

Introduction to Data Analysis Handbook

***“If
I knew what
you were going to use
the information for
I would have done a better
job of collecting it.”***

–Famous quote from a Migrant and Seasonal Head Start (MSHS) staff person to MSHS director at a Community Assessment Training.

Migrant & Seasonal Head Start
Technical Assistance Center

Academy for Educational Development



AED's Migrant and Seasonal Head Start Technical Assistance Center (TAC-12)

MISSION STATEMENT

The Migrant and Seasonal Head Start Technical Assistance Center (TAC-12) is committed to supporting Migrant and Seasonal Head Start programs in their continuing effort to provide the highest quality early childhood services to farm worker families. TAC-12 fosters quality technical assistance by capitalizing on strengths and working collaboratively with programs.



AED's Center for Early Care and Education

MISSION STATEMENT

AED's Center for Early Care and Education strives to enhance the lives of all under represented, at-risk children and families through research, technical assistance support, knowledge and provision of innovative strategies within early childhood programs throughout the United States. We are committed to supporting special populations within Head Start and the larger child care community in their continual process to improve services to low-income children and families. We strive to help all children enter school ready to learn.

Acknowledgments

The development of this Handbook is an outcome of our work with Migrant and Seasonal Head Start programs across the country, particularly in the areas of community assessment and child outcomes. Many programs expressed a desire to improve their abilities to more fully utilize the data they collect. We are grateful to East Coast Migrant Head Start Project staff who provided important input into suggested content and format of this workbook at a staff training in November 2005. In addition we want to thank Brian Richmond of the American Indian Technical Assistance Network at AED for sharing his knowledge by contributing Appendix B: Using Excel to Help Analyze Your Quantitative Data.

Introduction to Data Analysis Handbook

**Migrant & Seasonal Head Start
Technical Assistance Center**

Academy for Educational Development

Contract with DHHS/ACF/OHS/Migrant and Seasonal Program Branch

Table of Contents

I. Introduction.....	1
Introduction to the Handbook.....	1
Learning Objectives.....	2
Guiding Principles.....	2
What This Handbook Does Not Do	2
Why Do We Need Data Analysis?	3
II. Ways of Thinking About Data	5
Data is.....	5
Qualitative Data.....	7
Quantitative Data	8
Data Strategies	9
III. Conceptualizing Data Analysis as a Process	13
The “Problem” with Data Analysis.....	13
Data Analysis as a Linear Process.....	14
Data Analysis as a Cycle.....	15
IV. Managing the Data Analysis Process	22
Developing a Team	22
Planning	24
Data Management	25
Writing	26
Evaluation	26

Table of Contents continued

V. Data Analysis Using Content Area Examples	27
Introduction to Data Analysis.....	27
Terms and Concepts	29
Data Procedures and Methods.....	33
Procedures for Quantitative Analysis	33
Methods for Qualitative Analysis	37
Content Area Examples Using Different Procedures and Methods	40
Health.....	41
Teacher Credentials.....	43
Classroom Quality.....	47
Disabilities	57
Estimating the Number of Eligible Migrant and Seasonal Head Start Children and Families	60
Infant Toddler Languages: Program Policies	69
Family Strengths and Needs.....	75
 Appendix A: Foundations for Data Analysis Applications in MSHS.....	 84
 Appendix B: Using Excel To Help Analyze Your Quantitative Data	 91
 Appendix C: Supplemental Resources Score Sheet: Early Childhood Environment Rating Scale - Revised	 96
Data Analysis Evaluation Checklist.....	103

ANALYSIS

I. Introduction

Introduction to the Handbook

This Handbook provides an introduction to basic procedures and methods of data analysis. We provide a framework to guide program staff in their thinking about these procedures and methods and their relevant applications in MSHS settings. Accordingly, this Handbook was developed to support the work of MSHS staff across content areas.

This Handbook was created because “using data in meaningful ways” includes many possibilities – and a great deal of information. Some of this information is complex and highly dependent upon specialized knowledge. However, there are many ways of “using data” that are more basic and that involve relatively simple procedures. Our purpose is to provide MSHS programs with a basic framework for thinking about, working with, and ultimately benefiting from an increased ability to use data for program purposes.

Section I of the Handbook provides introductory information. Section I includes the presentation of the “guiding principles” we use in presenting information, as well as the articulation of specific learning objectives. In Section II, we present an introduction to ways of thinking about data and make the distinction between two basic types of data: quantitative and qualitative. Section III outlines information that we hope will assist program staff understand how to conceptualize data collection and its analysis as a process. In Section IV we discuss management considerations that should be addressed in order to gather and analysis data in an efficient and effective way in your program. We present a framework for managing the process of data collection and analysis. Because using data for program purposes is a complex undertaking it calls for a process that is both systematic and organized over time.

In Section V of the Handbook we examine data analysis using examples of data from each of the Head Start content areas. We explore examples of how data analysis could be done. We identify and describe trends in data that programs collect. Finally, we offer a perspective of how data lends itself to different levels of analysis: for example, grantee-wide, by delegate agency, and/or center- or classroom-level. Our intent is to demonstrate how the different analytical procedures and methods can be powerful and effective tools for MSHS managers. Specific procedures and methods of data analysis are discussed with clear ways of using and working with data in order to identify results. Here, procedures and methods for working with both quantitative and qualitative data are presented.

Learning Objectives

This Handbook is used in training sessions offered by the Migrant and Seasonal Head Start Technical Assistance Center (TAC-12). It can also be used as a self-paced or group resource. Utilizing this Handbook, you will explore how to:

- use a wide variety of data for planning and decision-making purposes;
- begin to develop abilities to use data to describe program operations and/or practices;
- observe basic techniques of data analysis to real-life Head Start examples; and
- identify and articulate trends and patterns in data gathered over time.

Guiding Principles for Approaching Data Analysis

1. To provide information to program staff from a variety of different backgrounds and levels of prior experience.
2. To create a “value-added” framework that presents strategies, concepts, procedures, methods and techniques in the context of real-life examples.
3. To appreciate that learning takes time.
4. Comfort, confidence, and competence take practice.
5. Data analysis provides opportunities to “reduce the burden.”

What This Handbook Does NOT Do

This Handbook does not provide guidance on data collection. For those who are familiar with the Five Steps to Community Assessment: A Model for Migrant and Seasonal Head Start programs workbook, that resource can provide you with good strategies for data collection.

In addition, this Handbook does NOT attempt to address all possible procedures or methods of data analysis or imply that “data analysis” is limited to the contents of this Handbook. Program staff are urged to view this Handbook as a beginning resource, and to supplement their knowledge of data analysis procedures and methods over time as part of their on-going professional development. In addition, fiscal analysis procedures such as analyzing cost per child per hour, etc are beyond the scope of this handbook.

ANALYSIS

This Handbook does not provide information on how to complete the Program Information Report (PIR). This information is provided by the PIR contractor, Xtria, in the form of an annual User's Guide (see www.xtria.com/pir2005). Programs who require assistance in completing the PIR are instructed to contact their designated Program Specialist.

This Handbook does not teach how to use Excel or other spreadsheet programs. Training on data entry, use of spreadsheets, and other applications is available from a variety of sources. Suggestions are included in Appendix B.

Finally, we cannot answer questions about how Head Start program monitoring will be conducted in the future, including which types of data will be gathered and used in program reviews.

Why Do We Need Data Analysis?

Data is short hand for “information,” and whether you are collecting, reviewing, and/or analyzing data this process has always been part of Head Start program operations. Children's enrollment into the program requires many pieces of information. The provision of health and dental services includes information from screening and any follow-up services that are provided. All areas of a Head Start program – content and management – involve the collection and use of substantial amounts of information. For MSHS programs, the use of data becomes even more crucial, as essential information must be managed within relatively short program seasons. Very few people working in MSHS programs complain about not having enough to do!

In addition, Head Start program operations have evolved substantially over the last ten years. As new requirements have been added, and new program initiatives launched, programs are increasingly expected to use data in meaningful ways. Finally, if the PRISM process will “focus on the collection, reporting, and analysis of data,” programs are well-advised to develop their expertise in working with data.

Lastly, recent Head Start sources support the need for a better understanding of data analysis in our work.

From the Head Start Bureau website (October 4, 2005):

The Head Start Bureau has made some significant changes to procedures guiding the FY 2006 PRISM. The changes will affect areas such as on-site review, the relationship between Federal team leaders and home region, and the way grantee and delegate agency reviews are conducted. The new changes to be implemented will also impact the PRISM Instrument procedures for reviewing service areas. An increased emphasis will focus on the collection, reporting, and analysis of data.

From Information Memorandum ACYF-IM-HS-05-08 (10/04/05):**Changes to the PRISM Process**

The following changes to the PRISM process are in place for fiscal year 2006:

The on-site review will focus on the collection, reporting, and analysis of data. The grantee presentation and summary meeting will no longer occur.

Federal team leaders will not supervise reviews in their home region when conducting triennial and first year reviews. These team leaders will, however, continue to supervise follow-up reviews for grantees in the Federal team leader's home region.

For grantees with delegate agencies, each delegate agency will be reviewed concurrently with the grantee agency review as part of each triennial and first-year review.

http://www.headstartinfo.org/publications/im05/im05_08.htm

ANALYSIS

II. Ways of Thinking About Data

Data is...

The 1973 Webster's New Collegiate Dictionary defines data as "factual information (as measurements or statistics) used as a basis for reasoning, discussion, or calculation." The 1996 Webster's II New Riverside Dictionary Revised Edition defines data as "information, especially information organized for analysis." Merriam Webster Online Dictionary defines data" as the following (<http://www.m-w.com>):

- 1 : factual information (as measurements or statistics) used as a basis for reasoning, discussion, or calculation. E.g., the data is plentiful and easily available -- H. A. Gleason, Jr., e.g., comprehensive data on economic growth have been published -- N. H. Jacoby.
- 2 : information output by a sensing device or organ that includes both useful and irrelevant or redundant information and must be processed to be meaningful.
- 3 : information in numerical form that can be digitally transmitted or processed.

Taking from the above definitions, a practical approach to defining data is that data is numbers, characters, images, or other method of recording, in a form which can be assessed to make a determination or decision about a specific action. Many believe that data on its own has no meaning, only when interpreted does it take on meaning and become information. By closely examining data we can find patterns to perceive information, and then information can be used to enhance knowledge (The Free On-line Dictionary of Computing, 1993-2005 Denis Howe).

- The number 1,099 is one example of data.
- "The number of children who were determined to have a disability prior to enrollment in Migrant and Seasonal Head Start for the 2004 enrollment year is 1,099" is information.

What has been evident in disciplines such as education, public health, nutrition, nursing, and management, is now becoming evident in early care and education, including Head Start. Programs now recognize that the quality and quantity of data, be it statistical or descriptive, is needed to set baselines, identify effective actions, set goals and targets, monitor progress and evaluate impacts (World Bank Website <http://www.worldbank.org/data/aboutdata/aboutdata.html>).

One thing that Migrant and Seasonal Head Start programs can do well is gather data. Using an upstream program as an example, in late May the data gathering process is swift and fast during enrollment. If the data relates to a child or family it is shared among appropriate Head Start staff. When the program ends, the data is stored, and next thing you know it is March and the program is preparing for pre-service. The question that one is always left with is: what do we do with all this data and or information? One of the goals of this handbook is to help you answer this question.

Before you can present and interpret information, there must be a process for gathering and sorting data. Once again, 1,099 is a number - and this number is, in fact, data. The number 1,099 is a raw number - on its own it has no meaning. Just like many of the crops that our families pick are raw from which food is prepared, so too, can data be viewed as the raw material from which information is obtained.

Head Start requires the collection of data in a variety of areas. We collect data in all of the content service areas. Thus, data collection is something that is not just limited to children and families, but if the purpose and the questions relate to children and families it is definitely not good practice to collect data when the children and families are not available. The data you collect in Head Start can take many forms. The data could be in the form of numbers, words, pictures, maps, and even newspaper articles. When collecting data, we are faced with the inevitable question of which is better. The concept of which is better has the potential to lead to the qualitative versus quantitative debate, which although exhilarating to some, could cause havoc in program planning and implementation. These debates fail to achieve an honest understanding of how qualitative and quantitative data differ, because in many people's mind the difference between the two is underscored by the notion that one is better than the other.

Why the Soliloquy? Types of Data

In research circles there has been a long-term debate over the merits of Quantitative versus Qualitative data. Key influences in this debate are based upon how researchers were taught, compounded by differences among individuals and their preference in relating to numbers or to words.

In reality, this debate is largely irrelevant in Head Start. In order to have a high quality program, we must collect both types of data. There are times when a quantitative

ANALYSIS

approach will be better suited to the situation and vice versa. “Qualitative and quantitative methods are not simply different ways of doing the same thing. Instead, they have different strengths and logics and are often best used to address different questions and purposes (Maxwell, 1996,2005).” That being said, there are other times when it makes sense to “have the best of both worlds,” and to use a combination of some quantitative and some qualitative data in order to credibly address a particular question and make well informed decisions.

Qualitative data

Data that is represented either in a verbal or narrative format is qualitative data. These types of data are collected through focus groups, interviews, opened ended questionnaire items, and other less structured situations. A simple way to look at qualitative data is to think of qualitative data in the form of words. Later on, we will explore how the transcript below can be used as a source of data.

Sample Qualitative Data: Transcript from Parent Interview

(Family One – husband)

OK, well, me first, before anything, I came here because of the poverty, do you understand me? And for a good quality of life, in my country not so much thinking about myself but about my smaller sisters so that they can have a better education considering that I did not have any, and another reason was in my country there are no good jobs, and very little work. They pay you very little and you never leave the poverty and another reason is that my father had two brothers that were already here and I thought that the more of us that are here the better that everybody could help each other out and it would be easier to get ahead with our younger sisters.

(Family One – wife)

The same to help my parents I came and I would send money and then my brother came and then the same.

(Family One – husband)

Because in her case, she or better yet sometimes us (in our situation) because we were the eldest, we were men but in her case the eldest are women, and the ones that were going to work, theoretically to help the parents the most were the youngest.

(Family One-wife)

My dad was already here when I came, he was here, my mother was in Mexico, my dad stayed here for some time and then he went to Mexico.

(Family One-husband)

More than anything, my parents for example they are that type of people that support you no they never stop, for example your dreams do not become reality they always try that if you decide, you know who you are, and they always let us what we wanted better yet things that they showed us and that were good we would do them and they always tried to better us.

Quantitative data

Quantitative data is data that is expressed in numerical terms, in which the numeric values could be large or small. Numerical values may correspond to a specific category or label.

Sample Quantitative Data from PIR

Actual Enrollment by Child

Ages of children served:

- a. Under 1 year:.....3,843
- b. 1 Year old:.....4,785
- c. 2 Years old:6,341
- d. 3 Years old:.....7,604
- e. 4 years old:.....6,988
- f. 5 Years and older:3,462

Contrasting Types of Data in Head Start

Qualitative Data	Family Partnership Agreements Social Service logs Advisory group minutes Policy Council minutes Newspaper articles
Quantitative	PIR Child performance tracking Health data tracking systems
Mixed Data	Enrollment info Enrollment & transition records Surveys (i.e., Parent, Teacher/Staff, Farmer)

Data Strategies

There are a variety of strategies for quantitative and qualitative analyses, many of which go well beyond the scope of an introductory Handbook. Different strategies provide data analysts with an organized approach to working with data; they enable the analyst to create a “logical sequence” for the use of different procedures. In the boxes below, we offer four examples of strategies for quantitative analysis that you may consider as you work with and develop your skills in data analysis as well as reasons why you may consider using the strategy. Some of these strategies are used in Section V when looking at particular content area data.

Strategy: **Visualizing the Data**

Involves: Creating a visual “picture” or graphic display of the data.

Reason(s): a way to begin the analysis process; or as an aid to the reporting/presentation of findings.

Strategy: **Exploratory Analyses**

Involves: Looking at data to identify or describe “what’s going on”? – creating an initial starting point (baseline) for future analysis.

Reason(s): Like you have a choice?

Strategy: **Trend Analysis**

Involves: Looking at data collected at different periods of time.

Reason(s): to identify and interpret (and, potentially, estimate) change.

Strategy: **Estimation**

Involves: Using actual data values to predict a future value.

Reason(s): to combat boredom after you have mastered all the previous strategies. Also to answer PIR and Community Assessment items and tasks.

Visualizing Data

Visualizing data is to literally create and then consider a visual display of data. Technically, it is not analysis, nor is it a substitute for analysis. However, visualizing data can be a useful starting point prior to the analysis of data.

Consider, for example, someone who is interested in understanding Migrant and Seasonal Head Start from a national perspective. Specifically, someone might be interested in the differences in funded enrollment across all MSHS grantees. Looking at a random list of funded enrollment numbers (PIR, 2004) gives us one perspective:

Random List of Funded Enrollment

677	377
266	601
2719	830
8623	754
480	391
171	425
6984	470
75	1762
259	274
217	684
2709	70
50	133
402	2216

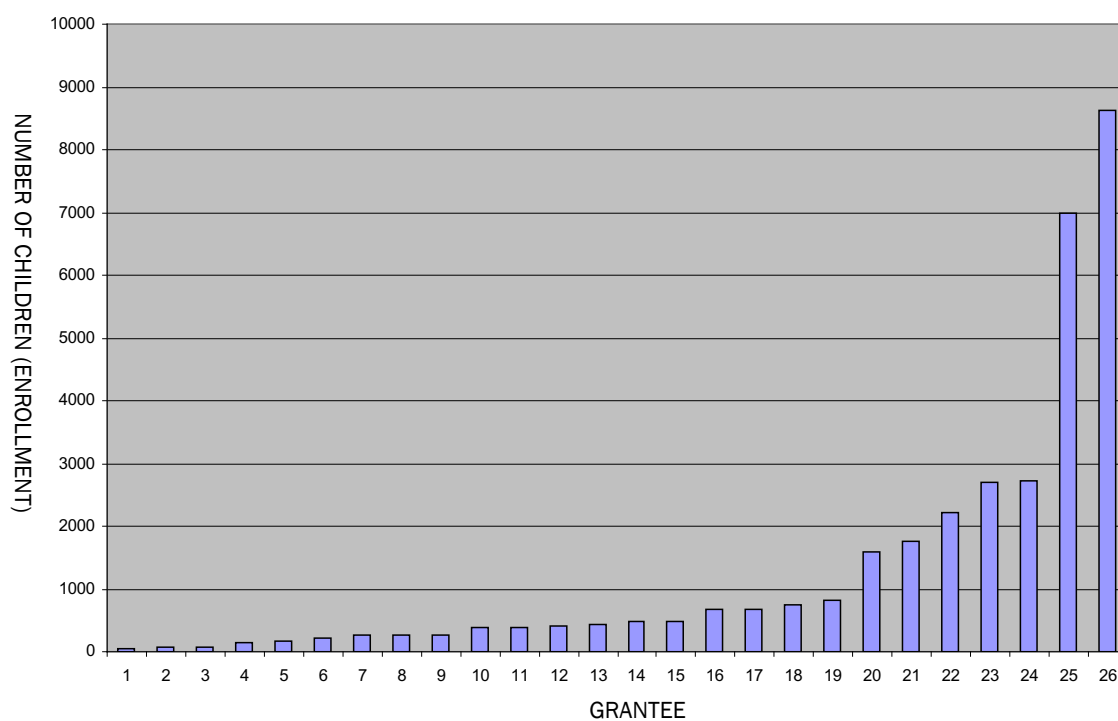
In random order, it is a bit difficult to get a handle on the data. By ranking the values in order however (notes: this can be done either lowest to highest or highest to lowest) we gain a more organized perspective of the data set:

ANALYSIS

Rank Order of Funded Enrollement

50	470
70	480
75	677
133	684
171	754
217	830
259	1601
266	1762
274	2216
377	2709
391	2719
402	6984
425	8623

MSHS: Funded Enrollment by Grantee 2004



By creating a visual display of the data, we can begin to get a “feel” of how MSHS grantees differed in terms of their funded enrollment in 2004 using the numbers above (Note: In Excel, go to “Insert” and select “Chart” to convert a spreadsheet column into a bar chart, see Appendix B.).

