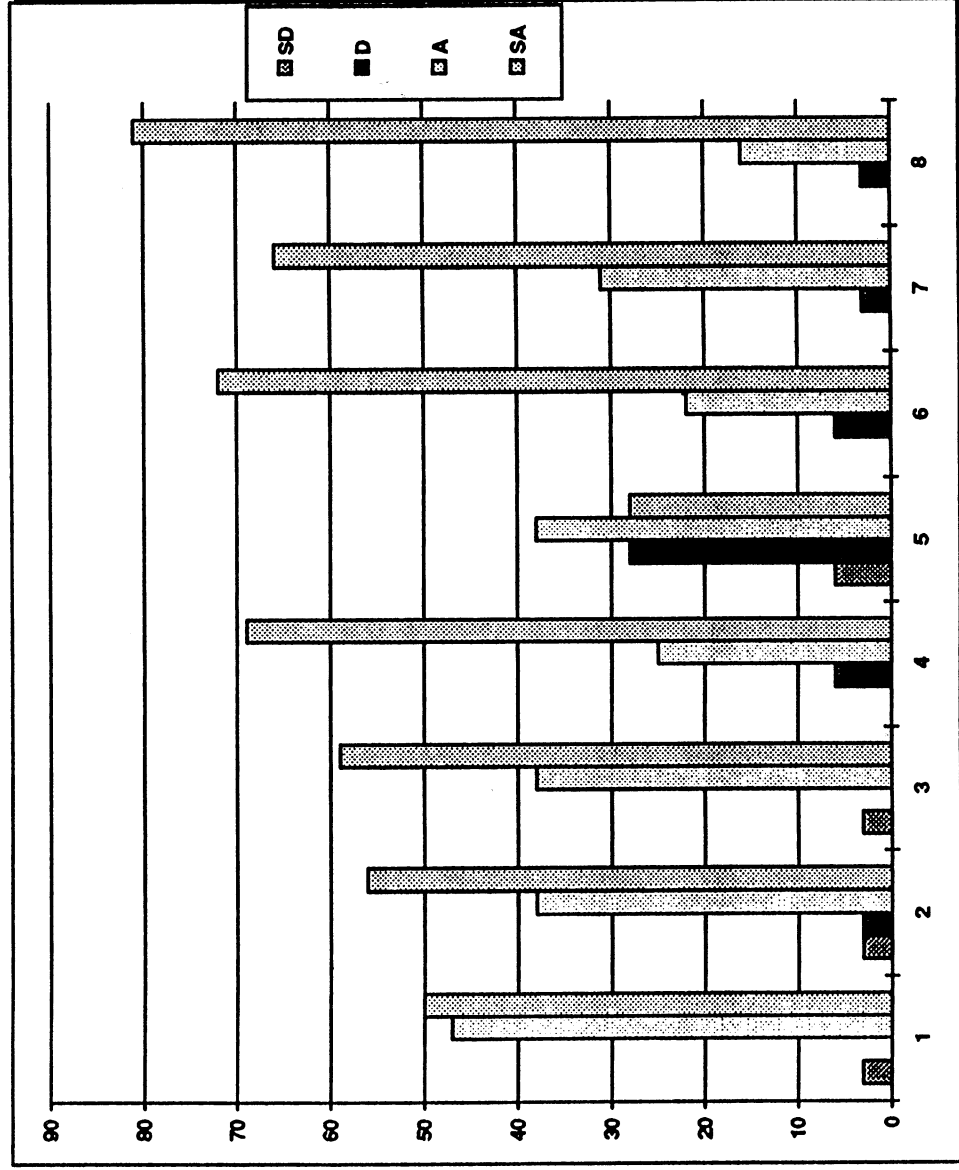


Figure 1. STEP responses by percentage to Part I of the Aerospace Workshop Evaluation.

Part II of the *Aerospace Workshop Evaluation* contained four open-ended questions. The responses were as follows:

Question #9: What workshop topics were most and least useful to you?

A total of 90 percent of the STEP group who completed the open-ended questions indicated the most useful workshop topics or activities were:

- job shadowing;
- rocket propulsion;
- KSC tours; and
- technology.

- Sixty percent noted that the least useful topic or activity was the Lego Seminar.

