

SECTION 8:
HELP FOR EVALUATORS

8.1 EVALUATOR'S RESEARCH COMMITTEE: PROCEDURES

IUCRC Evaluation Research Program
Procedures for Processing Research Proposals
Adopted by Evaluator Group in January, 1991
Revised June, 1997

The purpose of these procedures is to assist evaluators in preparing high quality proposals. Evaluators are encouraged to take advantage of this process. At the discretion of the NSF IUCRC program manager, proposals may be submitted directly to the NSF program manager for final review.

1. Potential investigators are encouraged to present informally ideas for research to the research committee and/or the group as a whole at any time. Proposers are strongly advised, but not required, to inform the research committee chair prior to the meeting so that sufficient time is available on the agenda. If no prior notice is given, time available for discussion may be limited. Such informal presentations permit investigators to get a preliminary reaction from the evaluators (as a group or from the research committee only) to a research idea prior to committing extensive effort to proposal development.
2. For proposals which an investigator would like to submit for formal consideration, the investigator sends a) a proposal to Research Committee chair at least 2 months in advance of Evaluator meeting (April 1 or November 1) and b) an abstract to the chairs of the Evaluators' group for circulation to all evaluators with the meeting agenda by May 10 or December 10.
3. The Research Committee chair sends copies to an *ad hoc evaluators' review committee* (3 or 4 persons).
4. The ad hoc committee returns their comments to the Research Committee chair 2 to 3 weeks prior to the Evaluator meeting. These are forwarded to the investigator for consideration before the Evaluator meeting.
5. The investigator presents and discusses the proposal at the Evaluator meeting.
6. The investigator incorporates comments with specific attention to the ad hoc committee's comments in a final proposal version that is submitted to the NSF IUCRC program manager.
7. The NSF program staff appoints a set of reviewers, including one or two evaluators who were not actively involved in preparing the proposal and makes a decision based on their recommendations.

For additional information, contact the Research Committee chair:

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8.2 PROGRAMMATIC RESEARCH STATEMENT

IUCRC Program's Evaluator Group:
Programmatic Research Statement
Adopted on June 13, 1991
Revised June, 1997

The quality of research supported by the IUCRC Program is extremely important to the NSF's IUCRC evaluation effort. The focal points or programmatic areas addressed by the IUCRC Evaluation Research Program will, to a large degree, determine not only the credibility and utility of the research projects, but also the eventual success of the Evaluation Research Program.

The overall goal of the IUCRC Evaluation Research Program is to increase knowledge about the nature of industry/university collaborative scientific research and of the factors that foster its success. Advancing research that is of value to universities and industry, and facilitating technology transfer are of overriding importance to the IUCRC Program. As a result, center impacts on scientific productivity and on technology transfer are of paramount importance to the IUCRC Research Program.

Suggested areas for programmatic research include:

- a) Center outcomes [such as research productivity and scientific advancement, student/graduate development, collaborative and cross-disciplinary research processes, findings and products];
- b) Factors related to center success [such as the quality of research generally and of collaborative research specifically, the degree of within-and between-center cross-disciplinary research, the quality of educational programs including their research components, the nature of university/industry communications, the nature of within-industry communications and gatekeeping, the extent of technology transfer, and within-industry champion development];
- c) Indicators of success of collaborative research models [such as joint and national centers and other cooperative research arrangements between IUCRCs and industry]; and
- d) methods for evaluating (a) - (c).

Proposers are encouraged to consider mandates such as the Government Performance and Results Act or other initiatives as they seek to develop proposal ideas.

Two types of projects are appropriate for the IUCRC Evaluation Research Program.

Tool development projects usually have total budgets **less than \$10,000**. These projects serve the administrative needs of the program. Tool development projects go beyond a literature review, but usually do not involve large-scale data collection. Where appropriate, funding mechanisms other than a research grant might be used.

Full projects are those which typically involve the testing of hypotheses or efforts to answer research questions. Such projects usually have a disciplinary (or multi-disciplinary) theoretical perspective upon which the researcher(s) has drawn in designing the proposed study. Full projects should make a new contribution to the relevant field. These projects may be longer-term, multi-year projects with budgets appropriate to the scale of effort. The NSF Program staff will work with the proposer to identify sources of potential cost-sharing, such as the relevant NSF Directorate. These proposals will **always** be submitted for external peer review and should conform to those standards.

8.3 THE IUCRC HOME PAGE

The evaluation project at NCSU maintains an IUCRC home page on the Internet. Information on this site answers frequently asked questions that Evaluators have about the IUCRC program and their responsibilities as Evaluators.