By creating and viewing a graphic display of the data, we get a “feel” of how MSHS grantees’ funded enrollment varies across the region. In particular, the size differences between the two largest grantees and the rest of the region stand out, as do the more basic differences between “small” and “large” programs. Again, this visual display of data is not a substitute for analysis, but it can often provide an effective foundation to guide subsequent analyses.

Exploratory Analysis

Exploratory analysis entails looking at data when there is a low level of knowledge about a particular indicator (teacher qualifications, first and second language acquisition, etc.) It could also include the relationship between indicators and/or what is the cause of a particular indicator.

Trend Analysis

The most general goal of trend analysis is to look at data over time. For example, to discern whether a given indicator such as the number of children with disabilities has increased or decreased over time, and if it has, how quickly or slowly the increase or decrease has occurred. One aspect of trend analysis that is discussed in this Handbook and encouraged is that of comparing one time period to another time period. This form of trend analysis is carried out in order to assess the level of an indicator before and after an event.

Estimation

Estimation procedures may occur when working with either quantitative or qualitative data. The use of both quantitative data such as poverty level data, can be combined with interviews from providers serving low income families to help determine the proportion of families in the area that are income eligible. Estimation is one of many tools used to assist planning for the future. Estimation works well for forecasting quantities that are closely related to demographic characteristics, eligible children and families, and social services. Estimation is the combination of information from different data sources to project information not available in any one source by itself.

ANALYSIS

III. Conceptualizing Data Analysis as a Process

The “Problem” with Data Analysis

What does ‘data analysis’ mean? Does it refer to one method or many? A collection of different procedures? Is it a process? If so, what does that mean? More important, can MSHS program staff – without a background in math or statistics – learn to identify and use data analysis in their work? (P.S. - the answer to the last question is Yes! – assuming a minimum investment of time, effort, and practice).

Data analysis can refer to a variety of specific procedures and methods. However, before programs can effectively use these procedures and methods, we believe it is important to see data analysis as part of a process. By this, we mean that data analysis involves goals; relationships; decision making; and ideas, in addition to working with the actual data itself. Simply put, data analysis includes ways of working with information (data) to support the work, goals and plans of your program or agency.

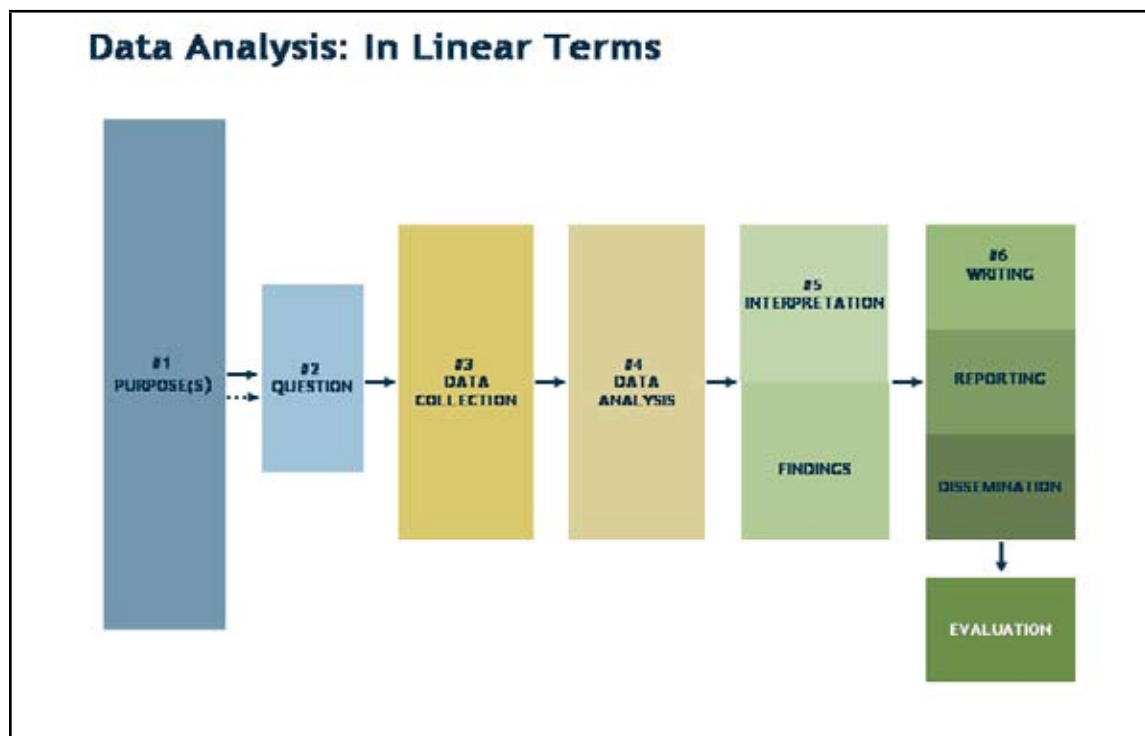
From this perspective, we present a data analysis **process** that includes the following key components:

- Purpose
- Questions
- Data Collection
- Data Analysis Procedures and Methods
- Interpretation/Identification of Findings
- Writing, Reporting, and Dissemination; and
- Evaluation

We have also found, from our review of the literature, that there are many different ways of conceptualizing the data analysis process. We can make a basic distinction between a linear approach and a cyclical approach; in this Handbook we provide examples of both.

Data Analysis as a Linear Process

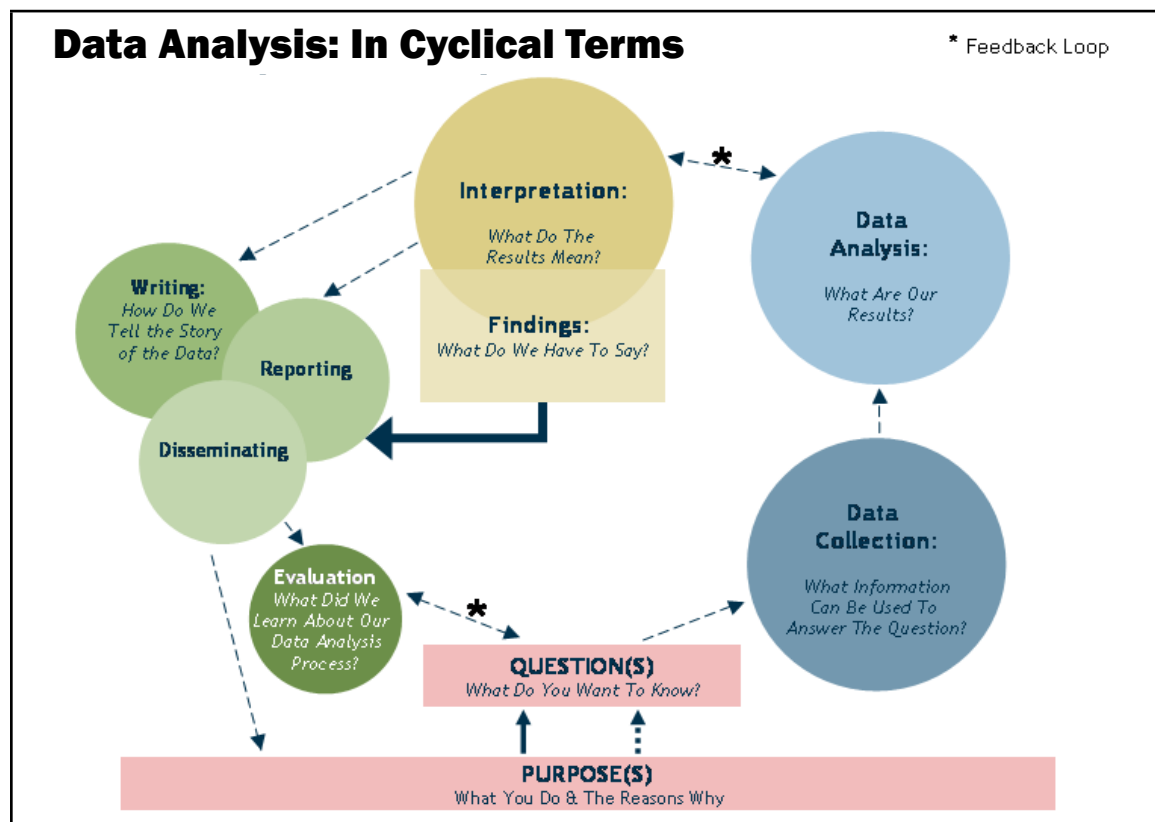
A strictly linear approach to data analysis is to work through the components in order, from beginning to end. A possible advantage of this approach is that it is structured and organized, as the steps of the process are arranged in a fixed order. In addition, this linear conceptualization of the process may make it easier to learn. A possible disadvantage is that the step-by-step nature of the decision making may obscure or limit the power of the analyses – in other words, the structured nature of the process limits its effectiveness.



ANALYSIS

Data Analysis as a Cycle

A cyclical approach to data analysis provides much more flexibility to the nature of the decision making and also includes *more* and *different kinds of decisions* to be made. In this approach, different components of the process can be worked on at different times and in different sequences – as long as everything comes “together” at the end. A possible advantage of this approach is that program staff are not “bound” to work on each step in order. The potential exists for program staff to “learn by doing” and to make improvements to the process before it is completed.



Therefore, the simplest possible answer to the question, what is data analysis, is probably: IT DEPENDS. Rather than chose to present ‘data analysis’ as either linear or cyclical, we have decided to present both approaches. Hopefully, this choice will give MSHS program staff the options and flexibility to make informed decisions, to utilize skills that they already have, and to grow and develop the ability to use data and its analysis to support program/agency purposes and goals.

Process Component #1. Purpose(s):

What Do We Do? & Why?

An effective data analysis process is based upon the nature and mission of the organization as well as upon the skills of the team that is charged with the task of collecting and using data for program purposes. Above all, an effective data analysis process is *functional* – i.e., it is useful and adds value to organizational services and individual practices. In some cases, the data analysis process can even be regarded as *fun*.

As you know, the Head Start Program Performance Standards (HSPPS) are the basic framework for program operations. In addition, Head Start program operations are guided by other federal and state regulations, local licensing requirements, community factors, and the goals/mission of the agency. Therefore, a preliminary step in the data analysis process is to select and train a team to carry out the process (refer to Section IV., for a discussion of “Who should be at the table?”).

Because the HSPPS present minimum standards for program services and provide guidance for the implementation of the various content areas, a process for data collection and analysis should be consistent with these and other regulations. More specifically, these standards are the basis for the first step in the data analysis process – forming one or more specific questions to be examined.

Process Component #2. Question(s):

What Do We Want To Know?

Before effective data collection or analytical procedures can proceed, one or more specific questions should be formulated. These questions serve as the basis for an organized approach to making decisions: first, about what data to collect; and second, about which types of analysis to use with the data.

Some questions are close-ended and therefore relatively straightforward, e.g., “Did our program meet the 10% mandate for serving children with disabilities last year”? Other questions are highly open-ended, such as: “How could we do a better job of parent involvement?” In the first case, there are only two possible answers to the question: “Yes” or “No.” In the second case, a possible answer to the question could include many relevant pieces of information. Many real-life questions that program staff face in the course of their work fall somewhere in between these two extremes.

ANALYSIS

Different types of questions require different types of data – which makes a difference in collecting data. In any case, the selection of one or more specific questions allows the process of data collection and analysis to proceed. Based on the nature and scope of the questions (i.e., what is included in the question) programs can then create a plan to manage and organize the next step in the process – data collection. Finally, by formulating specific questions at the beginning of the process, programs are also in a position to develop skills in evaluating their data analysis process in the future.

Process Component #3. Data Collection:

What Information Can Help Us Answer Our Question(s)?

Data collection is a process in and of itself, in addition to being a part of the larger whole. Data come in many different types (see the discussion in Section III.), and can be collected from a variety of sources, including:

- Observations
- Documents
- Questionnaires
- Tests
- Interviews
- Others

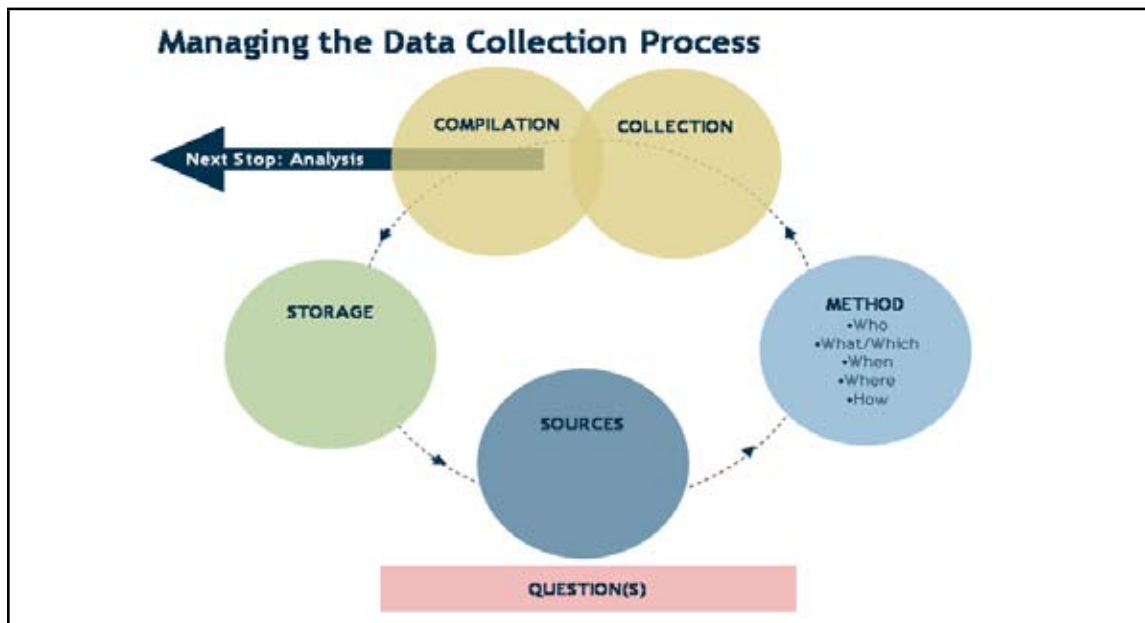
The value of carefully selecting the questions to be examined is therefore of major importance: the way that the question is worded is the foundation for an effective data collection plan. We urge programs to develop a specific planning process for data collection (no matter how brief) in order to avoid the common pitfalls of the collection process, which include having:

- Too little data to answer the question;
- More data than is necessary to answer the question; and/or
- Data that is not relevant to answering the question.

In order to successfully manage the data collection process, programs need a plan that addresses the following:

- What types of data are most appropriate to answer the questions?
- How much data are necessary?
- Who will do the collection?
- When and Where will the data be collected?
- How will the data be compiled and later stored?

By creating a data collection plan, programs can proceed to the next step of the overall process. In addition, once a particular round of data analysis is completed, a program can then step back and reflect upon the contents of the data collection plan and identify “lessons learned” to inform the next round.



ANALYSIS

Process Component #4. Data Analysis:

What Are Our Results?

Once data have been collected, the next step is to look at and to identify what is going on – in other words, to analyze the data. Here, we refer to “data analysis” in a more narrow sense: as a set of procedures or methods that can be applied to data that has been collected in order to obtain one or more sets of results. A list of specific analytical procedures and methods is provided below.

Because there are different types of data, the analysis of data can proceed on different levels. The wording of the questions, in combination with the actual data collected, have an influence on which procedure(s) can be used – and to what effects.

The task of matching one or more analytical procedures or methods with the collected data often involves considerable thought and reflection. As a GAO report puts it, “Balancing the analytic alternatives calls for the exercise of considerable judgment.” This is a rather elegant way of saying that there are no simple answers on many occasions.

Process Component #5. Interpretation:

What Do The Results Mean?

Once a set of results has been obtained from the data, we can then turn to the interpretation of the results.

In some cases, the results of the data analysis speak for themselves. For example, if a program’s teaching staff all have bachelor’s degrees, the program can report that 100% of their teachers are credentialed. In this case, the results and the interpretation of the data are (almost) identical.

However, there are many other cases in which the results of the data analysis and the interpretation of those results are **not** identical. For example, if a program reports that 30% of its teaching staff **has** an AA degree, the interpretation of this result is not so clear-cut.

In this case, interpretation of the data involves two parts: 1) presenting the result(s) of the analysis; and 2) providing additional information that will allow others to understand the meaning of the results. In other words, we are placing the results in a context of relevant information. Obviously, interpretation involves both decision making and the use of good judgments! We use the term results to refer to any information obtained from using analysis procedures. We use the term findings to refer to results which will be agreed

upon by the data analysis team as best representing their work. In other words, the team may generate a large number of results, but a smaller number of **findings** will be written up, reported, and disseminated.