Question #10: My suggestions for improving the workshop are:

- decrease workshop from four to three weeks;
- spread out activities (too much was included in the first week);
- establish hurricane contingency plans;
- plan morning classes and afternoon tours;
- eliminate Space Camp or do it in two afternoons;
- do not include a high-powered technology sales pitch as part of workshops;
- provide clearer details concerning clothing, stipend, housing, etc.;
- make sure workshop presenters know in advance what they are to present;
- schedule Lego demonstration and other topics by teachers' grade level;
- add more hands-on activities especially for elementary teachers, too much time sitting;
- after each workshop, plan KSC tours to show application of material; and
- plan some evening workshops and activities.

Question #11: What services in the ERC were most and least helpful to you?

- Eighty-one percent indicated the most helpful service in ERC was the videotaping.
- No significant amount of responses were noted in terms of least helpful ERC services.

Question 12: My suggestions for improving the ERC are:

- create a time schedule for each teacher to use the equipment to insure that all teachers have an opportunity;
- train staff on using the equipment so that they are able to help teachers;
- provide faster equipment for copying videotapes;
- allow time during the workshop to copy videos; and
- provide Macintosh computer and software.

Part III or Questions 13-20 gathered demographic data on the STEP group. The data revealed the following:

- 81 percent were female;
 - 19 percent were male;
 - 59 percent have a bachelor's degree;
 - 38 percent earned a master's degree;
 - 3 percent have specialist degrees;
 - 13 percent have less than five years of teaching;
 - 31 percent have taught between five and ten years;
 - 56 percent have been teaching for more than 10 years;
 - all grades (K-12) were taught by the group;
 - 3 percent were math teachers;
 - 22 percent were science teachers;
 - 44 percent taught math and science;
 - 31 percent taught other subjects: media, technology, music, agribusiness, computer, general;
 - included in the group was a Resource Coordinator;
 - 63 percent have not completed other aerospace courses;
 - 22 percent have completed 1-3 courses; and
 - 15 percent completed more than three courses.
- Everyone did not indicate a school location. Of the participants that responded, most of them were Florida residents. Only three were from Illinois, Colorado and Missouri.

Table 2. USF responses to Part I of the Aerospace Workshop Evaluation.

RESPONSE SCALE				
	1 Strongly Disagree	2 Disagree	3 Agree	4 Strongly Agree
STATEMENT	# responded (%)	# responded (%)	# responded (%)	# responded (%)
1 Instructors were well prepared for class.			7 (37)	12 (63)
2 Workshop topics were relevant to the subjects that I teach.			7 (37)	12 (63)
3 I received practical ideas for applying the information in my class.			8 (42)	11 (58)
4 Instructors stimulated my interest in aerospace.			3 (16)	16 (84)
5 Between workshops, I had ample time to explore the areas that were of special interest to me.		8 (42)	3 (16)	8 (42)
6 Assistance with using the ERC was readily provided.	1 (5)	3 (16)	4 (21)	11 (58)
7 Materials and services in the ERC were useful to me.	1 (5)	1 (5)	4 (21)	13 (69)
8 I plan to share the new information that I acquired with fellow teachers.			5 (26)	14 (74)
TOTAL	2 (1)	12 (8)	41 (27)	97 (64)

USF

Table and Figure 2 reveal responses from the USF group. Nineteen questionnaires were completed and analyzed. Overall, the STEP group had a positive attitude toward the workshop and ERC. Table 2 (TOTAL columns 3 & 4) indicate that 91 percent of the USF group strongly agreed and agreed with the statements. Only 9% disagreed and strongly disagreed with the statements (TOTAL columns 1 & 2).

Figure 2 shows that more than 50 percent of the STEP participants strongly agreed with seven statements. However, statement 5 indicated that 28 percent disagreed as well as strongly agreed.

