How To Conduct a Needs Analysis
WLMA Fall Conference 1997
Tacoma, WA

Peter G. Mohn
Snohomish School District
September 17, 1997
(360) 568-0489
Peter_Mohn@ravens.sno.wednet.edu
How to Conduct a Needs Analysis

A) Introduction

Before you make any plans or design a project to improve your library media center (LMC) you need to determine the “true” needs of your library. Not your personal “wants” or “likes.” A needs analysis allows the library media specialist (LMS) to objectively (as much as anyone can be objective) view the current situation of the library and see if it meets professional standards. Many times a needs analysis is conducted by an outside consultant.

B) Definitions of needs analysis and needs assessment

**Needs Analysis**

Is the process the librarian uses to “determine standards, analyze performance needs, and assess treatment needs.” (Ng, p120)

**Needs Assessment**

Is the instrument(s) used to evaluate the needs of the library to “generate treatment strategies, examine feasibility of proposed strategies, rank the feasible strategies, and identify optimal strategy for implementation.” (Ng, p122)

C) Library Literature on Needs Analysis

There is very little library literature on needs analysis, but there are almost 300 articles in ERIC (1982-6/1991) on needs assessment (LISA doesn’t consistently use either needs analysis nor needs assessment as subject headings in its database). Many of the ERIC citations are actually needs analysis articles. Remember, many people interchangeably use the definitions of needs analysis and needs assessment. Also, many of these articles describe instruments that you can use in your own LMC (there is no reason for you to reinvent the wheel). So, if you are asked to research a project for your LMC you will want to “needs assessment” to your literature search.

The references at the end of this handout are mainly from the education field, or from the business field. Either field can be read to synthesize information for use in the library media profession.
D) Needs Analysis Report Format

A formal needs analysis report is usually between 20-25 pages in length. If your report is less than 20 pages then management doesn’t think you have thoroughly covered the subject. If the report is longer than 25 pages, then people become bored reading it. Many times a needs analysis might be 40-60 pages in length because of the enormous amount of data collected for the report. If this happens then place the data in a separately bound appendices section to keep the report between 20-25 pages.

Parts of the Report

Executive Summary

Many times this is the only page a manager reads, therefore a well written abstract is important to the analysis. The summary should be kept to one page, and contain the following four sections: 1) the aim of the analysis; 2) how the analysis was carried out; 3) result summary of the analysis, and; 4) key recommendations of the analysis.

Example:

Executive Summary

Aim

This needs analysis was conducted to determine the technology needs of Totem Falls Elementary. The analysis will prioritize the implementation of technology, educational software, networking, staff training and technology curriculum for the school for the next three to five years.

Methodology

To carry out this needs analysis a number of qualitative methods was used to collect data. Qualitative methods used included a literature review, attending conferences and site visits to other school districts. In addition, a staff survey was conducted to identify the current level of technology expertise in software and hardware, what curricular areas should be prioritized first and what obstacles the staff faces in using technology in the classroom. Lastly, focus groups were conducted to clarify statements made in the survey.

Needs Identified

Major needs identified include TFE lacks the basic technology to develop a meaningful technology program in the classroom; TFE doesn't have an effective process to review educational software for school-wide curriculum decisions; TFE's school network is out of date and needs to be upgraded; TFE needs an
effective way to train staff in the use of technology, and; TFE needs to build a K-6 technology curriculum.

Recommendations

Major recommendations for improving the integration of technology into TFE during phase one are

- purchase enough computers so every teacher has a computer in their classroom.
- place computers on carts so they have flexible use throughout the school.
- preview and select word processing, keyboarding and math applications for all grades.
- provide staff with appropriate training to use computers in the classroom and integrate their use in the school's curriculum.
- continue development of long range technology planning.
1) Introduction

Give a brief description of the LMC organization (you might be able to use the mission statement of the LMC). Second, describe the current challenge(s) facing the LMC.

Example #1

Introduction

1.0 Organization. The SLIS library is currently in the process of evaluating its present serials collection development (SCD) structure. This structure is similar to the average academic research library; it has a well defined process in the selection of serials, but it lacks the processes that will allow the library to evaluate its serials collection over a period of time. The SLIS library wants an evaluation policy for its SCD, so it can better serve its patrons in the access of quality serials that meet the students and faculty needs in research, and in the SLIS curriculum.