On a final note, it is important to state that two observers may legitimately make different interpretations of the same set of data and its results. While there is no easy answer to this issue, the best approach seems to be to anticipate that disagreements can and do occur in the data analysis process. As programs develop their skills in data analysis, they are encouraged to create a process that can accomplish dual goals: 1) to obtain a variety of perspectives on how to interpret a given set of results; and 2) to develop procedures or methods to resolve disputes or disagreements over interpretation.

Process Component #6. Writing, Reporting & Dissemination:

What Do We Have To Say? How Do We Tell The Story of Our Data?

Once data have been analyzed and an interpretation has been developed, programs face the next tasks of deciding how to write, report, and/or disseminate the findings.

While it is not the purpose of this Handbook to provide guidance on writing and reporting, we can offer several basic suggestions. First, good writing is structured to provide information in a logical sequence. In turn, good writers are strategic – they use a variety of strategies to structure their writing. One strategy is to have the purpose for the written work to be clearly and explicitly laid out. This helps to frame the presentation and development of the structure of the writing. Second, good writing takes its audience into account. Therefore, good writers often specify who their audience is in order to shape their writing. A final thought is to look upon the writing/reporting tasks as opportunities to tell the story of the data you have collected, analyzed, and interpreted. From this perspective, the writing is intended to inform others of what you – the data analysis team – have just discovered.

ANALYSIS

Process Component #7. Evaluation:

What Did We Learn About Our Data Analysis Process?

The final step of the data analysis process is evaluation. Here, we do not refer to conducting a program evaluation, but rather, an evaluation of the preceding steps of the data analysis process. Here, program staff can review and reflect upon:

- **Purpose:** was the data analysis process consistent with federal standards and other, relevant regulations?
- **Questions:** were the questions worded in a way that was consistent with federal standards, other regulations, and organizational purposes? Were the questions effective in guiding the collection and analysis of data?
- **Data Collection:** How well did the data collection plan work? Was there enough time allotted to obtain the necessary information? Were data sources used that were not effective? Do additional data sources exist that were not utilized? Did the team collect too little data or too much?
- **Data Analysis Procedures or Methods:** Which procedures or methods were chosen? Did these conform to the purposes and questions? Were there additional procedures or methods that could be used in the future?
- **Interpretation/Identification of Findings:** How well did the interpretation process work? What information was used to provide a context for the interpretation of the results? Was additional relevant information not utilized for interpretation? Did team members disagree over the interpretation of the data or was there consensus?
- **Writing, Reporting, and Dissemination.** How well did the writing tell the story of the data? Did the intended audience find the presentation of information effective?

See Appendix C for a checklist on how to evaluate your data analysis process. Section V walks you through several content examples using all of the process components identified above.

In sum, data analysis is a process: a series of connected activities designed to obtain *meaningful information* from data that have been collected. As the graphics demonstrate, the process can be conceptualized in different ways (linear or cyclical). However, we strongly believe that either approach can be effective if each of the individual components of the process are included. In turn, each part of the process is based on **decision making**. Each stage of the process includes decision making; *which* decisions are made will then influence the remaining stages of the process.

IV. Managing the Data Analysis Process

Developing a Team

Similar to the Community Assessment, in which the Migrant and Seasonal Head Start Director has the responsibility of ensuring that the data analysis is fully completed and implemented, we would suggest the same for the data analysis. Ultimately the Migrant and Seasonal Head Start Director is responsible for assuring that the data be gathered and analyzed, is ready to present to appropriate stakeholders, and ready to be used for program decision making and enhancement.

Although the director holds the final responsibility for the data analysis process and products, other staff are active participants in the collection and analysis of data. Programs may choose to use existing policy groups to implement the data analysis process, or establish a separate data analysis team. The Policy Council and Board are consulted regarding the plan for implementing the decisions ascertained from the data analysis, and ultimately both groups review and approve all decisions that are made.

The data analysis process must be designed to include a variety of stakeholders. Stakeholders are individuals that have a vested interest in the Migrant and Seasonal Head Start Program – they will benefit from the program in some way. Migrant and Seasonal Head Start programs generally operate using a systems approach, which means that there already exist several teams and committees made up of various levels of the organization including staff, parents, Board and Policy Council and representatives from the community. Various individuals can be identified to form a data analysis team and select a team leader.

The data collection process can be conducted using a variety of teaming models, we recommend the use of two models. The first model emphasizes the use of members from existing committees (i.e., HSAC, Ed. Comm., CA Comm.) and the second model emphasizes the creation of a special data analysis team. Both of these models use a team approach. The team approach is more effective because it takes the burden off of a single individual and distributes the effort among others, thereby strengthening the process. It also ensures a more comprehensive approach to the data analysis process. It is essential to match responsibilities with individual interests and abilities.

In both models, staff, usually the director and service area managers, completes the tasks of collecting, analyzing, presenting the data as well as evaluating the data analysis process. Both models require the scheduling of regular meetings to discuss the work and progress of the data analysis process. It is helpful to include team members who have experience in data analysis so that they can mentor others on the team.

Staff from all program areas have important information and insights to contribute. The information gathered should reflect a perspective that encompasses all aspects of the Migrant and Seasonal Head Start program.

ANALYSIS

All team members participating in the data analysis process will need to be trained. For optimal results, try to match tasks with individual abilities and interests.

Migrant and Seasonal Head Start parents are an important source of information and key advisors in the process. Their participation includes acting as: 1) decision makers as members of policy groups or committees, 2) channels of information and opinions from eligible families, 3) collectors of information and opinions from their peers. Parents have information regarding trends in local agriculture, local migration patterns, child health status and service needs that impact Migrant and Seasonal Head Start planning and programming.

Community partners and other agencies often have their own data analysis needs. Information from community partners can be extremely valuable. Some community partners might have systems already in place to collect and analyze data (e.g. community colleges, migrant/community health clinics, agricultural extension offices, health departments, other Head Start programs, etc.).

The **Board, Policy Council and advisory committees** should be kept informed regarding the progress. Whenever possible, discuss the findings with appropriate decision making bodies before any document is completed to be submitted or for dissemination. This will enrich the process and enhance participation from appropriate individuals (i.e. parents) in the decision making process.

If a **consultant(s)** are on the team, they can work with the leader. If the organization does not have the expertise to conduct the process, the program may want to request assistance including training of the team from their Head Start technical assistance provider, another agency familiar with data analysis and/or a private consultant who knows Head Start and has worked with similar agencies. Summer interns can also benefit from participating in this process and can be of great help.

Important Tip: Sometimes when working with a person outside the MSHS or HS community there can be a disconnect between their training/background and the purpose of your task. Always make sure that the individual or agency hired or asked to do the task, understand what you want and what you will be doing with the information, as well as the population that you serve.

Planning

Planning is a very integral part of the data analysis process. It is imperative that you develop a plan to engage in data analysis. The plan should outline your data analysis process and include the purpose, questions, data collection methods, needed resources, identified lead person, as well as a timetable for completing all of the necessary tasks. The reality within most programs is that individuals are always managing a variety of different tasks at any given time. The actual process of data analysis should be given priority. Allow time for the identified person to have time or the person's supervisor can reassign certain tasks so that they can devote the appropriate amount of time to the project.

Sample Planning Table

Purpose	Questions	Data Collection Methods	Needed Resources	Lead Person	Timeframe
Purpose 1					
Purpose 2					
Purpose 3					

The planning piece of the framework gives you an opportunity to identify the resources that you will need. Some examples of needed resources include the translation of key pieces of information for parents, additional clerical support and scheduling meetings in conjunction with other activities.

As with other planning pieces within Head Start it is important that you consult with the Policy Council (PC) regarding the plan prior to its implementation. Solicit ideas and assistance from PC members regarding the proposed data analysis process.

Important Tip: Traditionally many programs find themselves in a crunch when dealing with data analysis. Taking time to plan out your process will save you time in the long run.

ANALYSIS

Key Points to remember about planning:

- As part of your plan include a strategy for keeping the Board of Directors, Policy Council and other key players updated regarding the progress of the data analysis process.
- Identify in advance the resources that you will need to implement the process. Some examples include the translation of key pieces of information for parents, additional clerical support and scheduling meetings in conjunction with other activities.
- Consult with the Policy Council (PC) regarding information being derived from the data analysis process as well as decisions that are being made as a result of the process. Solicit ideas and assistance from PC members regarding the proposed data analysis process.
- Ensure that all data analysis team members are oriented and trained to understand the importance of the data analysis and its impact on the provision of Head Start services to migrant and seasonal children and families.

Data Management

Data comes from many places and a variety of formats. It is important to take a systematic approach and think about the following questions:

- How will you keep track of all the data?
- How will you make the data available to several members of your team?
- How will you collect and integrate data over a period of time?
- How can you set up the system so that others can step in if your job responsibilities change?

Choices about which data to include in your Data Analysis is highly dependent on both the availability of data and the quality of the available data. For example if we look at the PIR, it would be very informative to report on data on otitis media (ear infection) of children enrolled in your program. Since data on otitis media is not readily available in the PIR, however, information on hearing condition is reported, which can also provide interesting information. Design your data collection so that you gather a balance of internal, community, state and national information that relates to your program's purpose and to the population that constitutes your eligible families and the community that they become part of when they migrate into your service area.

With regards to data management we strongly encourage that you store the information on the computer to the best of your potential and that you back up your data regularly.

Writing

Write your key findings and interpretations as related to your purpose. A well written report ought to proceed from your findings and interpretations to recommendations that are clear and concise. The report should include a brief narrative consisting of a restatement of your purpose(s), question(s), finding(s), interpretation(s) and recommendation(s). The following is list of useful tips to keep in mind when writing a report:

- Write to your audience;
- Reference all tables and data;
- Title all figures, maps and tables;
- Connect figures, maps and tables to narrative;
- When using figures, maps and tables make sure that they do not contradict the narrative;
- Make sure that your recommendations are derived from your data and not “random” stand alone pieces that have not been introduced earlier; and
- It is highly recommended that your narrative include a brief description of your methodology.

Evaluation

As identified in Section 3 **Conceptualizing Data Analysis as a Process**, the final step of the **Managing the Data Analysis Process** is evaluation. Here, the data analysis team can review and reflect upon:

- Development of a team: was team structure and team make-up appropriate?
- Planning: was the plan followed, timelines met?
- Data Management: How well was the data stored? Did the appropriate people have access to data when needed? Was the appropriate computer software used, was it user friendly and were you able to go about finding needed information?
- Writing, Reporting: How well did the writing tell the story of the data? Did the intended audience find the presentation of information effective? Was the report well written?

V. Data Analysis Using Content Area Examples

Introduction to Data Analysis

Working with data in real life situations always involves some combination of good news and bad news (of course, not necessarily in equal amounts).

In Head Start programs, data is everywhere. Every enrollment form, developmental history and child screening is a potential source of data, as are lesson plans, teachers' observations of children and even the comments made by bus drivers. Likewise, every pre-service evaluation form is also a source of data, as is every statement made by a parent, whether or not it is written down.

As we have mentioned previously, in Head Start programs, "data" come from many sources and are present in large amounts. Therefore, the good news is that we have plenty to work with! Second, all staff in MSHS *already possess* many skills in analyzing data. Consider the following example:

Q: Which size raise would you prefer?

- a) 0.5%
- b) 1.5%
- c) 5%
- d) 15%
- e) 50%?

Congratulations! Everyone got the correct answer! (Remember, the question asked what raise you would *prefer*....not what you should expect).

Some of the "bad" news connected with data analysis includes: 1) getting used to the idea that there are different types of data; 2) keeping track of the many "ways" of working with data; and 3) becoming comfortable with the reality that there is lots to learn if you are new to this. Actually, the related fields of data analysis are so broad and continuously developing that even people with decades of experience can always learn more – if they want to. (PS- there's a lot more bad news but we have space limitations)

Developing data analysis skills means using the skills that you already have and practicing the use of new skills... until they become familiar. Accordingly, we use this section to guide participants through some of the basic procedures and methods available for the analysis of data. Since there is a basic distinction between quantitative data (think, numbers) and qualitative data (think, no numbers) there is also a difference in what "data analysis" means in practice, depending upon the type(s) of data you are (or soon will be) working with.

Therefore, this section is divided into the following sub-sections: 1) Terms & Concepts; 2) Procedures and Methods; and 3) Content Area Examples.

Terms & Concepts: There is a universe of terms and concepts related to data and its analysis. The terms and concepts are the “raw materials” or basic ingredients of the data analysis process. There are on-line glossaries that exceed 30 pages just for quantitative items; in this sub-section we have developed our list to include terms and concepts for both quantitative and qualitative purposes. In addition, we have limited our list to those terms and concepts that we believe are crucial to developing an initial understanding of basic procedures.

Procedures and Methods: There are a large number of procedures and methods available for data analysis. A key consideration is that none of these procedures are necessarily abstract. That is, the same procedures can be applied across a wide range of settings – from baseball games to shopping malls to educational settings. Knowledge of data analysis procedures or methods means that we have the means to work with data; procedures and methods allow us to “make sense” of the data for program purposes. Since there are two basic types of data – quantitative and qualitative – we use this distinction to organize our presentation of procedures and methods in this sub-section.

Content Area Examples: Content area examples are where general, abstract procedures or methods meet up with specific data from Head Start program content areas. In this sub-section we provide several examples of more “simple” analyses followed by some more in-depth examples. Again we use the basic distinction between quantitative and qualitative data to sort out the content area examples.

Terms and Concepts

Term	Definition
Analysis	<i>noun</i> : an investigation of the component parts of a whole and their relations in making up the whole <i>noun</i> : the abstract separation of a whole into its constituent parts in order to study the parts and their relations
Code	<i>noun</i> : a category deemed important by the an individual(s) conducting the analysis. It is a method used to label important pieces of information that are contained in the narrative.
Correlation	<i>noun</i> : a statistical relation between two or more variables such that systematic changes in the value of one variable are accompanied by systematic changes in the other <i>noun</i> : a statistic representing how closely two variable co-vary; it can vary from -1 (perfect negative correlation) though 0 (no correlation) to +1 (perfect positive correlation) (Example: “What is the correlation between those two variables?”)
Data	<i>noun</i> : a collection of facts from which conclusions may be drawn (Example: “Statistical data”)
Denominator	<i>noun</i> : the divisor of a fraction
Difference	<i>noun</i> : the number that remains after subtraction; the number that when added to the subtrahend gives the minuend <i>noun</i> : a variation that deviates from the standard or norm
Estimation	<i>noun</i> : a judgment of the qualities of something or somebody (Example: “In my estimation the boy is innocent”) <i>noun</i> : an approximate calculation of quantity or degree or worth

Term	Definition
Interpretation	<i>noun</i>: an explanation of something that is not immediately obvious (Example: “The edict was subject to many interpretations”) <i>noun</i>: an explanation that results from interpreting something (Example: “The report included his interpretation of the forensic evidence”)
Interview	<i>noun</i>: the questioning of a person (or a conversation in which information is elicited); often conducted by journalists (Example: “My interviews with teenagers revealed a weakening of religious bonds”) <i>verb</i>: discuss formally with (somebody) for the purpose of an evaluation (Example: “We interviewed the job candidates”)
Narrative	<i>noun</i>: a message that tells the particulars of an act or occurrence or course of events; presented in writing or drama or cinema or as a radio or television program (Example: “His narrative was interesting”) <i>adjective</i>: consisting of or characterized by the telling of a story (Example: “Narrative poetry”)
Numerator	<i>noun</i> : the dividend of a fraction
Mean	<i>noun</i> : an average of n numbers computed by adding some function of the numbers and dividing by some function of n
Median	<i>noun</i>: the value below which 50% of the cases fall <i>adjective</i>: relating to or situated in or extending toward the middle
Mode	<i>noun</i> : the most frequent value of a random variable
Percentage	<i>noun</i> : a proportion multiplied by 100

ANALYSIS

Term	Definition
Qualitative	<i>adjective:</i> involving distinctions based on qualities (Example: “Qualitative change”) <i>adjective:</i> relating to or involving comparisons based on qualities
Quantitative	<i>adjective:</i> expressible as a quantity of relating to or susceptible of measurement (Example: “Export wheat without quantitative limitations”) <i>adjective:</i> relating to the measurement of quantity (Example: “Quantitative studies”)
Questionnaire	<i>noun:</i> a form containing a set of questions; submitted to people to gain statistical information
Reliability	<i>noun:</i> the trait of being dependable or reliable
Standard Deviation	<i>noun:</i> the square root of the variance
Statistics	<i>noun:</i> a branch of applied mathematics concerned with the collection and interpretation of quantitative data and the use of probability theory to estimate population parameters
Statistics (Descriptive)	<i>noun:</i> a branch of statistics that denotes any of the many techniques used to summarize a set of data. In a sense, we are using the data on members of set to describe the set.
Statistics (Inferential)	<i>noun:</i> comprises the use of statistics to make inferences concerning some unknown aspect (usually a parameter) of a population.
Sum	<i>noun:</i> the whole amount <i>noun:</i> a quantity obtained by addition

Term	Definition
Survey	<i>noun</i>: short descriptive summary (of events) <i>verb</i>: look over in a comprehensively, inspect (Example: “He surveyed his new classmates”) <i>verb</i>: make a survey of; for statistical purposes
Themes	<i>noun</i>: a unifying idea that is a recurrent element within an interview or a narrative leading to a set of patterns. There is no agreed-upon methodology in narrative analysis to derive themes from patterns. One practice, however, is to use an analysis team, with “themes” being whatever sets of “like” information the team reaches consensus on, based on discussion of transcripts and analysis of patterns. <i>noun</i>: the subject matter of a conversation or discussion
Trend	<i>verb</i>: a general direction in which something tends to move (Example: “The trend of the stock market”)
Validity	<i>noun</i>: the quality of having legal force or effectiveness <i>noun</i>: the quality of being logically valid
Variance	<i>noun</i>: the second moment around the mean; the expected value of the square of the deviations of a random variable from its mean value <i>noun</i>: the quality of being subject to variation

ANALYSIS

Data Procedures and Methods

Procedures for Data Analysis - Quantitative

There are a variety of procedures that may be used to analyze quantitative data. The two most basic types are:

- Summary Measures
- Variance Measures

Summary Measures

Questions to consider when working with summary measures include:

- How do the data converge (come together)?
- What is a “typical” (average) value?
- Where is the middle (center) of a group?