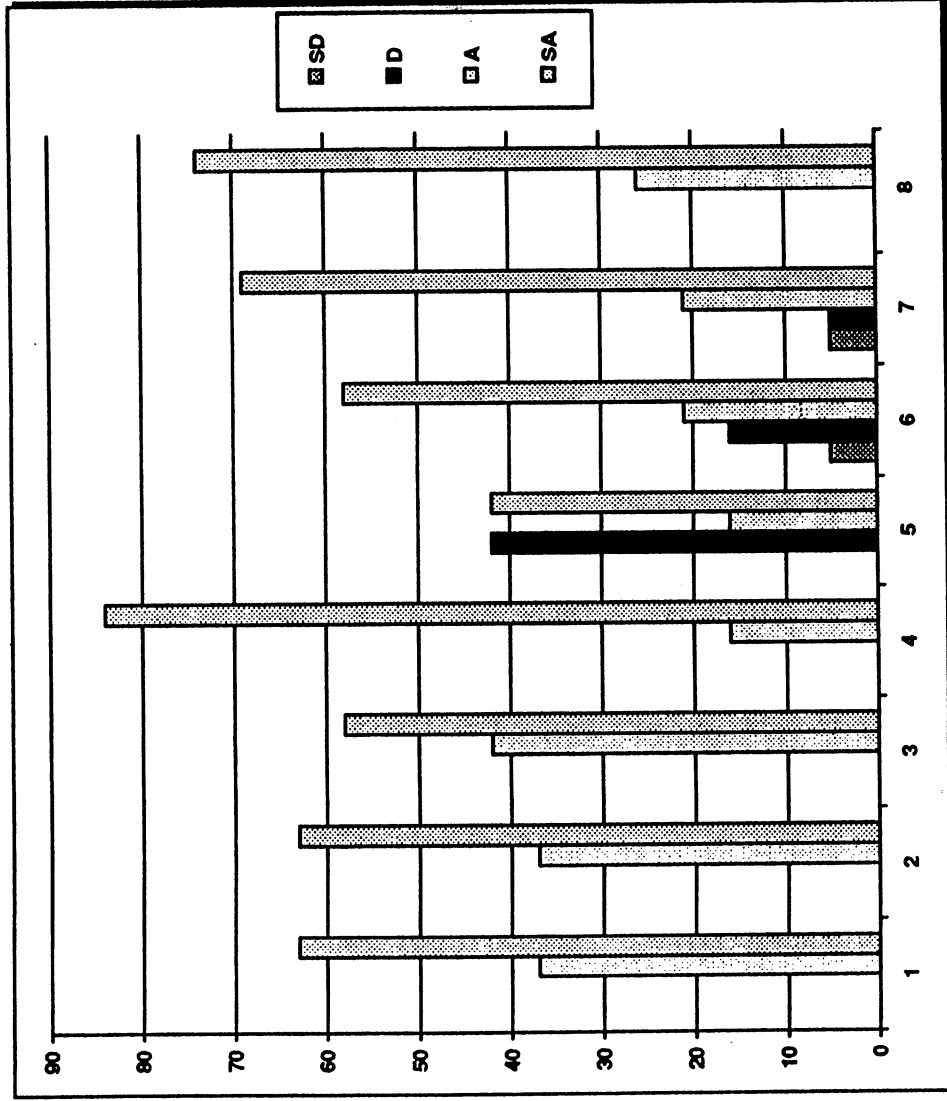


Figure 2. USF responses by percentage to Part I of the Aerospace Workshop Evaluation.

USF's responses to the open-ended questions are as follows:

Question #9: What workshop topics were most and least useful to you?

- Eighty percent of the USF group who completed the open-ended questions indicated the most useful workshop topic or activity were the tours.
- No significant amount of responses were noted for least useful workshop.

Question #10: My suggestions for improving the workshop are:

- provide better program coordination;
- add more meaningful hands-on activities;
- have separate workshops for middle and high school teachers;
- schedule as many visits as possible;
- increase time for individual exploring;
- send information before workshop begins; and
- schedule morning classes and afternoon tours.

Question #11: What services in the ERC were most and least helpful to you?

- Fifty-three percent indicated the most helpful service in ERC was the videotaping.
- No significant responses were noted in terms of least helpful ERC services.

Question 12: My suggestions for improving the ERC are:

- designate a time schedule for copying;
- create a list of most requested materials;
- add Macintosh software;
- need new information on IBM compatible formats;
- need more equipment for taping; and
- more information and IBM computers.

Questions 13-20 revealed the following demographic profile:

- 21 percent were female;
- 79 percent were male;
- 47 percent have a bachelor's degree;
- 42 percent have master's degrees;
- 11 percent have doctorates;

- 37 percent have less than five years of teaching;
- 5 percent have taught between five and ten years;
- 58 percent have been teaching for more than 10 years;
- grades 6-12 were taught by the group;
- 21 percent were science teachers;
- 79 were technology education teachers;
- 63 percent have not completed other aerospace courses; and
- 37 percent have completed 1-3 courses.
- All participants were Florida residents.

Step 6. Report Evaluation Information

The results of this evaluation were reported in this written report. Also, a formal presentation was given to all ESB personnel and Public Affairs Directors.