1.1 Challenge. The evaluation of serials collections has no precise research methodology that can be employed by librarians. The main reason for this problem is that the vast majority of serials are used “in house”, therefore 100% accurate data on their use is impossible to collect. The challenge facing academic research librarians is to develop an evaluation system that provides quality data to offset the imperfections of their quantity (number) data, and to improve the gathering techniques for collecting quantity data.

Example #2

I Introduction

1.1 Totem Falls Elementary (TFE) is a learning partnership of our children, parents, staff and community. We respect ourselves, others, and the world; create a love of knowledge; encourage and value the uniqueness of ALL learners; enhance hope for the future; and celebrate the wonder of children.

1.2 An important goal to achieving the school's mission is the integration of technology into the school's curriculum. The learning of and use of technology allows children, parents, staff and community to explore our world; create a love of knowledge by expanding the walls of the school to the world's information net; experience the uniqueness in others and value their beliefs by interacting with others from our global community. Technology helps students express and communicate their ideas to others in various mediums, prepares them for life in the future, business and personal, and to develop skills at individual learning rates.

Write your Introduction here:
2)  Aim

In one paragraph state the over-all goal of this needs analysis. This paragraph will be used in the executive summary.

Example #1

Aim

2.0  The purpose of this report is to identify data collection processes the SLIS library can employ to serials collection development that will help them evaluate their serials collection (see Appendix A for authority to conduct this needs analysis). This evaluation process is to be used as an on-going regular library process that will help provide the best serials collection possible to SLIS.

Example #2

II  Aim

2.1  This needs analysis is being conducted to determine the technology needs of Totem Falls Elementary. The analysis will prioritize the implementation of technology, educational software, networking, staff training and technology curriculum for the school for the next three to five years.

Write your Aim here:
3) **Bias for Action**

Who, or what (e.g., board, committee, etc.) granted you the authority to conduct this analysis. It’s important for the reader to weigh the importance of this project with how important the players are who requested the needs analysis.

*Example #1*

**Bias for action.**

3.0 The head librarian of the SLIS library has a definite appreciation for the potential of a formal structure for evaluating the serials collection. She understands that a well-rounded evaluation process will allow her to improve the serials collection by acquiring new serials that meet the needs of her patrons, and deselect serials that are least used by the patrons, and can no longer be bought within the existing budget. Also, this process will allow her to categorize serials for moves to the main library. The cost of serials continue to rise faster than the rate of inflation, the cost of monographs, and university support. The management of the serials collection can no longer be left to unscientific methods that react to economic changes through budget cuts, but rather the evaluation of serials needs to take a pro-active stance that will strengthen the collection, and add ammunition to defending this collection in the face economic hard times.

*Example #2*

**III Bias for Action**

3.1 In a world where technology is becoming an integral part of society TFE needs to develop a systemic approach to integrating technology into its curriculum. Nancy Whitson, the principal of TFE, has given the school's Technology Team the authority to conduct this analysis.

*Write your Bias for Action here:*
4) **Process Frame Factors**

Any analysis conducted has had limits placed on it. This section is where you list the limits to your analysis. If you were only given two weeks to conduct the analysis, then report this fact. Were you limited in the number of people you could interview, the number of other LMCs to visit, did some people refuse to talk with you, did you find all the documents you needed to carry out the analysis, and were there any restrictions placed on the analysis by superiors. This section lets the reader know how thorough you were able to carry out the analysis within the limits of the organization.

*Example #1*

**Process Frame Factors**

4.0 **Definition.** The frame factors of the needs analysis are the set of existing conditions which have set constraints on the gathering of data, thereby defining limitations on the Needs Analysis.