HOW TO FIND THE IUCRC HOME PAGE

Any Evaluator with a connection to the Internet may find this site by using some type of Internet browser software (e.g., Netscape, Mosaic, WebBrowser, etc.).

The address of the IUCRC home page is:

<http://www.ncsu.edu/iucrc>

Type this address into your Internet browser software and you will be connected to the IUCRC home page.

WHAT INFORMATION WILL YOU FIND?

The IUCRC Internet site includes:

- A general introduction to the National Science Foundation's IUCRC program
- A list of IUCRC-related publications
- A resources link to National Science Foundation RFP announcements and IUCRC evaluation related information
- Information about the IUCRC electronic mail list
- Information on the Process Outcome Survey, including instructions on how to code completed process outcome questionnaires, and how to submit data to the NCSU evaluation project
- PDF and Text versions of the Process Outcome Surveys
- PDF and Text versions of all optional assessment instruments
- PDF versions of Center Director Reports
- PDF versions of Process/Outcome Reports
- Link to instructions and data entry pages for the Center Director data

The IUCRC homepage is a service to all Evaluators. If you have suggestions or recommendations about this homepage, please contact the IUCRC evaluation project manager (e-mail: iucrc@ncsu.edu).

8.4 THE GRAPHIC PROGRAM FOR COLLECTION AND PRESENTATION OF L.I.F.E., EXTENDED L.I.F.E., AND MEETING EFFECTIVENESS DATA

WHAT IS ON THIS DISK?

This disk contains three separate directories, each containing a different version of the Graphic Program (GP). GP is a spreadsheet program designed to assist NSF-IUCRC evaluators in compiling and graphically presenting data at IAB meetings. The GP is a MS-Excel (5.0) program which can be read by either IBM-PC or Macintosh computers (note: Macintosh users need a DOS card and MS-Excel for Macintosh to read GP).

Each of the three directories on this disk contain an instruction file (readme.doc), and one of the three GP files (lif_dat.xls, lifx_dat.xls, mtg_dat.xls). Each GP file contains a Data Entry Sheet, which is linked to charts, which graphically summarize the data. Also included in each of the three directories is an MS-WORD file of the questionnaire form used in collecting the relevant data. A brief summary of the different forms is provided below.

STANDARD L.I.F.E. FORM

All evaluators are probably familiar with the standard L.I.F.E. form which is traditionally used in the proposal selection process. It consists of a four item scale measuring the level of interest among IAB members for a specified research project, and includes a “comments” section for open-ended responses.

For purposes of graphing the data from this form, we assume values for the L.I.F.E. items which represent an ordinal scale; assigning the items the following values: 1= not interested at all, 2= interested, with changes, 3=interested 4=very interested.

“EXTENDED” L.I.F.E. FORM

We introduce a new, extended L.I.F.E. form, which evaluates several dimensions of research proposals. The “Extended L.I.F.E.” form evaluates proposals on seven different dimensions (see *life_frm.doc*), and, similar to the standard L.I.F.E. form, it has space for comments on each dimension.

The Extended L.I.F.E. form can be used to compliment the standard (global) NSF L.I.F.E. form. Our Center, for example, employs a phased-approach to proposal selection, using the standard L.I.F.E. form for the initial vote of interest for a research project and the Extended (multi-dimensional) L.I.F.E. form for a final tally of IAB member interest.

MEETING EFFECTIVENESS QUESTIONNAIRE

We introduce the Meeting Effectiveness Questionnaire as a tool for evaluators to track IAB member’s satisfaction with and assessment of various aspects of IAB meetings across time.

This is a thirteen item questionnaire assessing meeting involvement, leadership, control, organization, and other general meeting features (see *mtg_frm.doc*).

FOR ASSISTANCE

If you need further assistance or instruction please contact us:

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8.4.1. HOW TO USE THE GRAPHIC PROGRAM FOR L.I.F.E.