Types of Summary Measures:

1. Mean

- Mean = “Arithmetic average” of the scores
- Example: scores = 64, 70, 80, 80, 90, 98, 100

Mean = Sum of values divided by number of scores:

$$64 + 70 + 80 + 80 + 90 + 98 + 100 = 582$$

$$582 \div 7 = 83.14$$

2. Median

Median = score in the middle; 50th percentile

Example #1:

- Median scores = 64, 70, 80, 80, 90, 98, 100

If # scores = odd: Find the score in the middle

64, 70, 80, [80], 90, 98, 100

Median = 80

Example #2:

- Median scores = 64, 70, 80, 80, 90, 98, 100, 100

If # scores = even: Average the 2 in the middle

64, 70, 80, [80, 90,] 98, 100, 100

$$80 + 90 = 170$$

$$170 \div 2 = 85$$

Median = 85

3. Mode

- Mode = largest number of scores

Example #1:

- Example: scores = 64, 70, 80, 80, 90, 98, 100

Mode = 80

Example #2:

- Example: scores = 64, 70, 80, 80, 90, 98, 100, 100

Modes = 80, 100

ANALYSIS

Important Tip: Some of these procedures can be performed manually. Many people confuse data analysis with complicated computer programs but simple data analysis procedures involve using a pencil, note pad and a calculator. Other procedures can be accomplished using features of Excel software. (See Appendix B)

Variance Measures

Questions to consider when working with variance measures include:

- How do scores differ?
- What are the differences between individuals in a group?
- What is the range of outcomes?

Example of variance measures:

50 participants rate a training using.....

I acquire new knowledge and/or skills

Strongly Disagree	Disagree	Agree	Strongly Agree
☐	☐	☐	☐

A. Results to the statement: I acquired new knowledge and/or skills.

Strongly Disagree	Disagree	Agree	Strongly Agree
45	3	1	1

In this example the variance is small (or, low variability). Staff strongly disagreed and felt that the training did not lead them to acquire new knowledge and/or skills.

B. In a second training consider the responses to the statement: *I acquired new knowledge and/or skills.*

Strongly Disagree	Disagree	Agree	Strongly Agree
0	5	5	40

As in the previous example the variance is small (or, low variability). But unlike the previous example, staff strongly agreed and felt that the training lead them to acquire new knowledge and/or skills.

C. In a third training consider the responses to the statement: I acquired new knowledge and/or skills.

Strongly Disagree	Disagree	Agree	Strongly Agree
15	13	14	8

Unlike the previous two examples the variance in this example is large (or, high variability). In this example staff were divided opinions as to whether they acquired new knowledge and/or skills.

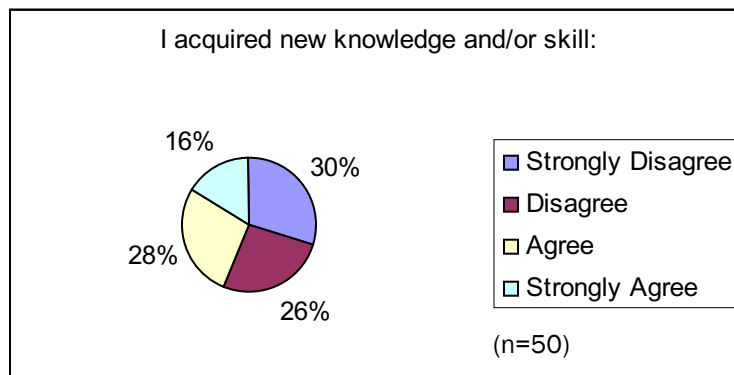
There are many ways to convey the same information. Below are three additional ways to display the same data.

I acquired new knowledge and/or skill:

Strongly Disagree	15
Disagree	13
Agree	14
Strongly Agree	8
	50

I acquired new knowledge and/or skill:

Strongly Disagree	30%
Disagree	26%
Agree	28%
Strongly Agree	16%
	100%
	(n=50)



ANALYSIS

The importance of measuring variance is that it demonstrates differences. Once the difference is identified, then you can seek an explanation and determine if it is significant. In the above examples, you might determine that the first training was not valuable to staff and you may reconsider the topic or the person delivering the training; the second training was valuable and you could consider a follow-up and continue to provide the training; for the third training you could consider the target audience and re-evaluate the material being covered and appropriateness for some staff such as teachers versus family service workers. In these cases further information may be needed as to why there was low or high variability in the responses.

Methods for Data Analysis - Qualitative

There are also a number of ways that qualitative data can be analyzed. We will concentrate on a narrative analysis method using questionnaires and interviews.

Although the following examples are identified as narrative analysis the same process can be used when analyzing interviews and questionnaires.

In the example below we will explore how the transcript can be used as a source of data.

Sample Qualitative Data: Transcript from a 2002 Parent Interview Conducted in a Rural Head Start Program in Upstate New York

(Family one – husband)

OK, well, me first, before anything, I came here because of the poverty, do you understand me? And for a good quality of life, in my country not so much thinking about myself but about my smaller sisters so that they can have a better education considering that I did not have any, and another reason was in my country there are no good jobs, and very little work. They pay you very little and you never leave the poverty and another reason is that my father had two brothers that were already here and I thought that the more of us that are here the better that everybody could help each other out and it would be easier to get ahead with our younger sisters.

(Family one – wife)

The same to help my parents I came and I would send money and then my brother came and then the same.

(Family one – husband)

Because in her case, she or better yet sometimes us (in our situation) because we were the eldest, we were men but in her case the eldest are women, and the ones that were going to work, theoretically to help the parents the most were the youngest.

(Family one-wife)

My dad was already here when I came, he was here, mi mother was in Mexico, my dad stayed here for some time and then he went to Mexico.

(Family one-husband)

More than anything, my parents for example they are that type of people that support you no they never stop, for example your dreams do not become reality they always try that if you decide, you know who you are, and they always let us what we wanted better yet things that they showed us and that were good we would do them and they always tried to better us.

The first step in analyzing qualitative data is to arrange the data in a manageable format that will facilitate the process of assigning codes and themes to sections of the transcript:

ANALYSIS

Text	Code	Theme
<i>OK, well, me first, before anything, I came here because of the poverty, do you understand me?</i>	Poverty	Purpose for migration
<i>And for a good quality of life, in my country not so much thinking about myself but about my smaller sisters so that they can have a better education considering that I did not have any</i>	Family Life Better education	Purpose for migration/ family
<i>and another reason was in my country there are no good jobs, and very little work.</i>	Work	Purpose for migration

Once the theme has been established, count the number of times that the theme was identified. At this point the themes can be arranged in order of frequency (the number of times that the theme was identified).

Theme	Frequency	Strength	Barrier
Purpose for migration	2		
Purpose for migration/ family	1		

After using the above format for managing narrative data you may want to determine if the theme is a strength or a barrier. The identification of the theme as a strength or a barrier will help in prioritizing as well as for planning purposes.

Note: To review the definition of code and theme, see page 29 and 32.

Content Area Analysis Using Different Procedures and Methods

On the following pages we walk you through the data analysis process using five of the key process components discussed earlier in Section III. Content examples include:

- Health
- Teacher Credentials
- Classroom Quality
- Disabilities
- Estimating the Number of Eligible Migrant and Seasonal Head Start Children and Families
- Infant Toddler Language
- Family Strengths and Needs

Health (PIR Medical Services)

Process Components	Content Information
--------------------	---------------------

Purpose	To identify the top medical conditions that impact children in MSHS programs over a three year time period, using the Program Information Report (PIR).
----------------	---

Question	What is the number one medical condition that impacts MSHS children enrolled in MSHS programs over a three year period?
-----------------	---

Data Collection	Using the PIR data - Percentage of children who received treatment for main health conditions:
------------------------	--

	MSPB-03	MSPB-04	MSPB-05
Anemia	3.1%	2.5%	2.8%
Asthma	2.0%	2.0%	2.3%
Hearing Diff	1.7%	1.7%	1.7%
Overweight	2.8%	3.2%	3.6%
Vision Problem	1.3%	1.3%	1.4%

Health (PIR Medical Services) (continued)

Process Components

Content Information

Data Analysis

The above percentages are proportions that will tell us what fraction of the total number of children received treatment for the one the identified health conditions. The percentages were calculated by taking the number of children with one of the main health conditions and dividing that number by the actual enrollment.

Add the percent of children identified with each particular health condition for the years available to you (in this example the years are 2003, 2004, 2005), and divide the total by the number of years being analyzed:

	Total	# of years	Average
Anemia	8.4%	3	2.8%
Asthma	6.3%	3	2.1%
Hearing Diff	5.1%	3	1.7%
Overweight	9.6%	3	3.2%
Vision Problem	4%	3	1.3%

At this time it is recommended that a visualizing strategy be used. Rank the health condition using the average.

	Average	Rank
Overweight	3.2%	1
Anemia	2.8%	2
Asthma	2.1%	3
Hearing Diff	1.7%	4
Vision Problem	1.3%	5

Interpretation

Being overweight is the number one medical condition that impacts MSHS children enrolled from 2003-2005.

Teacher Credentials

Process Components

Content Information

Purpose

Since the 1998 Head Start Act reauthorization, Head Start has been mandated to have least 50% of its teachers hold an AA degree or higher. In addition, programs are also mandated to have at least one qualified teacher in each classroom (i.e., the teacher possesses a CDA or higher). In order to monitor and evaluate how their program is meeting these mandates, MSHS staff can make use of several data analysis procedures.

Question

Program staff could begin by asking the question: What is the current level of teacher credentials in our program? Another way to frame the question would be to ask: What percentage of classroom teachers employed by our program now meet the credentialing mandate?

Data Collection

Since a “credentialed” teacher is someone with an AA degree or higher, two pieces of data (information) are needed: 1) the total number of teachers with either an AA degree, BA degree or higher; and 2) the total # teachers.

Data Analysis

The analysis of this data is simply to divide:

Total # teachers with AA, BA, or higher

Total # teachers

=

 X % credentialed teachers.

Teacher Credentials (continued)**Process Components****Content Information****Interpretation**

Consider the following two examples:

Program A

Teachers with AA degree = 37

Teachers with BA degree = 11

Teachers with MA degree = 1

Total teachers with degrees = 49

Total number of teachers = 50

Credentialed teachers = 98%

Program B

Teachers with AA degree = 37

Teachers with BA degree = 11

Teachers with MA degree = 1

Total teachers with degrees = 49

Total number of teachers = 225

Credentialed teachers = 22%

Teacher Credentials (continued)

Process Components

Content Information

Interpretation continued

The same process can be used to identify the percent of teachers who are qualified. Since a “qualified” teacher is someone with a CDA or higher, the calculations would look like this:

Teachers with a CDA = 50
Teachers with AA degree = 37
Teachers with BA degree = 11
Teachers with MA degree = 1
Total number of qualified teachers = 99
Total number of teachers = 100
Qualified teachers = 99%

Once the calculations have been done, program staff can consider the following:

1. Does the result “speak for itself”?- or,
2. Does the result need to be presented in the context of additional information in order to be “adequately” understood?

In the case of teacher credentials for Program A, the result pretty well speaks for itself. The program far exceeds the Head Start Bureau mandate for teacher credentials.

Teacher Credentials (continued)

Process Components

Content Information

Interpretation continued

In the case of Program B, if 22% of a program's teaching staff are credentialed, the interpretation of this result may vary, depending upon other, relevant information. For example, say the program supported a large number of teaching staff ($n = 20$) to obtain degrees. However, if 18 out of 20 teachers who received their degrees left to take jobs in public school programs, this would decrease the percent of credentialed teachers. Other relevant factors could include the presence or absence of higher education partners, changes in access to distance learning, and/or the level of staff turn-over. Program staff can consider and discuss all relevant factors are part of their interpretation of the data.

Alternatively, an analysis of trends in the data might provide meaningful interpretation (explanation) of the current level of teacher credentials.

Program B	2002	2003	2004	2005
% teachers with credentials	5%	11%	15%	22%

In this example, the program is still below the 50% mandate, but presents evidence of

(substantial) progress between 2002 – 2005.

The teacher credential mandate presents one area in which programs can use and develop their skills in data analysis and interpretation. The goal is to use these skills to obtain a clear and valid picture of where the program is “at” – and, possibly, where it has been.

Classroom Quality

Process Components

Content Information

Purpose

To develop an initial “portrait” of classroom quality.

Question

What is the current level of quality in our classrooms?

Data

Possible data sources include:

Early Childhood Environments Rating Scale, Revised Edition (ECERS-R) (Harms, Clifford, & Cryer, 1998).

<http://www.fpg.unc.edu/~ecers/>

Early Language & Literacy Classroom Observation Tool (ELLCO) (Smith, Dickinson, Sangeorge & Anastasopoulos, 2002).

<http://www.brookespublishing.com>

Regardless of which specific instrument is used to measure classroom quality, several common features are:

- Personnel must be trained to use the instrument;
- Different aspects of classroom quality are measured by assessing specific items, using a scale that is specified in the instrument manual; and
- Scores for various sub-scales and a total score can be calculated.

This last feature provides several options for data analysis.

Classroom Quality (continued)

Process Components

Content Information

Data Analysis

The different instruments for measuring classroom quality use information from specific items to form “portraits” of different aspects of overall classroom quality (sub-scores or sub-scales). In addition, the instrumental sub-scales combine to form a total (overall) score. Therefore, scores obtained by using one (or both) of the instruments can be examined at two basic levels:

Instrument-level Options:

1. Individual item
2. Sub-group (sub-scale)
3. Total score

Program-level Options:

1. Individual classroom
2. Classrooms across center
3. Centers across agency
4. Grantee-wide

For example, ECERS-R examines the following seven sub-scales (categories or groups) of classroom quality: Space and Furnishings; Personal Care Routines; Language-Reasoning; Activities; Interaction; Program Structure; and Parents and Staff.

Each of these sub-groups is assessed using a 7-point scale, providing scores, as follows:

1 = Inadequate; 2; 3 = Minimal; 4.; 5 = Good; 6.; 7 = Excellent.

Note that the odd numbers of the scale are where the level of quality is defined; the even numbers represent “mid-points” between two defined levels.

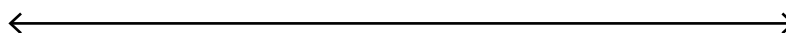
Once we have a grasp of how the instrument is organized and how items are measured, we can begin to understand what data we will be gathering and then how to analyze and interpret it.

Process Components

Data Analysis continued

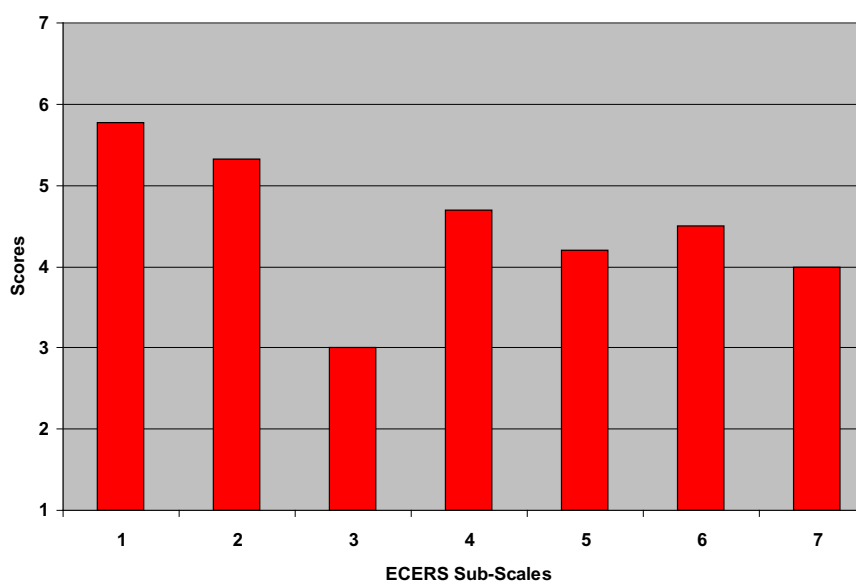
Micro

Macro



In between, we have a range of choices for analysis, depending upon our purposes. The chart below presents data from an actual preschool classroom in New Jersey that participated in a research study in November, 2001 (note: Appendix ____ contains a copy of the completed score sheet).

ECERS DATA: NJ Classroom 3-B



Classroom Quality (continued)

Process Components

Content Information

Data Analysis continued

Remember:

The 7 sub-scales =

Sub-scale 1 = Space and Furnishings; Sub-scale 2 = Personal Care Routines; Sub-scale 3 = Language-Reasoning; Sub-scale 4 = Activities; Sub-scale 5 = Interaction; Sub-scale 6 = Program Structure; and Sub-scale 7 = Parents and Staff

Each sub-scale is scored as:

1 = Inadequate; 2; 3 = Minimal; 4.; 5 = Good; 6.; 7 = Excellent.

Interpretation

Is there evidence of classroom strengths? Consider the following two sub-scales:

1. Space (score = 5.87 out of a possible 7.0).
2. Personal Care Routines (score = 5.33 out of a possible 7.0).

These sub-groups are identified as strengths because they fall within (above) the “good” range

What other evidence is there? Consider:

1. All other sub-scales are scored below the “good” level.
2. The Language-Reasoning score is lowest, (3.0 out of a possible 7.0) -- falling into the minimal range.

Note: The Language-Reasoning sub-scale contains four specific items that are scored individually and then totaled: Books and pictures; Encouraging children to communicate; Using language to develop reasoning skills; and Informal use of language. Criteria for scoring each item are presented in the Instructions section of the ECERS-R.