Step 7. Manage the Evaluation

Prior to starting the evaluation, a timetable indicating proposed activities and completion dates was developed (Figure 3). No additional costs were associated with the evaluation. Questionnaires were developed using the office computer. ESB's copy machine was used for duplication. Questionnaire #1 was administered on-site. Questionnaire #2 was mailed through KSC's regular mail system.

EVALUATION TIMELINE	
<u>Activity</u>	<u>Completion Date</u>
Research program background	June 26
Review previous evaluations and meet with primary stakeholder	June 26
Compile list of evaluation questions	June 26
Design two instruments: 1. Aerospace Workshop Evaluation 2. Aerospace Teacher's Kit Evaluation	July 7
Field test instruments	July 12
Pilot test and revise instrument #1	July 31
Administer instrument #1	August 4
Pilot test and revise instrument #2	August 18
Present results (oral presentation)	August 23
Formulate and submit written report	August 24

Figure 3. Timetable for managing the evaluation

CONCLUSION AND RECOMMENDATIONS

The data from the *Aerospace Workshop Evaluation* clearly showed that STEP and USF had favorable opinions of the workshop and ERC. Both groups shared these common responses and recommendations for improvement:

- duplicating videotapes was the most helpful ERC service;
- create a time schedule to insure that everyone has an opportunity to duplicate tapes;
- schedule morning classes and afternoon tours (afternoon lectures are not productive);
- provide more hands-on activities;
- add more Macintosh computers and software in the ERC; and
- schedule more time for teachers to explore their individual interests during the workshop.

Since both STEP and USF indicated these responses, it is recommended that the ESB staff consider these suggestions for implementation during future workshops.

The return rate on the pilot test for the *Aerospace Teacher's Kit Evaluation* was low. A low return rate may occur when the actual questionnaires are mailed during the school year. To increase the number of completed and returned questionnaires, several items are recommended:

- mail the questionnaires to educators approximately three months after their summer workshop to allow them time to use the materials in class;
- include a stamped and addressed envelope with the questionnaire;
- allow them ample time for them to respond;
- send another questionnaire in February to the non-respondents;
- provide an incentive for them to complete and return the questionnaires by the due date;
- mail questionnaires to the school principal;
- give questionnaires to Spacemobile representatives to take with them to the schools and distribute to teachers; and
- keep questionnaires in the ERC and distribute to teachers.

REFERENCES

- Carmines, E. and Zeller, R. (1979). *Reliability and validity assessment*. Sage Publications: Beverly Hills.
- Fink, A. and Kosecoff, J. (1978). *An evaluation primer*. Sage Publications: Beverly Hills.
- National Aeronautics and Space Administration, John F. Kennedy Space Center. (1995). *NASA facts: NASA and contractor educational programs at the John F. Kennedy Space Center* (KSC Release No. 138-95). Kennedy Space Center, FL: Author.

APPENDIX A

Aerospace Workshop Evaluation



AEROSPACE WORKSHOP EVALUATION

Your opinion is extremely important to us. Please take a few minutes to complete the survey to let us know your feelings toward this workshop.

Part I. Please respond to each statement using the following key (circle your answer):

Key	
1=Strongly Disagree	3=Agree
2=Disagree	4=Strongly Agree

	Strongly Disagree	1	2	3	4	Strongly Agree
1. Instructors were well prepared for class.		1	2	3	4	
2. Workshop topics were relevant to the subjects that I teach.		1	2	3	4	
3. I received practical ideas for applying the information in my class.		1	2	3	4	
4. Instructors stimulated my interest in aerospace.		1	2	3	4	
5. Between workshops, I had ample time to explore the areas that were of special interest to me.		1	2	3	4	
6. Assistance with using the Educators Resource Center (ERC) was readily provided.		1	2	3	4	
7. Materials and services in the ERC were useful to me.		1	2	3	4	
8. I plan to share the new information that I acquired with fellow teachers.		1	2	3	4	

Part II. Please answer the following questions:

9. What workshop topics were:

- most useful to you?

- least useful to you?

10. My suggestions for improving the workshop are:

11. What services in the ERC were:

- most helpful to you?

- least helpful to you?