4.1 **Factors in this Analysis**

- The review of literature on serials selection is so extensive that I had to limit it to 31 selections
- Time frame for completion of the needs analysis
- Limited availability of branch librarians to interview for the purposes of the needs analysis
- Lack of other university SLIS libraries to visit and interview due to distance and time.
- Small sample of faculty interviews
- Unknown abilities of library automation at I.U.
- Lack of SLIS graduate student input to this needs analysis

*Example #2*

**IV Process Frame Factors**

4.1 As with any analysis there are limitations that effect the gathering of information. The limitations facing this analysis are

- a two month time frame to conduct the analysis
- analysis conducted outside of regular work responsibilities
- lack of access to a wide range of research periodicals
- one site visit to another school district
- attended one conference (on networking)
- no parent or student surveys developed or given
- no room to build a computer lab in the short term
Write your Process Frame Factors here:
5) Organizational Background

Describe the organization, or the department you are looking at. List the assets of the staff, describe current procedures, organizational makeup, and how this effects the transition taking place, or may take place, during the project.

Example #1

Organizational Background

5.0 Context. In analyzing evaluation techniques for SCD used in academic research libraries it was necessary for me to understand the entire SCD used in the SLIS library. The following paragraphs outline my understanding of this context as describe to me.

5.01 Selection. New serials for the SLIS library are ordered on the basis of requests from Ph.D. students, faculty, and/or the head librarian. These serials are evaluated through professional reviews, indexes cited, sample copies, and by cost. After a year, or two these serials are re-evaluated by the library and the person who requested the serial to see if the serial should be continued, or dropped. So far, almost 100% of new serials requested by the faculty interviewed have been filled.

5.02 In-house use. Patrons are asked to re-shelve the serials they use. This makes it impossible to collect statistical data on serials usage. Though patrons are asked to re-shelve serials many leave their serials sitting on study carrels, where the library staff must collect, and re-shelve them.

5.03 G.A.’s and CWS staff. All three G.A.’s spend four hours a week running the circulation desk, and re-shelving materials as part of their over all job responsibilities. CWS staff help in re-shelving of materials.

5.04 Serials control. One G.A. is in charge of serials control. She spends about ten hours a week in the processing, keeping track, and binding of serials.

5.05 Circulation desk. All materials checked out are also tallied for statistical analysis.

5.06 Serials Data Collection. The only statistics gathered on serials is when patrons need to use a copier outside the SLIS library. Serials are checked out for ten minute intervals, and a tally is recorded for each check out.

5.07 Current Serials Issues. These issues are placed in boxes marked Monday through Friday. Each week day a new set of serials are placed in the box of that day, and left for a week for faculty and students to browse through. The week old material is removed from the box, and placed onto the serials stacks for patrons to use.

5.08 Inter-Library Loan (ILL). These requests are handled by the main library. Statistics are kept on this usage by the reference department,
and reports ofserials requested more than five times in a year are sent to the branch libraries.

5.09 **Space.** The SLIS library is quickly running out of space to house monographs, and serials. Currently, there are not any future plans to expand the size of the existing library.

5.1 **Transition.** The transition of the current SCD system without a standard evaluation process to a SCD with a formal evaluation system must include the blending of the new processes with the present SCD system. The evaluation processes employed must not be a burden on the staff, nor greatly interfere with the other job responsibilities the staff must do in order for the SLIS library to function over-all.

*Example #2*

V **Organizational Background**

5.1 **Description of Organization**

5.1.1 TFE is in the process of systemically changing its educational mission. The school is in the process of creating a School Planning Team comprised of the principal, certificated and classified staff members, parents, community members and business leaders. TFE's School Planning Team will parallel the strategic planning process at the district level and will formulate or revisit vision and mission statements by June 1995. The School Planning Team will then design and begin implementation of systemic long-term goals over the next two years.

5.1.2 To work with the School Planning Team TFE has formed a School Technology Team made up of certificated and classified staff, parents and community members. This team will function as a sub-committee of the School Planning Team and generate a school technology plan.

5.1.3 The current mission of TFE is to fully integrate teachers, parents and community leaders in the educational decision making process of Totem Falls Elementary (TFE). TFE have identified the major stakeholders in the Totem Falls community. These groups include parents, individual community members and some business leaders. Their involvement in the school decision making process, at this time, has been limited to a supporting role. Through our model planning process, we hope to take the next step and make them full partners in our school restructuring efforts.