Classroom Quality (continued)

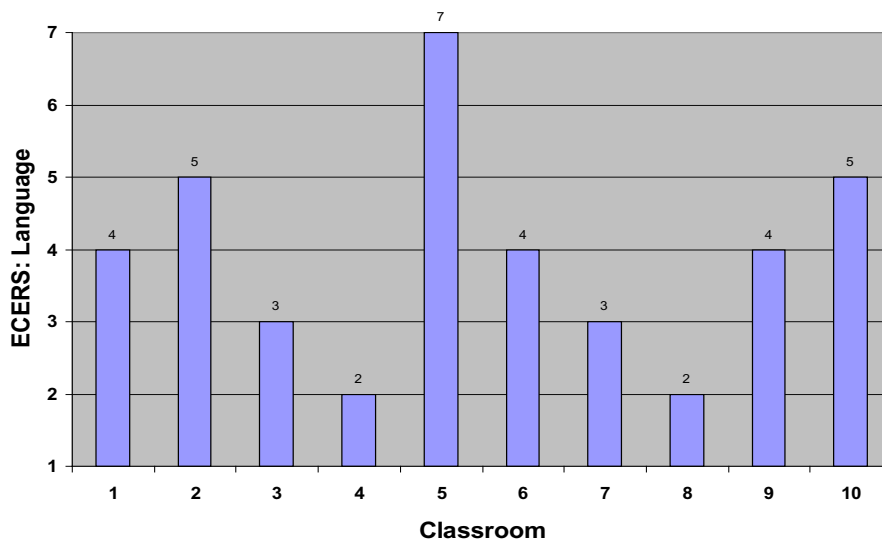
Process Components

Content Information

Interpretation continued

This combination of evidence from one classroom can lead us to consider the larger picture. For example, since the Language-Reasoning sub-scale scores were so low in Classroom 3-B, what about the scores from other classrooms in the same center or program? A next step is to conduct the analysis across classrooms (i.e., how do the different classrooms in the center (program) compare to each other?).

LANGUAGE (across all classrooms)



What can we interpret from the data in the chart above?

Classroom Quality (continued)

Process Components

Content Information

Interpretation continued

By ranking classrooms on a simple distinction – which classrooms are at/above the “good” score (i.e., 5.0) and which are below? – we can quickly identify:

- 3 out of 10 classrooms (30%) are at or above a “good” score in the Language-Reasoning sub-scale.
- 7 out of 10 classrooms (70%) are below a “good” score in the Language-Reasoning sub-scale.

We can also calculate the mean score for all classrooms in the Language-Reasoning sub-scale by adding all of the scores for individual classrooms (the total = 39) and dividing by the number of classrooms (10) for a mean score of 3.9.

We can also account for the variance in scores by simply presenting the range of scores, from highest (e.g., classroom # 5 is a perfect 7) to lowest (e.g., both classrooms # 4 and #8 have a score of 2). A summary statement of these findings could be written as:

The mean for the 10 classrooms on the Language-Reasoning sub-scale was 3.9, with a range of 2 – 7.

We could present an interpretation of these findings along these lines:

The 10 classrooms differ substantially in quality in the Language-Reasoning sub-scale. Although a few classrooms present good or excellent environments for children, the majority of classrooms fall below a “good” rating.

Classroom Quality (continued)

Process Components

Content Information

Interpretation continued

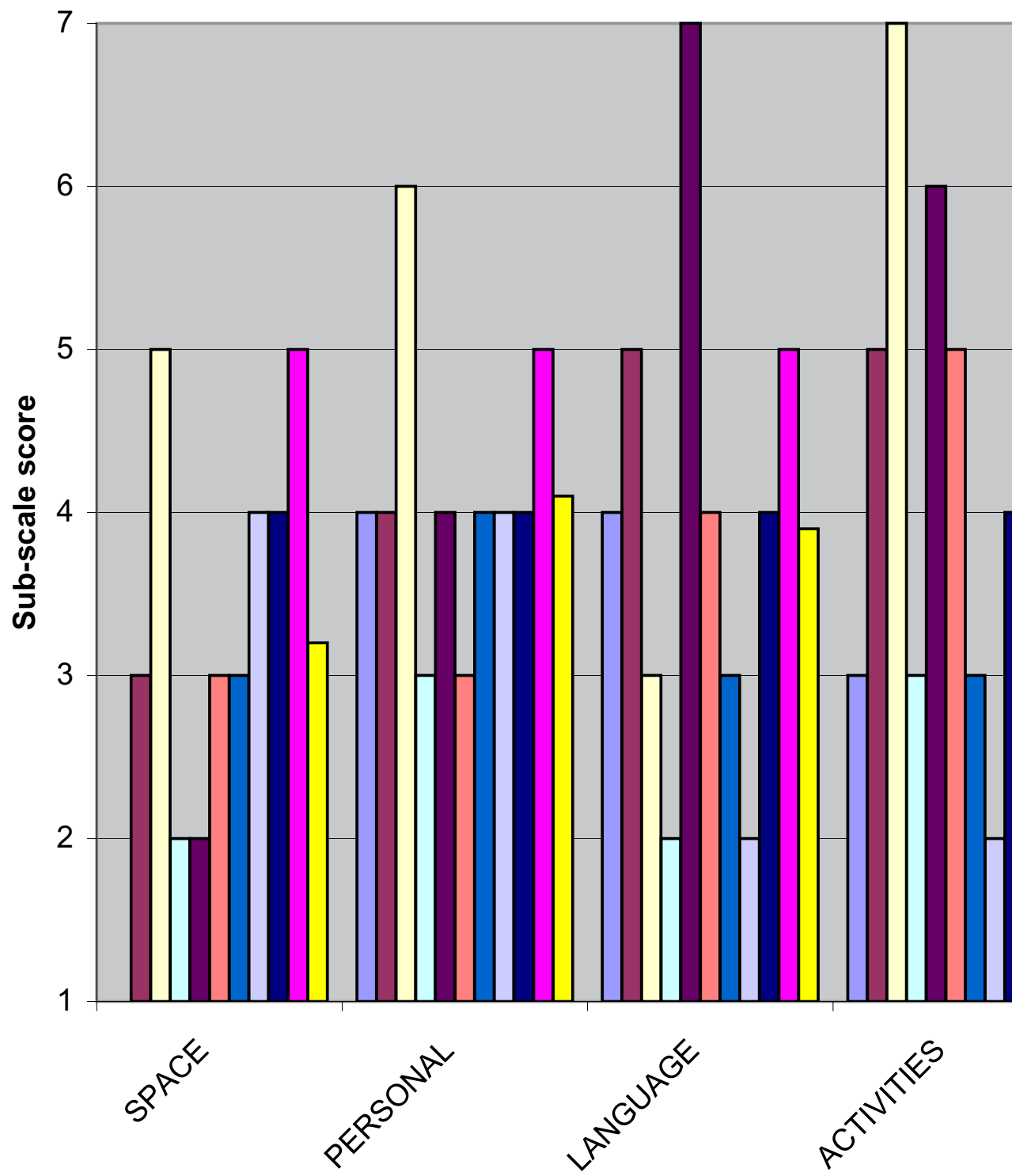
Obviously, this initial look at classroom quality, focused on the Language-Reasoning sub-scale, is not particularly uplifting. Unfortunately, when we look at data, we often “discover” bad news. However, while the data considered above are nothing to cheer over, there are some positive aspects.

1. The worst is over.
2. Planning is straightforward.
3. The lower we start, the only place to go is up.

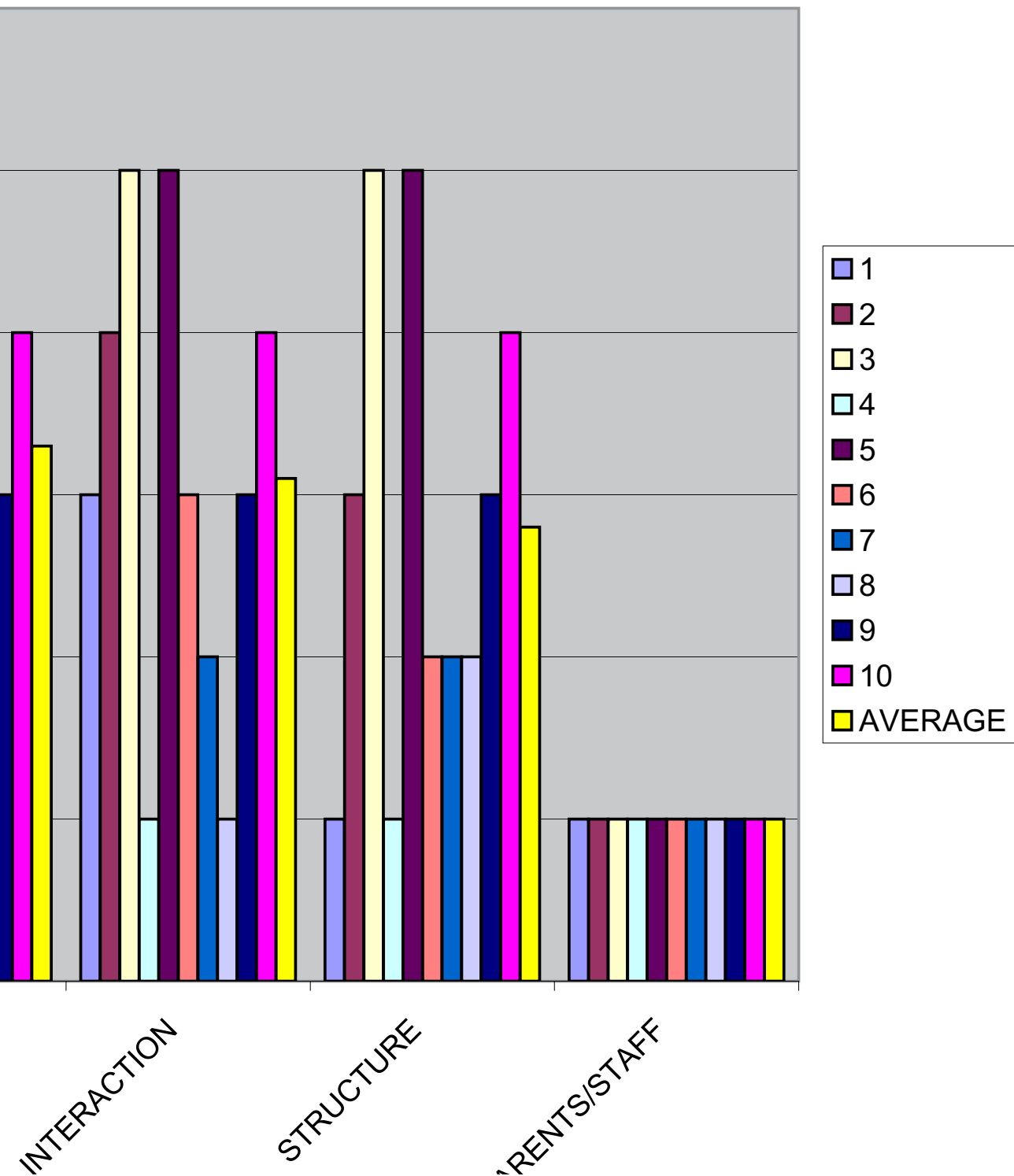
ECERS Example: 10 Classrooms

One advantage of looking at classroom quality data by individual classroom is that we can focus upon the individual strengths and need for improvement for that particular classroom. However, in large-size programs with many classrooms, there are several potential disadvantages to looking at individual classroom data. First, the process can become very time consuming, as classroom data is reviewed and analyzed separately. Second, someone reviewing the data can get “lost” in the details, and not able to focus on the “big picture.”

One way around these disadvantages is to aggregate (combine, put together) data from different classrooms. The graphic below presents hypothetical data for all ECERS sub-scales for ten classrooms. By aggregating the data, everything now fits into one place and is available for analysis.



ANALYSIS



Classroom Quality (continued)**Process Components****Content Information****Interpretation
continued**

When data are aggregated, this presents a variety of options for analysis. For example, someone reviewing the data could look specifically for strengths. Another option would be to analyze for areas needing improvement. Yet another approach would be to look for patterns in the data – i.e., where are there similarities and differences?

Take a moment to review the chart on the following pages and, given the data, see how you would answer the following questions:

- What would you identify as strengths?
- What are areas needing improvement?
- What patterns do you see in the data?
- What else “stands out for you?

ANALYSIS

Disabilities

Process Components

Content Information

Purpose

To estimate the number of children with a disability prior to enrollment in the MSHS program for the upcoming year.

Question

What is a meaningful estimate of children identified to have a disability prior to enrollment in MSHS programs using prior PIR data?

Data Collection

The data that is need is the following:

#_____ of Children with disabilities prior to enrollment for 2001, 2002, 2003, 2004

Actual Enrollment for 2001, 2002, 2003, 2004

Total Number of Children Identified with a Disability Prior to Enrollment for HS Region “XX” from 2001-2004

2001 = 846

2002 = 927

2003 = 1,059

2004 = 1,099

Actual Enrollment for HS Region “XX” from 2001-2004

2001 = 28,157

2002 = 30,498

2003 = 33,188

2004 = 33,023

Disabilities (continued)**Process Components****Content Information****Data Analysis**

Take the # of children with a disability prior to enrollment and divide it by the actual enrollment (this will provide you with a % of children identified with a disability prior to enrollment for each program year from 2001-2004):

$$2001 - 846/28157 = .030 = 3\%$$

$$2002 - 927/30498 = .030 = 3\%$$

$$2003 - 1059/33188 = .031 = 3.1\%$$

$$2004 - 1099/33023 = .033 = 3.3\%$$

(The percentage is a proportion that will tell us what fraction of the total number of children identified with a disability prior to enrollment.)

Add the percent of children identified with a disability prior to enrollment from the years available to you (in this example the years are 2001, 2002, 2003, 2004):

$$= (2001 + 2002 + 2003 + 2004) = (.03 + .03 + .031 + .033) = .124$$

Divide the total by the number of years being analyzed:

$$= .124/4 = .031 \text{ or } 3.1\%$$

(By adding the 4 years worth of data you are determining the average which will be used to make an estimate of the % of children that will be enrolled in the program with a prior disability for the upcoming year.)

In order to determine the estimate you would need to add the actual enrollment from 2001-2004 and calculate the average actual enrollment:

$$= 28,157 + 30,498 + 33,188 + 33,023 = 124,866 / 4 = 31,217$$

And then take the average actual enrollment and multiple it by the % calculated above:

$$= 31,217 \times 3.1\% \text{ or } 31,217 \times .031 = 968$$

Disabilities (continued)

Process Components

Content Information

Interpretation

It is estimated that 3.1 % or 968 children enrolled in HS Region “XX” for 2005 will be identified with a disability prior to enrollment.

Based on the estimate HS Region “XX” will not enroll 10% of children with disabilities prior to the beginning of the program.

Estimating the Number of Eligible Migrant and Seasonal Head Start Children and Families

Process Components

Content Information

Purpose

To obtain meaningful estimates of the number of eligible children and families for the upcoming program year

Question

What is the estimate of eligible children and families for the upcoming year?

Data and Data Analysis

Information needed =

1. Actual enrollment (min. of 2 years)
2. Total number of families served by program

Grower estimates of eligible families for following program year

Table 1

Actual Enrollment		
	2004	2005
Center 1	275	265
Center 2	112	125
Center 3	213	215
Center 4	75	80
Center 5	95	95
Center 6	300	295
Center 7	266	270
Center 8	100	101
Center 9	125	125
Center 10	275	270
Total	1836	1841

ANALYSIS

Estimating the Number of Eligible Migrant and Seasonal Head Start Children and Families (continued)

Process Components

Content Information

Data and Data Analysis continued

Take the totals in Table 1 and determine the average of the two years:

$$\begin{aligned}\text{Table 1 Average} &= (\text{Total 2004} + \text{Total 2005})/2 \\ &= (1836 + 1841)/2 \\ &= (3677)/2 \\ &= 1838.5\end{aligned}$$

Table 2

PIR QUESTION: Total Number of HS or EHS Families Served		
	2004	2005
Number of Families with Children in Program	1080	1083
Total	1080	1083

Take the totals in Table 2 and determine the average:

$$\begin{aligned}\text{Table 2 Average} &= (\text{Total 2004} + \text{Total 2005})/2 \\ &= (1080 + 1083)/2 \\ &= (2163)/2 \\ &= 1081.5\end{aligned}$$

Estimating the Number of Eligible Migrant and Seasonal Head Start Children and Families (continued)

Process Components

Content Information

Data and Data Analysis continued

Table 3

Grower Estimates of Eligible Families for 2006 Program Year		
	Low Estimate	High Estimate
Center 1	164	167
Center 2	64	68
Center 3	120	127
Center 4	40	46
Center 5	53	58
Center 6	170	180
Center 7	150	160
Center 8	50	62
Center 9	70	77
Center 10	160	165
Total	1041	1110

Take the totals in Table 3 and determine the average of the low and high estimate:

Table 3 Average = (Total Low Estimate + Total High Estimate)/2

$$= (1041 + 1110) / 2$$

$$= (2151) / 2$$

$$= 1075.5$$

ANALYSIS

Estimating the Number of Eligible Migrant and Seasonal Head Start Children and Families (continued)

Process Components

Content Information

Data and Data Analysis continued

Determining the Actual Number of Children per Family:

Take Table 1 Average and Divide by Table 2 Average:

$(\text{Table 1 Average}) / (\text{Table 2 Average}) = \text{Actual Number of Children per Family}$

$$= (1838.5) / (1081.5)$$

$$= 1.69$$

Determining the Estimate Number of Children for Your Program for 2006 Using Grower Family Estimates:

Take Table 3 Average and Multiple by the Actual Number of Children per Family:

Estimate Number of Children for Your Program for 2006
Using Grower Family Estimates = $(1075.5) \times (1.69)$

$$= 1817.6$$

Estimating the Number of Eligible Migrant and Seasonal Head Start Children and Families (continued)

Process Components

Content Information

Data and Data Analysis continued

Table 4

Grower Estimates of Eligible Families for 2006 Program Year			
	Low Estimate	High Estimate	Average Grower Family Estimate
Center 1	164	167	$331/2=165.5$
Center 2	64	68	$132/2=66$
Center 3	120	127	$247/2=123.5$
Center 4	40	46	$86/2=43$
Center 5	53	58	$111/2=55.5$
Center 6	170	180	$350/2=175$
Center 7	150	160	$310/2=155$
Center 8	50	62	$112/2=56$
Center 9	70	77	$147/2=73.5$
Center 10	160	165	$325/2=162.5$

ANALYSIS

Estimating the Number of Eligible Migrant and Seasonal Head Start Children and Families (continued)

Process Components Content Information

**Data and
Data Analysis
continued**

Table 5

Grower Estimates of Eligible Children for 2006 Program Year by Center				
	Column A: Average Grower Family Estimate	Column B: Estimated Average Number of Children Per Family	Column C: Multiple Column A by Column B	Total from Column C
Center 1	$331/2=165.5$	1.69	$(165.5) \times 1.69$	280
Center 2	$132/2=66$	1.69	$(66) \times 1.69$	112
Center 3	$247/2=123.5$	1.69	$(123.5) \times 1.69$	209
Center 4	$86/2=43$	1.69	$(43) \times 1.69$	73
Center 5	$111/2=55.5$	1.69	$(55.5) \times 1.69$	94
Center 6	$350/2=175$	1.69	$(175) \times 1.69$	296
Center 7	$310/2=155$	1.69	$(155) \times 1.69$	262
Center 8	$112/2=56$	1.69	$(56) \times 1.69$	95
Center 9	$147/2=73.5$	1.69	$(73.5) \times 1.69$	124
Center 10	$325/2=162.5$	1.69	$(162.5) \times 1.69$	275

Estimating the Number of Eligible Migrant and Seasonal Head Start Children and Families (continued)

Process Components

Content Information

Data and Data Analysis continued

Table 6

Actual Enrollment for 2004 and 2005 and Estimated Enrollment for 2006			
	Actual Enrollment 2004	Actual Enrollment 2005	Estimated Enrollment 2006
Center 1	275	265	280
Center 2	112	125	112
Center 3	213	215	209
Center 4	75	80	73
Center 5	95	95	94
Center 6	300	295	296
Center 7	266	270	262
Center 8	100	101	95
Center 9	125	125	124
Center 10	275	270	275
Total	1836	1841	1820

Interpretation

- In this example the estimated number of children for the 2006 program year is 1820.
- In this example the estimated number of families for the 2006 program year is 1076.
- Things to Consider:
 - Survey a large number of growers.
 - Ask for a range of estimates.
 - Compare with actual data from prior years.
 - Make sure that you have the most accurate data sources.