12. My suggestions for improving the ERC are:

Part III. Please circle the appropriate information or fill in the blanks (where applicable):

13. Gender: 1. Female 2. Male
14. Highest degree obtained: 1. Bachelor's 2. Master's 3. Specialist 4. Doctorate
15. Number of years teaching: 1. Less than Five 2. Five-Ten 3. More than Ten
16. Grade level(s) you teach: K 1 2 3 4 5 6 7 8 9 10 11 12
17. Subject(s) you teach: 1. Mathematics 2. Science 3. Other _____
18. Number of courses you've completed related to aerospace (excluding this workshop):
 1. Zero 2. One-Three 3. More than Three
19. Name (optional): _____
20. School name & location: _____

THANK YOU!

APPENDIX B

Aerospace Teacher's Kit Evaluation



AEROSPACE TEACHER'S KIT EVALUATION

Part I. Listed below are titles of most of the booklets and brochures in your kit. Please answer the questions below:

1. America's Spaceport
2. Astronaut Fact Book
3. Astronaut Selection and Training
4. Countdown! NASA Launch Vehicles and Facilities
5. Living and Working on the New Frontier
6. Materials Processing in Space
7. Questions and Answers About Aeronautics and Space
8. Spacelab
9. Space Link
10. Space Shuttle
11. Space Shuttle Mission Chronology STS-1 - STS-61 1981-1993
12. Space Shuttle Mission Summary The First Decade: 1981-1990
13. Spinoffs
14. Teacher Resource Center Network
15. The Early Years: Mercury to Apollo-Soyuz
16. Video Catalog
17. Wardrobe for Space

1. Which of the publications have you used to create classroom activities (indicate numbers only)?

2. Indicate the activities you've developed (if possible, provide sample lesson plans or continue details on back).

3. Do you need a training workshop to help you fully incorporate these materials into your class lessons? ___ YES ___ NO

4. What other workshops would help you to provide comprehensive lessons related to space and aeronautics?

5. What additional information would you like to see in the kit?

Part II. Please circle the appropriate information or fill in the blanks (where applicable):

6. Name: _____
7. School name & location: _____
8. Gender: 1. Female 2. Male
9. Highest degree obtained: 1. Bachelor's 2. Master's 3. Specialist 4. Doctorate
10. Number of years teaching: 1. Less than Five 2. Five-Ten 3. More than Ten
11. Grade level(s) you teach: K 1 2 3 4 5 6 7 8 9 10 11 12
12. Subject(s) you teach: 1. Mathematics 2. Science 3. Other _____

Thanks for your assistance!

Use this space to provide additional information

APPENDIX C

**Cover Letter accompanying the
Aerospace Workshop Evaluation
(pilot test)**

National Aeronautics and
Space Administration
John F. Kennedy Space Center
Kennedy Space Center, FL 32899



July 13, 1995

Dear Teacher:

In the near future, the Education Services Branch will use a new type of questionnaire for workshop evaluations. You have been selected to be a part of the pilot group to test this new questionnaire. Please complete the survey and comment on the following:

1. Length of time to complete _____ minutes
2. Wording (too difficult, too simple, just right) _____
3. Length of survey (too long, too short, just right) _____
4. Overall clarity (easy to understand, not clear, just right) _____

Since the test-retest method is being used to insure the reliability of this questionnaire, you will be given another copy to complete in one week. The two sets of responses will be compared and a reliability coefficient will be calculated. Thanks for your assistance!

Sincerely,

Steve Duczak
Steve Duczak, Chief
Education Services Branch

APPENDIX D

**Cover letter accompanying the
Aerospace Teacher's Kit Evaluation**

National Aeronautics and
Space Administration
John F. Kennedy Space Center
Kennedy Space Center, FL 32899



August 7, 1995

Reply to Attn of:

PA-ESB

Dear Teacher:

Last summer you received an Aerospace Teacher's Kit from the Education Services Branch at the Kennedy Space Center. In the near future, we will be conducting a survey to determine the extent to which teachers incorporate this information into their classroom activities. You have been selected to be a part of the pilot group to test the new questionnaire. If you have used any of the information from these materials to teach lessons related to space and aeronautics, please take a few minutes to complete the survey and comment on the following:

1. Length of time to complete the survey: _____ minutes
2. Wording (too difficult, too simple, ok):
3. Length of survey (too long, too short, ok):
4. Overall clarity (easy to understand, not clear, ok):

Please return the completed survey and your comments by Friday, August 18, 1995. It is crucial that we receive your response by this date. A return envelope is enclosed for your convenience. We greatly appreciate your assistance!

Sincerely,

Steve Dutczak, Chief
Education Services Branch

Enclosure