- A. Create a template file of the L.I.F.E. Graphic Program
1. Open file LIF_DAT.XLS
 2. In the Data Entry Sheet, column A, enter the names (or abbreviations) of the industry partners of your NSF center by typing over the rows of *industry placeholders* (Industry 1, Industry 2, Industry 3, and so forth).
 3. Delete the (entire) rows of unused *industry placeholders*.
 4. Save the modified file under a new name, such as LIF_TMP.XLS (as the template file will be referred to in this instruction guide).
- B. To create a file of the L.I.F.E. Graphic Program for upcoming upcoming IAB meetings
1. Open file LIF_TMP.XLS
 2. In the Data Entry Sheet, row 1, column B, enter the names (or abbreviations) of the proposals to be voted on at the upcoming IAB using the L.I.F.E. questionnaire by typing over the *proposal placeholders* (Proposal A, Proposal B, Proposal C, and so forth).
 3. Delete the (entire) remaining columns of unused *proposal placeholders*.
 4. Save the modified file under a new name, perhaps one indicative of the date of the upcoming IAB meeting in which L.I.F.E. data will next be collected (eg, Sep_96.xls).
- C. Using the L.I.F.E. Graphic Program to collect data and view auto-generated graphic(s).
1. Using the file created in Step B, enter collected L.I.F.E. data into the Data Entry Sheet cells. Leave cells blank where there is missing data or “abstain” scoring in the L.I.F.E. responses. Then save the file.
 2. To view the auto-generated graphic, which is linked to the data entered in the Data Entry Sheet, click the tab in the lower portion of the screen titled “L.I.F.E. CHART”. For an expanded (nearly full screen) view of the L.I.F.E. CHART graphic, select *View--Full Screen* and then *View--Sized Width Window* from the main menu bar. From the *Full Screen* mode you can return to the reduced-screen mode by clicking on the *Full Screen* icon.
- D. Presenting L.I.F.E. data: 3 different ways.
1. View the chart directly on the computer monitor in the *Full Screen* mode. This is perhaps the easiest method of presentation, however, unless you have access to a large screen computer monitor and a have small IAB meetings this method may not be satisfactory.
 2. Use a video projection system to display the chart. In the *Full Screen* mode color video projection displays the graphics using a common overhead projector. A major drawback to video projection systems is that they are rather expensive (4K). However, you may want to investigate the possibility of borrowing or renting a video projector through your University department or media service center.

3. Print the graphic and create an overhead transparency of the chart(s) you wish to display using an overhead projector. To print a graphic, simply click on the graphic and then select *File-Print* from the main menu bar.

8.4.2 L.I.F.E. FORM

**L.I.F.E..
Level of Interest, Feedback Evaluation
NSF I/UCRC--CEMDAS**

Topic _____

_____ **Very interested**

_____ **Interested**

_____ **Interested with changes**

_____ **No interest**

_____ **Abstain**

Comments

8.4.3 HOW TO USE THE GRAPHIC PROGRAM FOR EXTENDED L.I.F.E.

A. Create a template file of the Extended L.I.F.E. Graphic Program

1. Open file LIFX.DAT.XLS
2. In the “data entry” section of the Data Entry Sheet, column A, enter the names (or abbreviations) of the industry partners of your NSF center by typing over the rows of *industry placeholders* (Industry 1, Industry 2, Industry 3, and so forth).
3. Delete the (entire) rows of unused *industry placeholders*.
4. Save the modified file under a new name, such as LIFX_TMP.XLS (as the template file will be referred to in this instruction guide).

B. To create a file of the Extended L.I.F.E. Graphic Program for upcoming IAB meetings

1. Open file LIFX_TMP.XLS
2. In the “data entry” section of the Data Entry Sheet, row 1, enter the names (or abbreviations) of the proposals to be voted on at the upcoming IAB using the L.I.F.E. questionnaire by typing over the *proposal placeholders* (Proposal A, Proposal B, Proposal C, and so forth). Note: these names will automatically appear in the Data Summary section.
3. Delete the (entire) remaining columns of unused *proposal placeholders*.
4. Save the modified file under a new name, perhaps one indicative of the date of the upcoming IAB meeting in which Extended L.I.F.E. data will next be collected (eg, Sep_96.xls).

C. Using the Extended L.I.F.E. Graphic Program to collect data and view auto-generated graphic(s).

1. Using the file created in Step B, enter collected Extended L.I.F.E. data into the Data Entry Sheet cells. Leave cells blank where there is missing data. Then save the file. Note that the average scores for each of the seven dimensions will be copied into the appropriate cells in the Data Summary Section, which is linked to the graphics.
2. To view the auto-generated graphics, which are linked to the Data Summary Section, click the tabs in the lower portion of the screen. You can view graphic comparisons of specific dimensions across all proposals (tabs: OVR, FIT, USE, QAL, TIM, BUD, and CAP) or you can view how each proposal was scored across the seven dimensions (tabs: Proposal A [P_A], Proposal B [P_B], Proposal C [P_C], and so forth).

For an Extended (nearly full screen) view of the graphics, select *View--Full Screen* and then *View--Sized Width Window* from the main menu bar. From the *Full Screen* mode you can return to the reduced-screen mode by clicking on the *Full Screen* icon.