ANALYSIS

Estimating the Number of Eligible Migrant and Seasonal Head Start Children and Families (continued)

Process Components

Content Information

Interpretation continued

Another estimation procedure that is used in estimating migrant and seasonal farmworkers and could possibly be used to estimate the number children for migrant and seasonal farmworker families is a “bottom-up” approach for estimates. This “bottom-up” approach was used by Dr. Alice Larson and a group of consultants to estimate the number of migrant and seasonal farmworkers for an enumeration profiles study conducted for the Bureau of Primary Health Care. The enumeration profiles for Arkansas, California, Florida, Louisiana, Maryland, North Carolina, Mississippi, Oklahoma, Texas, and Washington can be found at:

[http://bphc.hrsa.gov/migrant/Enumeration/
EnumerationStudy.htm](http://bphc.hrsa.gov/migrant/Enumeration/EnumerationStudy.htm)

Estimating the Number of Eligible Migrant and Seasonal Head Start Children and Families (continued)

Process Components

Content Information

Interpretation continued

The following estimate is described within the enumeration profiles study:

- The field agriculture estimate used a “demand for labor” (DFL) process that examines the number of workers needed to perform temporary agricultural tasks, primarily harvesting. The results estimate full-time equivalent (FTE) workers required for the task during the period of peak labor demand. Calculations, prepared for each county, are derived through a formula using four elements:
- $DFL = A \times H/W \times S$

Where:

A = crop acreage.

H = hours needed to perform a specific task (e.g., harvest) on

one acre of the crop.

W = work hours per farmworker per day during maximum activity.

S = season length for peak work activity.

In order to relate the “demand for labor” calculation to MSHS and determine the estimate of eligible MSHS children you will need take the “DFL” in each county and multiply by the average number of children per family in your program to determine the estimate.

Infant/Toddler Languages: Program Policies

Process Components

Content Information

Purpose

To identify issues and concerns from staff and parents related to infant/toddler languages and program policies.

Questions

What concerns do programs have about infant/toddler languages?

What preferences do parents express related to language use in infant/toddler classrooms?

Data Collection

Sample Qualitative Data – Partial Transcript from Questionnaire Distributed to MSHS Programs

Questionnaire item #1: Languages

Our teachers are primarily monolingual English speakers and our teacher assistants are bilingual English and Spanish speakers. Ninety percent of the infants and toddlers have parents who are monolingual Spanish speakers.

The families of the infants and toddlers in our program speak Spanish only at home. Do we need to use English in our program or can we do the whole program in Spanish?

Our program has families that are speak Spanish only (37%) and those that speak Spanish and English (63%). The children who understand Spanish are spoken to in Spanish and those that understand English are spoken to in English. Is this okay for our infants and toddlers or do we need to worry about teaching them all in both English and Spanish?

There is a concern that children may be confused when children are learning at an early age to speak two languages that it may delay their primary language development. Do infants and toddlers exposed to more than one language have language delays?

Infant/Toddler Languages: Program Policies (continued)

Process Components

Content Information

Data Collection continued

In infants and toddler's classrooms it is very important to maintain the home language, to help the children develop their skills; also they needs to be exposed to common English words.

Our infants and toddlers who are exposed to more than one language seem to prosper and become bilingual. When I go into a toddler classroom the children will speak Spanish to their Spanish speaking friends, English to their English speaking friends and depending on the teacher, speak in the teacher's primary language.

Teachers are encouraged to develop relationships with parents, and learn about their interactions with their infant/toddler, as far as communication styles. Teachers speak with children at every occasion, they describe objects and events to them, in both languages, as much as possible. Teachers use songs and finger plays that encourage language, and praise all efforts by children to speak, in whichever language they chose. Teachers are instructed to use their primary language with the children, unless they are highly fluent in the second language ...it is not best practice to have infant/toddler teachers use improper grammar, inappropriate words, or just poorly engage and communicate with their young learners.

Infant/Toddler Languages: Program Policies (continued)

Process Components

Content Information

Data Collection continued

Questionnaire item #2: Preferences of Parents

There is a concern about the children that are speaking only Spanish that they will struggle as they get to the public school system.

Our parents want home language in the program. That is what we do.

Our parents want both languages in the program.

Our parents do not want the use of English to be done to the extent that they loose Spanish. How do we do we figure out how to do this?

Parents often state a preference for their infants and toddlers to learn English. How can we assure them that they will do so even if we use Spanish with them.

Parents prefer a combination of home language and English in the classroom, because they think it is important for the child to start learning the country's language, but also to keep their roots and culture.

Infant/Toddler Languages: Program Policies (continued)

Process Components

Content Information

Data Analysis

The first step in analyzing qualitative data is to arrange the data in a manageable format that will facilitate the process of assigning codes and themes to sections of the transcript.

Managing and Analyzing Narrative Data by Developing Codes and Themes

Parents Preferences for Language Use in Infant/Toddler Classrooms:		
Text	Code	Theme
Our parents want home language in the program	Preference for Spanish	Desire to preserve home language; classrooms should support child's first language.
Parents often state a preference for their infants and toddlers to learn English.	Preference for English	Desire for children to learn English; classrooms should support English acquisition.
Parents prefer a combination of home language and English in the classroom Our parents want both languages in the program	Preference for both Spanish & English	Desire for dual language classrooms; support learning in both languages.

Infant/Toddler Languages: Program Policies (continued)

Process Components

Content Information

Interpretation

Children's Languages

Although many infants and toddlers in MSHS programs are predominantly from Spanish-speaking families, there appear to be important differences in the extent to which children are also exposed to English. In many cases, it appears that infants and toddlers are truly monolingual – their exposure to language is entirely in Spanish. In other cases, however, children are clearly exposed to varying amounts of English in addition to Spanish. Although the questionnaire did not obtain data on the sources, amounts of types of exposure across languages, responses from some programs referred to toddlers who were equally capable of using both Spanish and English. These children were reported to be able to address Spanish- and English-speakers in their own language. In addition, it appears that the developmental progression of both of the children's languages were relatively parallel (i.e., that children were using age-appropriate expressions in both of their languages).

A second important issue identified from the questionnaire responses was the language backgrounds of MSHS teaching staff. Here, fundamental difference emerged between programs regarding the languages of their teachers. Most programs appear to staff their infant/toddler classrooms with Spanish-speaking teachers; some doing so exclusively, based upon an explicit philosophy and/or set of program policies. In other cases, program staff are a mix of Spanish- and English-monolinguals as well as teachers who speak both languages. In a few programs, teachers are primarily English monolinguals.

Infant/Toddler Languages: Program Policies (continued)

Process Components

Content Information

Interpretation continued

Children's Languages continued

These basic differences appear to exist for a variety of reasons: in some cases, programs seem to choose the type(s) of languages they want in their teachers; in other cases, programs seem to be making do with the available workforce of their rural communities.

Parent Preferences for Language(s) in the Classroom

Information obtained on parents' expressed preferences for language use in MSHS infant/toddler classrooms varied as much as the data on teachers' language backgrounds. Basically, there was evidence for all possible positions on the issue.

Some programs reported that parents want their home language (Spanish) to be the language of their child's classroom. Other programs reported that parents often state a preference for their child to learn English – even to the exclusion of Spanish. Finally, other programs indicated that parents express a preference for a combination of both languages in the classroom. In some cases, this latter perspective was modified by the consideration that exposure to English should not be done to the extent that children lose their first language. Given the shared governance mandate of Head Start programs, and the diversity of parent preferences, these considerations are especially important for local program practices and policies.

Family Strengths and Needs

Process Components

Content Information

Purpose

To identify strengths and needs of migrant farmworker families as they move from one geographical area to another.

Questions

- What needs do families have as they enter the program?
- What is the impact on individuals and family systems?

Data Collection

Sample Qualitative Data – Partial Transcript from a 2002 Parent Interview Conducted in a Migrant and Seasonal Head Start Program

(Family One – husband)

OK, well, me first, before anything, I came here because of the poverty, do you understand me? And for a good quality of life, in my country not so much thinking about myself but about my smaller sisters so that they can have a better education considering that I did not have any, and another reason was in my country there are no good jobs, and very little work. They pay you very little and you never leave the poverty and another reason is that my father and I had two brothers that were already here and I thought that the more of us that are here the better that everybody could help each other out and it would be easier to get ahead with our younger sisters.

(Family One – wife)

The same to help my parents I came and I would send money and then my brother came and then the same (interrupted by the husband)

Family Strengths and Needs (continued)

Process Components

Content Information

Data Collection continued

(Family One – husband)

Because in her case, she or better yet sometimes us (in our situation) because we were the eldest, we were men but in her case the eldest are women, and the ones that were going to work, theoretically to help the parents the most were the youngest.

(Family One-wife)

My dad was already here when I came, he was here, mi mother was in Mexico, my dad stayed here for some time and then he went to Mexico.

(Family One-husband)

More than anything, my parents for example they are that type of people that support you - no they never stop, for example if your dreams do not become reality you try anyway, you know who you are, and they always let us because we wanted better than things that they showed us, and that was good - they always tried to better us.

(Family One-husband)

When I arrived here it was real real rare to see Mexicans, Columbians, there was very little people here, the little words that I have learned, do you understand me, I learned from a book, the principal thing is asking for a job in English I repeated and repeated the couple of words, when you get to a restaurant and an American comes and tells you, he would ask you what are you looking for, and then that word I knew and for example, I'm looking for job. I had to know and learn.

Family Strengths and Needs (continued)

Process Components

Content Information

Data Analysis

Again the first step in analyzing qualitative data is to arrange the data in a manageable format that will facilitate the process of assigning codes and themes to sections of the transcript:

Text	Code	Theme
OK, well, me first, before anything, I came here because of the poverty, do you understand me?	Poverty	Poverty as a motivator for migration
And for a good quality of life, in my country not so much thinking about myself but about my smaller sisters so that they can have a better education considering that I did not have any,	Family opportunity/ education	Increased educational opportunities for family members
and another reason was in my country there are no good jobs, and very little work.	Work	Employment as a motivator migration
They pay you very little and you never leave the poverty	Poverty	Poverty as a motivator for migration

Family Strengths and Needs (continued)

Process Components

Content Information

Data Analysis continued

Text (continued)	Code (continued)	Theme (continued)
and another reason is that my father and I had two brothers that were already here and I thought that the more of us that are here the better that everybody could help each other out and it would be easier to get ahead with our younger sisters.	Support	Family support for economic advancement
(Family One – wife) The same to help my parents I came and I would send money and then my brother came and then the same (interrupted by the husband)	Family opportunity/ economic	Family support for economic advancement

Family Strengths and Needs (continued)

Process Components

Content Information

Data Analysis continued

Text (continued)	Code (continued)	Theme (continued)
(Family One – husband) Because in her case, she or better yet sometimes us (in our situation) because we were the eldest, we were men but in her case the eldest are women, and the ones that were going to work, theoretically to help the parents the most were the youngest.	Roles/ responsibilities	Family structures that have an economic impact
(Family One-wife) My dad was already here when I came, he was here, my mother was in Mexico, my dad stayed here for some time and than he went to Mexico.	Separation	Family separation

Family Strengths and Needs (continued)

Process Components

Content Information

Data Analysis continued

Text (continued)	Code (continued)	Theme (continued)
(Family One-husband) More than anything, my parents for example they are that type of people that support you - no they never stop, for example if your dreams do not become reality you try anyway, you know who you are, and they always let us because we wanted better than things that they showed us, and that was good - they always tried to better us.	Support	Family support for economic advancement
(Family One-husband) When I arrived here it was real real rare to see Mexicans, Columbians, there was very little people here,	Community	Emergent community

Family Strengths and Needs (continued)

Process Components Content Information

**Data Analysis
continued**

Text (continued)	Code (continued)	Theme (continued)
the little words that I have learned, do you understand me, I learned from a book, the principal thing is asking for a job in English I repeated and repeated the couple of words, when you get to a restaurant and an American comes and tells you, he would ask you what are you looking for, and than that word I knew and for example, I'm looking for job. I had to know and learn.	Language/work	Impact of language on employment

Family Strengths and Needs (continued)

Process Components

Content Information

Data Analysis continued

Once the theme has been established, count the number of times that the theme was identified. At this point, the themes can be arranged in order of frequency (the number of times that the theme was identified):

Theme	Frequency
Family support for economic advancement	3
Poverty as a motivator for migration	2
Increased educational opportunities for family members	1
Employment as a motivator migration	1
Family structures that have an economic impact	1
Family separation	1
Emergent community	1
Impact of language on employment	1

Family Strengths and Needs (continued)

Process Components

Content Information

Interpretation

- Looking at the transcript sample we notice that the family left their country of origin for economic advancement facilitated by the support of their families both in the United States and in their country of origin. In turn we notice a restructuring of the family system that is divided geographically in which some members are in the country of origin and some in the new community. From a mental health standpoint this is something to note for further examination.
- Poverty is another indicator that impacted the family's decision to migrate. It is important to note that the family's discussion of poverty is not related to their current situation but rather to what prompted them to move. For further examination it would be important to probe families on their current situation regarding their notion of poverty and their current status.

Appendix A: Foundations for Data Analysis Applications in MSHS

The Federal Framework for data analysis applications includes:

- Head Start Act, 1998
- Information Memorandum
- ACYF-IM-HS-00-03
- Information Memorandum
- ACYF-IM-HS-00-18
- GAO Report, 1992

Here, we have not sought to interpret the information, only to provide excerpts of some of the most important information. Program staff are encouraged to obtain the complete versions of these documents for more careful review.

ANALYSIS

Excerpts: The Head Start Act, 1998

As Amended October 27, 1998

Quality Standards; Monitoring of Head Start Agencies and Programs

Sec. 641A [42 U.S.C. 9836A]

The Secretary shall establish by regulation standards, including minimum levels of overall accomplishment, applicable to Head Start agencies, programs, and projects under this subchapter, including—additional education performance standards to ensure that the children participating in the program, at a minimum:

- Develop phonemic, print, and numeracy awareness;
- Understand and use language to communicate for various purposes;
- Understand and use increasingly complex and varied vocabulary;
- Develop and demonstrate an appreciation of books; and
- In the case of non-English background children, progress toward an acquisition of the English language.

Excerpts: Information Memorandum

ACYF-IM-HS-00-03 (1/31/2000)

Subject:

Initial Guidance on New Legislative Provisions on Performance Standards, Performance Measures, Program Self Self-Assessment and Program Monitoring

The purpose of this Memorandum is to inform grantees about the legislative changes on program outcomes, accountability and program improvement in the 1998 Head Start Reauthorization. These requirements, applicable to all Head Start grantees serving three to five year old children, build on and expand our current efforts to improve and document program quality and effectiveness.

Program Self-Assessment

Legislative Provision: Section 641A(b)(2)(B) requires that results-based performance measures “be adaptable for use in self assessment, peer review, and program evaluation of individual Head Start agencies and programs..”

This new legislative mandate calls for Head Start grantees and delegate agencies to augment their current self-assessment efforts by creating a system to track patterns and program outcomes and to use this information to inform program planning and improvement efforts.

Program Monitoring

The new legislative provisions will require that program monitoring incorporates examination of how grantees are tracking and making use of data on child and program outcomes, as well as patterns of those outcomes.

Excerpts: Information Memorandum

ACYF-IM-HS-00-18 (8/10/2000)

Subject:

Using Child Outcomes in Program Self-Assessment

The purpose of this Memorandum is to inform Head Start grantees and delegate agencies about:

- Steps for incorporating data on child outcomes in their program's self-assessment.
- Recommendations for local grantee planning to implement these steps.

Early Head Start and Migrant Head Start programs are responsible for implementing Program Performance Standards, including initial screening and ongoing assessment of all children as annual program self-assessment. Grantees should focus on the goal of enhancing program self-assessment and continuous program improvement by incorporating data on child outcomes.

The objectives of this initiative are to:

Improve the content, quality, consistency and credibility of ongoing assessment of children.

Design an approach to analyze data on children's progress and accomplishments.

Incorporate child outcome data into program self-assessment and continuous program involvement.

Grantees should ensure that their system for ongoing assessment of children includes collection of some data in each of the eight domains of children's learning and development:

- Language Development
- Literacy
- Mathematics
- Science
- Creative Arts
- Social and Emotional Development

- Approaches Toward Learning
- Physical Health and Development

Grantees must develop a system to analyze data on child outcomes that centers on patterns of progress for groups of children over time as they receive services through the program year.

At a minimum, data analysis should compare progress beginning when children enter Head Start, at a mid-point in the program year, and when they when they complete the program year.

Data analysis could also be designed to answer questions such as the following:

- What are the patterns of progress and accomplishments for groups of children in different domains and indicators of learning and development?
- What are the patterns of outcomes for children in different program options, forms of service, and service areas?
- What are the patterns of outcome data for different groups of children, such as (a) those that begin Head Start at different levels of functioning and (b) children that receive one or two years of Head Start services?
- What are the trends in outcome data from year to year, in terms of stability and change in patterns of progress and levels of accomplishment?

In most programs, analysis of child outcomes should be based on data from all children enrolled. Grantees that serve very large numbers of children may consider, with the assistance of appropriate research or evaluation experts, approaches to analyzing outcome data from a sample of children selected to be representative of the full population of children being served.

Data analysis on patterns of child outcomes should be incorporated into the overall self-assessment system and in reporting to agency management teams, Policy Committees and Policy Councils and governing bodies.

ANALYSIS

Excerpts: Quantitative Data Analysis: An Introduction Report to Program Evaluation and Methodology Division. United States General Accounting Office, 1992

Successful data analysis, whether quantitative or qualitative, requires:

- Understanding of a variety of data analysis methods,
- Planning data analysis early in a project and making revisions in the plan as the work develops;
- Understanding which methods will best answer the study questions posed, given the data that have been collected;
- Once the analysis is finished recognizing how weaknesses in the data or the analysis affect the conclusions that can properly be drawn.

Data Analysis

After the data are collected, evaluators need to see whether their expectations regarding data characteristics and quality have been met. Choice among possible analyses should be based partly on the nature of the data—for example, whether many observed values are small and a few are large and whether the data are complete. If the data do not fit the assumptions of the methods they had planned to use, the evaluators have to regroup and decide what to do with the data they have.

Balancing the analytic alternatives calls for the exercise of considerable judgment.

Generic Types of Quantitative Questions

Generic Question
What is a typical value of the variable?
How much spread is there among the cases? To what extent are two or more variables associated?
To what extent are there causal relationships among two or more variables?

DATA

Appendix B: Using Excel To Help Analyze Your Quantitative Data

The task of reviewing and analyzing your quantitative data is made easier with a computer software spreadsheet. One such example is Microsoft's Excel. You will want to begin the process by considering the questions that you want to address. Some of the questions are close-ended questions (e.g., Where are you living now? Where did you live before?) that can be answered using a limited number of responses (e.g., selection 1, 2, 3, or 4; yes/no; etc.).

For example, if you were to utilize the following questions (i.e.,

- Where are you living now?
- How many children (under age 5) live with you?
- How old are each of the children?
- How many children do you have in Migrant and Seasonal Head Start?)

and put them into a spreadsheet, it might look something like the following:

Microsoft Excel - Head Start Parent Survey.xls

File Edit View Insert Format Tools Data Window Help

Type a question for help

Arial 10

J14 =SUM(J3:J13)

1	Parent Questionnaire Responses										
2	ID #	Location:	E	S	W	N	Age <5	Age 4	Age 3	Age <2	# in MSHS
3	1		1				3	0	0	1	1
4	2				1		1	0	1	0	1
5	3		1				2	0	1	1	2
6	4			1			2	1	0	1	2
7	5					1	3	0	1	1	2
8	6					1	1	1	0	0	1
9	7				1		2	0	0	1	1
10	8		1				2	1	0	1	2
11	9					1	1	0	1	0	1
12	10			1			2	1	1	0	2
13											
14	Totals=		3	2	2	3	19	4	5	6	15
15	Percent=		30%	20%	20%	30%		21%	26%	32%	79%
16											
17											
18											
19											
20											
21											

Ready

NB1

Since the first question (Where are you living?) is not a numerical response, you might want to create some geographical categories (e.g., East, South, West, North) or names of farms or camps (e.g., Campo Verde, Campo Chico, etc.) to which you could then enter a "1" for each parent responding. For questions like How old are each of the children?,

DATA

you may want to assign age groups to separate columns. After entering information into the spreadsheet, you can quickly sum up the data in the columns by using the Auto Sum button. To double-check that the information in the selected cell is correct, look at the function (fx)—in this case, the cell J14 has the following function: $J14 = \text{SUM}(J3:J13)$ —that is, all the cells from J3 through J13 have been summed together...and the total equals seventeen.

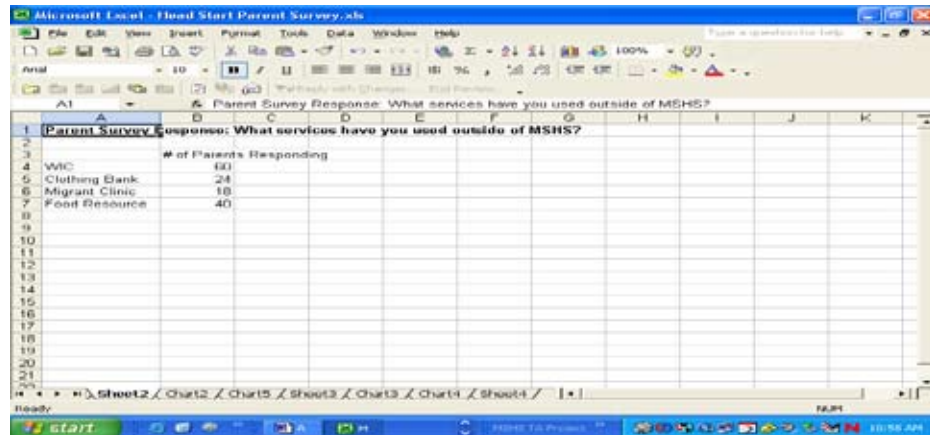
Using a spreadsheet will also allow you to create other functions, such as percentages. In the example below, the responses from ten parent questionnaires have been summed, then percentages have been calculated by creating functions. For example, the cell J16 has the function (fx = $J14/F14$)—that is, the total number of children in the Migrant and Seasonal Head Start program (in cell J14) is divided by the total number of children “Age<5” (in cell F14). $15/19 = 0.7894$ and, if you click on the “Percent Style” button, you can change this notation to “79%” (it automatically rounds up).

Microsoft Excel - Head Start Parent Survey.xls

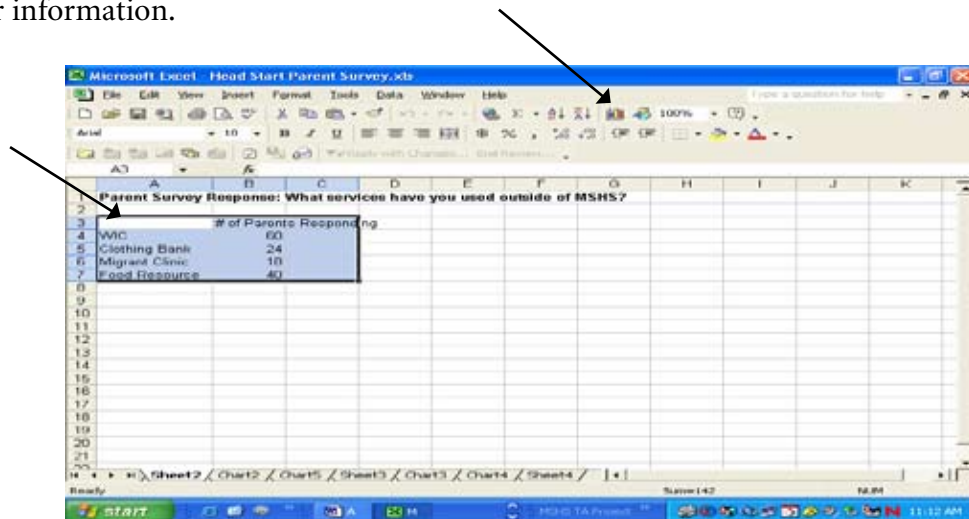
	A	B	C	D	E	F	G	H	I	J
1	Parent Questionnaire Responses									
2	ID #	Location	S	W	N	Age <5	Age 4	Age 3	Age <2	# In MSHS
3	1	1				3	0	0	1	1
4	2			1		1	0	1	0	1
5	3	1				2	0	1	1	2
6	4		1			2	1	0	1	2
7	5				1	3	0	1	1	2
8	6				1	1	1	0	0	1
9	7			1		2	0	0	1	1
10	8	1				2	1	0	1	2
11	9				1	1	0	1	0	1
12	10		1			2	1	1	0	2
13										
14	Totals=	3	2	2	3	19	4	5	6	15
15										
16	Percent=	30%	20%	20%	30%		21%	26%	32%	79%
17										
18										
19										
20										
21										

ANALYSIS

With a computer spreadsheet, you can also create a summary table (see below).

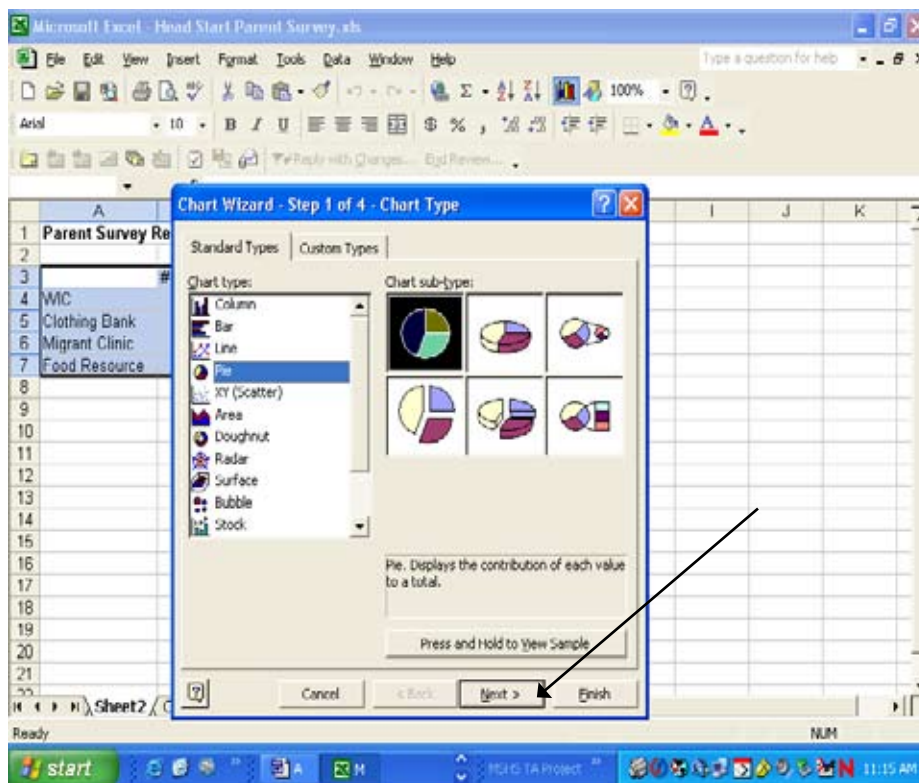


Highlighting the information that you would like to display, you can then go to the Standard Toolbar and select the Chart Wizard to help you create a graphic to represent your information.



DATA

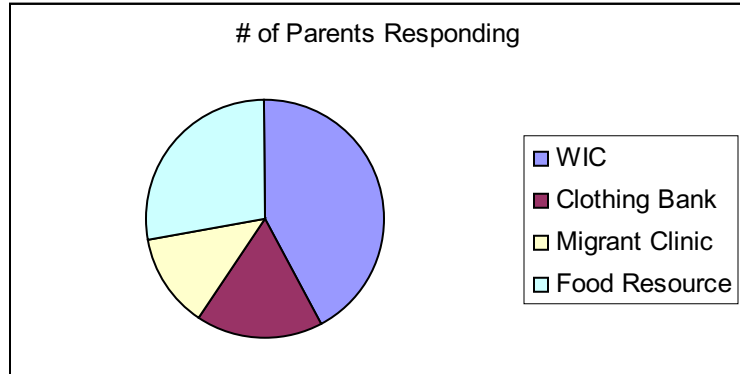
Step by step instructions will then walk you through the process (see below).



From a number of different options (i.e., bar chart, line graph, pie chart), select the one that you think will best represent your data to your target audience (e.g., Policy Council, Management Staff) in an easy-to-understand manner. You can try different options, share the results with your “team,” and select one that best suits your needs.

ANALYSIS

You can then print it out, share it with your target audience to get their feedback, and cut and paste the finished product into your report, as needed.



Appendix C: Supplemental Resources

DATA

SCORE SHEET Early Childhood Environment Rating Scale-Revised

Thelma Harms, Richard M. Clifford, and Debby Cryer

Observer: _____ Observer Code: _____
 Center/School: _____ Center Code: _____
 Room: 33 Room Code: _____
 Teacher(s): _____ Teacher Code: _____
 Number of staff present: 02
 Number of children enrolled in class: 12
 Number of children present: 9

Date of observation: 11 / 21 / 01
 m m d y y
 Number of children with identified disabilities: 03
 Check type(s) of disability: ☒ physical/sensory ☒ cognitive/language
☐ social/emotional ☐ other: _____
 Birthdates of children enrolled: youngest 11 / 08 / 97
 oldest 08 / 08 / 96
 m m d y y
 Time observation began: 9 : 00 ☒ AM ☐ PM
 Time observation ended: 12 : 00 ☒ AM ☐ PM

SPACE AND FURNISHINGS		Notes						
		1	2	3	4	5	6	7
Indoor space		Y N	Y N	Y N	Y N	Y N	Y N	Y N
1.1	☒ ☐	3.1	☒ ☐	5.1	☒ ☐	7.1	☒ ☐	
1.2	☒ ☐	3.2	☒ ☐	5.2	☒ ☐	7.2	☒ ☐	
1.3	☒ ☐	3.3	☒ ☐	5.3	☒ ☐	7.3	☒ ☐	
1.4	☒ ☐	3.4	☒ ☐	5.4	☒ ☐	7.4	☒ ☐	
Furniture for care, play, & learning		Y N	Y N	Y N	Y N	Y N	Y N	Y N
1.1	☒ ☐	3.1	☒ ☐	5.1	☒ ☐	7.1	☒ ☐	
1.2	☒ ☐	3.2	☒ ☐	5.2	☒ ☐	7.2	☒ ☐	
Furnishings for relaxation		Y N	Y N	Y N	Y N	Y N	Y N	Y N
1.1	☒ ☐	3.1	☒ ☐	5.1	☒ ☐	7.1	☒ ☐	
1.2	☒ ☐	3.2	☒ ☐	5.2	☒ ☐	7.2	☒ ☐	
4. Room arrangement		Y N	Y N	Y N	Y N	Y N	Y N	Y N
1.1	☒ ☐	3.1	☒ ☐	5.1	☒ ☐	7.1	☒ ☐	
1.2	☒ ☐	3.2	☒ ☐	5.2	☒ ☐	7.2	☒ ☐	
5. Space for privacy		Y N	Y N	Y N	Y N	Y N	Y N	Y N
1.1	☒ ☐	3.1	☒ ☐	5.1	☒ ☐	7.1	☒ ☐	
6. Child-related display		Y N	Y N	Y N	Y N	Y N	Y N	Y N
1.1	☒ ☐	3.1	☒ ☐	5.1	☒ ☐	7.1	☒ ☐	
1.2	☒ ☐	3.2	☒ ☐	5.2	☒ ☐	7.2	☒ ☐	