D. Presenting Extended L.I.F.E. data: 3 different ways.

1. View the chart directly on the computer monitor in the *Full Screen* mode. This is perhaps the easiest method of presentation, however, unless you have access to a large screen computer monitor and a have small IAB meetings this method may not be satisfactory.
2. Use a video projection system to display the chart. In the *Full Screen* mode color video projection displays the graphics using a common overhead projector. A major drawback to video projection systems is that they are rather expensive (4K). However, you may want to investigate the possibility of borrowing or renting a video projector through your University department or media service center.
3. Print the graphic and create an overhead transparency of the chart(s) you wish to display using an overhead projector. To print a graphic, simply click on the graphic and then select *File-Print* from the main menu bar.

8.4.4 EXTENDED L.I.F.E. FORM

Extended L.I.F.E.

OVERALL PROPOSAL RATING					
	<i>Excellent proposal/ Strongly support</i>		<i>Fair proposal/ Moderately support</i>		<i>Poor proposal/ No support</i>
<u>Proposal 1</u>	5	4	3	2	1
Comments:					
FIT OF PROPOSAL WITH CENTER MISSION AND GOALS					
	<i>Excellent fit</i>		<i>Fair fit</i>		<i>Poor fit</i>
<u>Proposal 1</u>	5	4	3	2	1
Comments:					
APPROPRIATENESS/ UTILITY OF PROPOSED PROJECT DELIVERABLES					
	<i>Very useful</i>		<i>Moderately useful</i>		<i>Not useful</i>
<u>Proposal 1</u>	5	4	3	2	1
Comments:					
APPROPRIATENESS/QUALITY OF PROJECT METHODOLOGY/RESEARCH DESIGN					
	<i>Strong methodology</i>		<i>Acceptable methodology</i>		<i>Weak methodology</i>
<u>Proposal 1</u>	5	4	3	2	1
Comments:					
FEASIBILITY OF PROJECT TIMELINE					
	<i>Easily achievable</i>		<i>Achievable</i>		<i>Not achievabl</i>
<u>Proposal 1</u>	5	4	3	2	1
Comments:					
ADEQUACY/APPROPRIATENESS OF PROPOSAL BUDGET					
	<i>Excellent</i>		<i>Adequate</i>		<i>Inadequate</i>
<u>Proposal 1</u>	5	4	3	2	1
Comments:					
ADEQUACY/APPROPRIATENESS OF STAFF COMMITMENTS/CAPABILITIES					
	<i>Excellent</i>		<i>Adequate</i>		<i>Inadequate</i>
<u>Proposal 1</u>	5	4	3	2	1
Comments:					

8.4.5 HOW TO USE THE GRAPHIC PROGRAM FOR THE MEETING EFFECTIVENESS QUESTIONNAIRE

- A. Create a template file of the Meeting Effectiveness Graphic Program
1. Open file MTG_DAT.XLS
 2. In the “data entry” section of the Data Entry Sheet, column A, enter the names (or abbreviations) of the industry partners of your NSF center by typing over the rows of *industry placeholders* (Industry 1, Industry 2, Industry 3, and so forth).
 3. Delete the (entire) rows of unused *industry placeholders*.
 4. Save the modified file under a new name, such as MTG_TMP.XLS (as the template file will be referred to in this instruction guide).
- B. Using the Meeting Effectiveness Graphic Program to collect meeting effectiveness data and view associated auto-generated graphic(s).
1. Open MTG_TMP.XLS.
 2. In the “data entry” section of the Data Entry Sheet, row 1, enter the date (or meeting name) for the upcoming IAB meeting in which you will be collecting or presenting meeting effectiveness data by typing over the *meeting placeholders* (Meeting 1, Meeting 2, Meeting 3, and so forth). Note: these names will automatically appear in the Data Summary section below.
 3. Save the modified file under a new name, perhaps one indicative of the years for which the meeting effectiveness data will be tracked (eg, mtg96_99.xls).
- C. Using the Meeting Effectiveness Graphic Program to collect data and view auto-generated graphic(s).
1. Using the file created in Step B, enter collected Meeting Effectiveness under the appropriate meeting date into the Data Entry Sheet cells. Leave cells blank where there is missing data. Then save the file. The average scores for each of Meeting Effectiveness items will be automatically copied into the appropriate cells in the Data Summary Section, which is linked to the graphs.
 2. To view the auto-generated graphics, which are linked to the Data Summary Section, click the tabs in the lower portion of the screen. You can view graphic comparisons of specific dimensions across all meetings to date (tabs: GOL, PAR, INT etc...) or you can view how a particular meeting was scored across the thirteen meeting effectiveness dimensions (tabs: Meeting 1 [MT_1], Meeting 2 [MT_2], Meeting 3 [MT_3], and so forth).

For an expanded (nearly full screen) view of the graphics, select *View--Full Screen* and then *View--Sized With Window* from the main menu bar. From the *Full Screen* mode you can return to the reduced-screen mode by clicking on the *Full Screen* icon.

- D. Presenting Meeting Effectiveness data: 3 different ways.
1. View the chart directly on the computer monitor in the *Full Screen* mode. This is perhaps the easiest method of presentation, however, unless you have access to a large screen computer monitor and a have small IAB meetings this method may not be satisfactory.
 2. Use a video projection system to display the chart. In the *Full Screen* mode color video projection displays the graphics using a common overhead projector. A major

drawback to video projection systems is that they are rather expensive (4K). However, you may want to investigate the possibility of borrowing or renting a video projector through your University department or media service center.

3. Print the graphic and create an over-head transparency of the chart(s) you wish to display using an over-head projector. To print a graphic, simply click on the graphic and then select *File-Print* from the main menu bar.

8.4.6 MEETING EFFECTIVENESS FORM

**[NAME OF YOUR CENTER]--NSF INDUSTRY-UNIVERSITY
CENTER
EVALUATION OF MEETING EFFECTIVENESS**

<p align="center">This is a form for you to confidentially evaluate the meeting just held. Please provide your own opinions by circling the number on the scale corresponding to you opinion. (There are no right or wrong answers.)</p>

Date: November 21, 199X **NAME/INDUSTRY** _____

1. GOALS OF THE MEETING

		1	2	3	4	5		
(Unclear, diverse conflicting, unacceptable)	Poor	_____					Good	(Clear, shared by all, endorsed with enthusiasm.)

2. PARTICIPATION IN THE MEETING

		1	2	3	4	5		
(A few dominated, some were passive.)	Poor	_____					Good	(All were involved.)

3. GENERAL INTERACTION IN THE MEETING

		1	2	3	4	5		
(Some not listened to, several talked at once or interrupted.)	Poor	_____					Good	(All were listened to open discussion and sharing of ideas.)

4. MY CONTRIBUTION IN THE MEETING

		1	2	3	4	5		
(I was not allowed to fully state my opinions, others gave little attention to my my beliefs and ideas, group did not use my knowledge.)	Poor	_____					Good	(Adequate opportunity to state my beliefs about subjects discussed, satisfied with consideration others gave my ideas and knowledge)

5. LEADERSHIP OF THE MEETING

		1	2	3	4	5		
(Group need for leadership not met).	Poor	_____					Good	(A clear sense of direction was provided.)

6. PERSONAL LEADERSHIP SHOW BY MEMBERS DURING THE MEETINGS

		1	2	3	4	5		
(Group depended too much on one or a few members).	Poor	_____					Good	(Leaders allowed to emerge as need for leadership arose.)

7. DECISION MAKING PROCESS OF MEETING

		1	2	3	4	5		
(Few involved in decision making process, decisions made to which I felt Uncommitted.)	Poor	_____					Good	(Everyone took part in decision making process, people committed to discussions).

8. DECISIONS MADE DURING THE MEETING

		1	2	3	4	5		
(Few involved in decision making process, decisions made to which I felt Uncommitted.)	Poor	_____					Good	(Everyone took part in decision making process, people committed to discussions).

9. ORGANIZATION OF THE MEETING

		1	2	3	4	5		
(Chaotic, very poorly organized.)	Poor	_____					Good	(Very well organized, all went smoothly.)

10. CONTROL OF THE MEETING

		1	2	3	4	5		
(Too tightly controlled, I felt manipulated.)	Poor	_____					Good	(Flexible enough so we were able to influence it.)

11. RELATIONSHIP AMONG MEETING PARTICIPANTS

		1	2	3	4	5		
(I felt antagonistic towards others in meeting, didn't trust them.)	Poor	_____					Good	(I trusted and worked well with others in this meeting.)

12. ATTITUDE ABOUT THE MEETING

		1	2	3	4	5		
(Boring, not informative, I disliked it.)	Poor	_____					Good	(Interesting, informative, I liked it.)

13. PRODUCTIVITY OF THE MEETING

(Didn't accomplish much, got nowhere, waste too much time, results not worth the time involved.)

Poor 1 2 3 4 5 Good

(Got a lot done, very fruitful, good use of time, efficient, results worth the time invested.)