53

12
14
10
32

ANALYSIS

7. Space for gross motor <table border="1"> <tr> <th colspan="2">1 2 3 4 5 6 7</th> </tr> <tr> <td>Y N</td> <td>Y N</td> </tr> <tr> <td>1.1 ☒ ☐</td> <td>7.1 ☒ ☐</td> </tr> <tr> <td>1.2 ☒ ☐</td> <td>7.2 ☒ ☐</td> </tr> <tr> <td>1.3 ☒ ☐</td> <td>7.3 ☒ ☐</td> </tr> </table> Notes	1 2 3 4 5 6 7		Y N	Y N	1.1 ☒ ☐	7.1 ☒ ☐	1.2 ☒ ☐	7.2 ☒ ☐	1.3 ☒ ☐	7.3 ☒ ☐	11. Nap/rest <table border="1"> <tr> <th colspan="2">1 2 3 4 5 6 7 NA</th> </tr> <tr> <td>Y N</td> <td>Y N</td> </tr> <tr> <td>1.1 ☒ ☐</td> <td>7.1 ☒ ☐</td> </tr> <tr> <td>1.2 ☒ ☐</td> <td>7.2 ☒ ☐</td> </tr> <tr> <td>1.3 ☒ ☐</td> <td>7.3 ☒ ☐</td> </tr> </table> Notes	1 2 3 4 5 6 7 NA		Y N	Y N	1.1 ☒ ☐	7.1 ☒ ☐	1.2 ☒ ☐	7.2 ☒ ☐	1.3 ☒ ☐	7.3 ☒ ☐		
1 2 3 4 5 6 7																							
Y N	Y N																						
1.1 ☒ ☐	7.1 ☒ ☐																						
1.2 ☒ ☐	7.2 ☒ ☐																						
1.3 ☒ ☐	7.3 ☒ ☐																						
1 2 3 4 5 6 7 NA																							
Y N	Y N																						
1.1 ☒ ☐	7.1 ☒ ☐																						
1.2 ☒ ☐	7.2 ☒ ☐																						
1.3 ☒ ☐	7.3 ☒ ☐																						
8. Gross motor equipment <table border="1"> <tr> <th colspan="2">1 2 3 4 5 6 7</th> </tr> <tr> <td>Y N</td> <td>Y N</td> </tr> <tr> <td>1.1 ☒ ☐</td> <td>7.1 ☒ ☐</td> </tr> <tr> <td>1.2 ☒ ☐</td> <td>7.2 ☒ ☐</td> </tr> <tr> <td>1.3 ☒ ☐</td> <td>7.3 ☒ ☐</td> </tr> </table> Notes	1 2 3 4 5 6 7		Y N	Y N	1.1 ☒ ☐	7.1 ☒ ☐	1.2 ☒ ☐	7.2 ☒ ☐	1.3 ☒ ☐	7.3 ☒ ☐	12. Toileting/diapering <table border="1"> <tr> <th colspan="2">1 2 3 4 5 6 7</th> </tr> <tr> <td>Y N</td> <td>Y N</td> </tr> <tr> <td>1.1 ☒ ☐</td> <td>7.1 ☒ ☐</td> </tr> <tr> <td>1.2 ☒ ☐</td> <td>7.2 ☒ ☐</td> </tr> <tr> <td>1.3 ☒ ☐</td> <td>7.3 ☒ ☐</td> </tr> </table> Notes	1 2 3 4 5 6 7		Y N	Y N	1.1 ☒ ☐	7.1 ☒ ☐	1.2 ☒ ☐	7.2 ☒ ☐	1.3 ☒ ☐	7.3 ☒ ☐		
1 2 3 4 5 6 7																							
Y N	Y N																						
1.1 ☒ ☐	7.1 ☒ ☐																						
1.2 ☒ ☐	7.2 ☒ ☐																						
1.3 ☒ ☐	7.3 ☒ ☐																						
1 2 3 4 5 6 7																							
Y N	Y N																						
1.1 ☒ ☐	7.1 ☒ ☐																						
1.2 ☒ ☐	7.2 ☒ ☐																						
1.3 ☒ ☐	7.3 ☒ ☐																						
A. Subscale (Items 1-8) Score <u>47</u> B. Number of items scored: <u>8</u> SPACE & FURNISHINGS Average Score (A + B) <u>5.875</u>		13. Health practices <table border="1"> <tr> <th colspan="2">1 2 3 4 5 6 7</th> </tr> <tr> <td>Y N</td> <td>Y N</td> </tr> <tr> <td>1.1 ☒ ☐</td> <td>7.1 ☒ ☐</td> </tr> <tr> <td>1.2 ☒ ☐</td> <td>7.2 ☒ ☐</td> </tr> <tr> <td>1.3 ☒ ☐</td> <td>7.3 ☒ ☐</td> </tr> </table> Notes		1 2 3 4 5 6 7		Y N	Y N	1.1 ☒ ☐	7.1 ☒ ☐	1.2 ☒ ☐	7.2 ☒ ☐	1.3 ☒ ☐	7.3 ☒ ☐										
1 2 3 4 5 6 7																							
Y N	Y N																						
1.1 ☒ ☐	7.1 ☒ ☐																						
1.2 ☒ ☐	7.2 ☒ ☐																						
1.3 ☒ ☐	7.3 ☒ ☐																						
PERSONAL CARE ROUTINES 9. Greeting/departing <table border="1"> <tr> <th colspan="2">1 2 3 4 5 6 7</th> </tr> <tr> <td>Y N</td> <td>Y N</td> </tr> <tr> <td>1.1 ☒ ☐</td> <td>7.1 ☒ ☐</td> </tr> <tr> <td>1.2 ☒ ☐</td> <td>7.2 ☒ ☐</td> </tr> <tr> <td>1.3 ☒ ☐</td> <td>7.3 ☒ ☐</td> </tr> </table> Notes		1 2 3 4 5 6 7		Y N	Y N	1.1 ☒ ☐	7.1 ☒ ☐	1.2 ☒ ☐	7.2 ☒ ☐	1.3 ☒ ☐	7.3 ☒ ☐	14. Safety practices <table border="1"> <tr> <th colspan="2">1 2 3 4 5 6 7</th> </tr> <tr> <td>Y N</td> <td>Y N</td> </tr> <tr> <td>1.1 ☒ ☐</td> <td>7.1 ☒ ☐</td> </tr> <tr> <td>1.2 ☒ ☐</td> <td>7.2 ☒ ☐</td> </tr> <tr> <td>1.3 ☒ ☐</td> <td>7.3 ☒ ☐</td> </tr> </table> Notes		1 2 3 4 5 6 7		Y N	Y N	1.1 ☒ ☐	7.1 ☒ ☐	1.2 ☒ ☐	7.2 ☒ ☐	1.3 ☒ ☐	7.3 ☒ ☐
1 2 3 4 5 6 7																							
Y N	Y N																						
1.1 ☒ ☐	7.1 ☒ ☐																						
1.2 ☒ ☐	7.2 ☒ ☐																						
1.3 ☒ ☐	7.3 ☒ ☐																						
1 2 3 4 5 6 7																							
Y N	Y N																						
1.1 ☒ ☐	7.1 ☒ ☐																						
1.2 ☒ ☐	7.2 ☒ ☐																						
1.3 ☒ ☐	7.3 ☒ ☐																						
10. Meals/snacks <table border="1"> <tr> <th colspan="2">1 2 3 4 5 6 7</th> </tr> <tr> <td>Y N</td> <td>Y N</td> </tr> <tr> <td>1.1 ☒ ☐</td> <td>7.1 ☒ ☐</td> </tr> <tr> <td>1.2 ☒ ☐</td> <td>7.2 ☒ ☐</td> </tr> <tr> <td>1.3 ☒ ☐</td> <td>7.3 ☒ ☐</td> </tr> </table> Notes		1 2 3 4 5 6 7		Y N	Y N	1.1 ☒ ☐	7.1 ☒ ☐	1.2 ☒ ☐	7.2 ☒ ☐	1.3 ☒ ☐	7.3 ☒ ☐	A. Subscale (Items 9-14) Score <u>32</u> B. Number of items scored: <u>6</u> PERSONAL CARE ROUTINES Average Score (A + B) <u>5.33</u>											
1 2 3 4 5 6 7																							
Y N	Y N																						
1.1 ☒ ☐	7.1 ☒ ☐																						
1.2 ☒ ☐	7.2 ☒ ☐																						
1.3 ☒ ☐	7.3 ☒ ☐																						

55

Notes		1 2 3 4 5 6 7	
24. Dramatic play	Y N 1.1 ☐ ☒	Y N 5.1 ☒ ☐	Y N 7.1 ☐ ☒
25. Nature/science	Y N 1.1 ☐ ☒	Y N 5.1 ☐ ☒	Y N 7.1 ☐ ☒
26. Math/number	Y N 1.1 ☐ ☒	Y N 5.1 ☐ ☒	Y N 7.1 ☐ ☒
27. Use of TV, video, and/or computers	Y N 1.1 ☐ ☒	Y N 5.1 ☐ ☒	Y N 7.1 ☐ ☒
28. Promoting acceptance of diversity	Y N 1.1 ☐ ☒	Y N 5.1 ☐ ☒	Y N 7.1 ☐ ☒

33. Interactions among children	1 2 3 4 5 6 7	Notes	37. Provisions for children with disabilities	1 2 3 4 5 6 7 NA	Notes
Y N 1.1 ☒ ☒ 1.2 ☒ ☒ 1.3 ☒ ☒ Y N 3.1 ☒ ☒ 3.2 ☒ ☒ 3.3 ☒ ☒ Y N 5.1 ☒ ☒ 5.2 ☒ ☒ 5.3 ☒ ☒ Y N 7.1 ☒ ☒ 7.2 ☒ ☒ 7.3 ☒ ☒			Y N 1.1 ☒ ☒ 1.2 ☒ ☒ 1.3 ☒ ☒ 1.4 ☒ ☒ Y N 3.1 ☒ ☒ 3.2 ☒ ☒ 3.3 ☒ ☒ Y N 5.1 ☒ ☒ 5.2 ☒ ☒ 5.3 ☒ ☒ Y N 7.1 ☒ ☒ 7.2 ☒ ☒ 7.3 ☒ ☒		4.7 4.19/50
A. Subscale (Items 29-33) Score <u>21</u> B. Number of items scored: <u>5</u>			A. Subscale (Items 34-37) Score <u>22</u> B. Number of items scored: <u>4</u>		
INTERACTION Average Score (A + B) <u>4.2</u>			PROGRAM STRUCTURE Average Score (A + B) <u>4.5</u>		
PROGRAM STRUCTURE					
34. Schedule	1 2 3 4 5 6 7	Notes	38. Provisions for parents	1 2 3 4 5 6 7	Notes
Y N 1.1 ☒ ☒ Y N 3.1 ☒ ☒ 3.2 ☒ ☒ 3.3 ☒ ☒ 3.4 ☒ ☒ Y N 5.1 ☒ ☒ 5.2 ☒ ☒ 5.3 ☒ ☒ Y N 7.1 ☒ ☒ 7.2 ☒ ☒			Y N 1.1 ☒ ☒ 1.2 ☒ ☒ Y N 3.1 ☒ ☒ 3.2 ☒ ☒ 3.3 ☒ ☒ 3.4 ☒ ☒ Y N 5.1 ☒ ☒ 5.2 ☒ ☒ 5.3 ☒ ☒ Y N 7.1 ☒ ☒ 7.2 ☒ ☒ 7.3 ☒ ☒		
PARENTS AND STAFF					
35. Free play	1 2 3 4 5 6 7	Notes	39. Provisions for personal needs of staff	1 2 3 4 5 6 7	Notes
Y N 1.1 ☒ ☒ 1.2 ☒ ☒ Y N 3.1 ☒ ☒ 3.2 ☒ ☒ 3.3 ☒ ☒ Y N 5.1 ☒ ☒ 5.2 ☒ ☒ 5.3 ☒ ☒			Y N 1.1 ☒ ☒ 1.2 ☒ ☒ Y N 3.1 ☒ ☒ 3.2 ☒ ☒ 3.3 ☒ ☒ 3.4 ☒ ☒ 3.5 ☒ ☒		
36. Group time					
Y N 1.1 ☒ ☒ 1.2 ☒ ☒ Y N 3.1 ☒ ☒ 3.2 ☒ ☒ Y N 5.1 ☒ ☒ 5.2 ☒ ☒ 5.3 ☒ ☒	1 2 3 4 5 6 7		Y N 1.1 ☒ ☒ 1.2 ☒ ☒ Y N 3.1 ☒ ☒ 3.2 ☒ ☒ 3.3 ☒ ☒ Y N 5.1 ☒ ☒ 5.2 ☒ ☒ 5.3 ☒ ☒	1 2 3 4 5 6 7	

ANALYSIS

41. Staff interaction and cooperation	1 2 3 4 5 6 7 NA	Notes																				
<table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">Y N</td> <td style="text-align: center;">Y N</td> <td style="text-align: center;">Y N</td> <td style="text-align: center;">Y N</td> </tr> <tr> <td>1.1 ☐ ☒</td> <td>3.1 ☐ ☒</td> <td>5.1 ☐ ☒</td> <td>7.1 ☐ ☒</td> </tr> <tr> <td>1.2 ☐ ☒</td> <td>3.2 ☐ ☒</td> <td>5.2 ☐ ☒</td> <td>7.2 ☐ ☒</td> </tr> <tr> <td>1.3 ☐ ☒</td> <td>3.3 ☐ ☒</td> <td>5.3 ☐ ☒</td> <td>7.3 ☐ ☒</td> </tr> </table>	Y N	Y N	Y N	Y N	1.1 ☐ ☒	3.1 ☐ ☒	5.1 ☐ ☒	7.1 ☐ ☒	1.2 ☐ ☒	3.2 ☐ ☒	5.2 ☐ ☒	7.2 ☐ ☒	1.3 ☐ ☒	3.3 ☐ ☒	5.3 ☐ ☒	7.3 ☐ ☒						
Y N	Y N	Y N	Y N																			
1.1 ☐ ☒	3.1 ☐ ☒	5.1 ☐ ☒	7.1 ☐ ☒																			
1.2 ☐ ☒	3.2 ☐ ☒	5.2 ☐ ☒	7.2 ☐ ☒																			
1.3 ☐ ☒	3.3 ☐ ☒	5.3 ☐ ☒	7.3 ☐ ☒																			
42. Supervision and evaluation of staff	1 2 3 4 5 6 7 NA																					
<table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">Y N</td> <td style="text-align: center;">Y N</td> <td style="text-align: center;">Y N NA</td> <td style="text-align: center;">Y N</td> </tr> <tr> <td>1.1 ☐ ☒</td> <td>3.1 ☐ ☒</td> <td>5.1 ☐ ☒</td> <td>7.1 ☐ ☒</td> </tr> <tr> <td>1.2 ☐ ☒</td> <td>3.2 ☐ ☒</td> <td>5.2 ☐ ☒</td> <td>7.2 ☐ ☒</td> </tr> <tr> <td></td> <td></td> <td>5.3 ☐ ☒</td> <td>7.3 ☐ ☒</td> </tr> <tr> <td></td> <td></td> <td>5.4 ☐ ☒</td> <td></td> </tr> </table>	Y N	Y N	Y N NA	Y N	1.1 ☐ ☒	3.1 ☐ ☒	5.1 ☐ ☒	7.1 ☐ ☒	1.2 ☐ ☒	3.2 ☐ ☒	5.2 ☐ ☒	7.2 ☐ ☒			5.3 ☐ ☒	7.3 ☐ ☒			5.4 ☐ ☒			
Y N	Y N	Y N NA	Y N																			
1.1 ☐ ☒	3.1 ☐ ☒	5.1 ☐ ☒	7.1 ☐ ☒																			
1.2 ☐ ☒	3.2 ☐ ☒	5.2 ☐ ☒	7.2 ☐ ☒																			
		5.3 ☐ ☒	7.3 ☐ ☒																			
		5.4 ☐ ☒																				
43. Opportunities for professional growth	1 2 3 4 5 6 7																					
<table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">Y N</td> <td style="text-align: center;">Y N</td> <td style="text-align: center;">Y N</td> <td style="text-align: center;">Y N NA</td> </tr> <tr> <td>1.1 ☐ ☒</td> <td>3.1 ☐ ☒</td> <td>5.1 ☐ ☒</td> <td>7.1 ☐ ☒</td> </tr> <tr> <td>1.2 ☐ ☒</td> <td>3.2 ☐ ☒</td> <td>5.2 ☐ ☒</td> <td>7.2 ☐ ☒</td> </tr> <tr> <td></td> <td>3.3 ☐ ☒</td> <td>5.3 ☐ ☒</td> <td>7.3 ☐ ☒</td> </tr> <tr> <td></td> <td></td> <td>5.4 ☐ ☒</td> <td></td> </tr> </table>	Y N	Y N	Y N	Y N NA	1.1 ☐ ☒	3.1 ☐ ☒	5.1 ☐ ☒	7.1 ☐ ☒	1.2 ☐ ☒	3.2 ☐ ☒	5.2 ☐ ☒	7.2 ☐ ☒		3.3 ☐ ☒	5.3 ☐ ☒	7.3 ☐ ☒			5.4 ☐ ☒			
Y N	Y N	Y N	Y N NA																			
1.1 ☐ ☒	3.1 ☐ ☒	5.1 ☐ ☒	7.1 ☐ ☒																			
1.2 ☐ ☒	3.2 ☐ ☒	5.2 ☐ ☒	7.2 ☐ ☒																			
	3.3 ☐ ☒	5.3 ☐ ☒	7.3 ☐ ☒																			
		5.4 ☐ ☒																				
A. Subscale (Items 38-43) Score <u>24</u>																						
B. Number of items scored: <u>6</u>																						
PARENTS & STAFF Average Score (A + B) <u>4</u>																						
Total and Average Scores																						
	Total Score	# of Items Scored	Average Score																			
Space & Furnishings	47	8	5.88																			
Personal Care	32	6	5.33																			
Language-Reasoning	12	4	3.00																			
Activities	47	10	4.70																			
Interaction	21	5	4.2																			
Program Structure	18	4	4.5																			
Parents & Staff	24	6	4.0																			
TOTAL	201	43	4.67																			

Comments

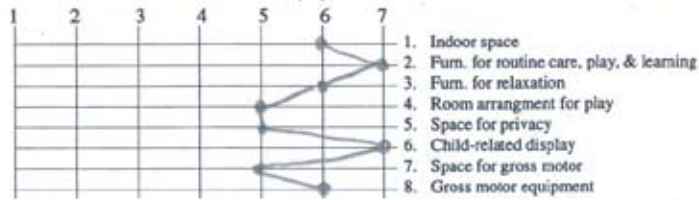
11
13
24

ECERS-R Profile

Center/School: _____ Observation 1: 11 / 21 / 01 Observer: _____
 Teacher(s)/Classroom: BB Observation 2: _____ / _____ / _____ Observer: _____

I. Space & Furnishings (1-8)

Obs. 1 5.78 Obs. 2
 average subscale score



II. Personal Care Routines (9-14)

Obs. 1 5.38 Obs. 2



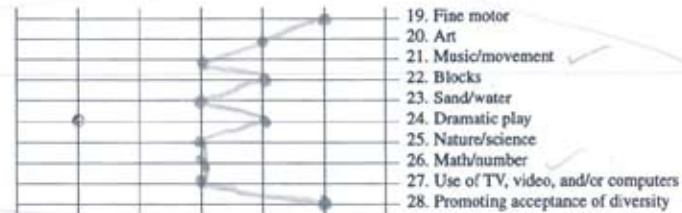
III. Language-Reasoning (15-18)

Obs. 1 3.00 Obs. 2



IV. Activities (19-28)

Obs. 1 4.70 Obs. 2



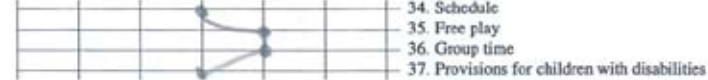
V. Interaction (29-33)

Obs. 1 4.20 Obs. 2



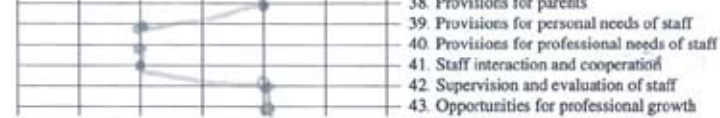
VI. Program Structure (34 - 37)

Obs. 1 4.50 Obs. 2



VII. Parents and Staff (38-43)

Obs. 1 4.00 Obs. 2



Average Subscale Scores



*more interaction
program
star*

ANALYSIS

Data Analysis Evaluation Checklist

_____ (i.e. teacher credentials, enrollment, community assessment, etc)

Process Components	Evaluation Questions	Evidence
Purpose: What Do We Do & Why?	Was the data analysis process consistent with federal requirements and other, relevant regulations?	
Questions: What Do We Want To Know?	Were the questions worded in a way that was consistent with federal standards, other regulations, and organizational purposes? Were the questions effective in guiding the collection and analysis of data?	
Data Collection: What Information Can Help Us Answer Our Question(s)?	How well did the data collection plan work? Was there enough time allotted to obtain the necessary information? Were data sources used that were not effective? Do additional data sources exist that were not utilized? Did the team collect too little data or too much?	
Data Analysis: What Are Our Results?	Which procedures were chosen? Did these conform to the purposes and questions? Were there additional procedures that could be used in the future?	
Interpretation: What Do The Results Mean?	How well did the interpretation process work? What information was used to provide a context for the interpretation of the results? Was additional relevant information not utilized for interpretation? Did team members disagree over the interpretation of the data or was there consensus?	
Writing/Reporting/ Disseminating: What Do We Have To Say? How Do Tell The Story of The Data?	How well did the writing tell the story of the data? Did the intended audience find the presentation of information effective?	
Evaluation: What Did We Learn About Our Data Analysis Process?	Did we evaluate?	





TAC-12 Migrant & Seasonal Head Start Technical Assistance Center

Academy for Educational Development
1875 Connecticut Avenue, NW
Washington, DC 20009
Ph. 202.884.8475
www.aed.ece.org