5.1.4 In order to accomplish our goals TFE will be using a systems design process to restructure the community's local educational system. This systems design process is modeled after Bela Banathy's and Dr. Charles Reigeluth's research in systemically restructuring school systems for our future. TFE is already moving toward learner-
experience level educational design, where systems of learning and human
development are learner based. TFE wants to bring in broad based societal sources
that are available beyond the current boundaries of the school, that support learning.
That decisions relevant to the educational experience be made jointly by the
learning-resources management personnel and by the learners. Specifically, TFE
wants to expand the boundaries of the learner's systems to include various societal
sectors (e.g., local social and business agencies, the Internet, etc.) that can provide
opportunities, arrangements and resources for learning to improve their
interpersonal communication skills.

5.1.5 The organizing perspectives and systems requirements when developing the
learning-experience level include the following core ideas:

• the learner is the key entity and occupies the nucleus of the systems
  complex of education.
• the primary systems function is the facilitation of learning.
• the primary systems level is the learning-experience level, around
  which the systems complex is built.
• there is a large reservoir of learning resources in the society which can
  be defined, developed and made available to support learning.
• left to his or her own devices, the learner cannot attain easy access to
  these resources.
• learning resources need to be identified, developed, and organized, and
  their availability communicated to and their use arranged for the learner.
• there is a wide array of learning types and models that has to be explored,
  selected, defined, and operationalized, such as self-directed, other-directed,
  socially supported, team learning, social learning, organizational learning

The first five perspectives provides rationale for organizing systems complexes
around the learning-experience level. The last two items present requirements that
have to be transformed into the design of systems that can support learning and
human development (Banathy, 1991).

5.1.6 To implement such an ambitious model planning process and to improve its chance
of taking root and becoming an exemplar to other schools/districts TFE proposes to
identify, develop and organize learning resources through the use of technology.
Last spring, through community and school-wide surveys TFE discovered that the
number one educational concern reported by 75% of the school's community was
the lack of technology in the school for teachers/students to use as a
learning/teaching tool and to contact outside societal institutions for finding,
selecting, using and communicating information to others.

5.1.7 To address the number one concern of TFE's community the school has taken
several steps toward improving the situation in this educational area. The TFE
community has hired a new librarian with a strong technology/systems design
background, earmarked school, private, PTO and state instructional and technology funds to buy technology and has integrated its SLIG/technology goals to improve students' interpersonal communication skills. However, the TFE community understands that the buying of technology by itself will not solve its problems in improving students' interpersonal communication skills.

5.1.8 The effective use of technology for improving students' interpersonal communication skills and the development of providing outside societal sources for learning these skills at TFE demands a systemic restructuring of how we approach learning. The School Planning Team will work on the long term systemic restructuring goals of the school by revisiting the 1991 school mission statement and core educational beliefs. Once consensus is reached on the school's vision, then the Team will develop a systemic restructuring educational plan. The Technology Team will work on the short term plan - development of systemic technology goals as the way to fully integrate staff/community members into the school's decision-making process.

5.1.9 By starting the process of systemic change at TFE the local community will be faced with several transitions that will affect the development of a technology plan.

- the Technology Team is learning the shared-decision making process while it is trying to develop a long term plan.
- the School Planning Team was formed after the Technology Team and its decisions may alter the Technology Team's efforts.
- Washington State Education Goals 2000 Grant will help give the Technology Team opportunities to explore various technology options.
- unknown effect of district strategic plans.
- well rounded Technology Team provides good technical expertise.
- much of the technology budget is made up of soft money.

Write your Organizational Background here:
6) **Methodology**

Describe the techniques you used to carry out this analysis. Techniques described in this section should be placed in the executive summary. List the techniques used: review of the literature, surveys, interviews conducted, observations made, and/or visits you conducted to other LMCs. Also, in this section discuss how you carried out the techniques used in the methodology. Lastly, in this section list the LMC standards your LMC will be compared to in the analysis.

*Example #1*

**Methodology**

6.0 **Techniques**

6.01 **Literature Review.** The concern of serials collection development has been in the forefront of academic libraries for the last twenty years. A review of the literature on this topic was critical in order to understand all aspects of this nationwide problem (see Bibliography for citations). Authors who were particularly insightful into this issue are Atkinson, Cohen, Degenor, Gore, Hanson, Heitshu, Lupone, Presley, Tuttle, and White.

6.02 **Interviews.** Once a clear understanding of this nationwide problem of SCD was completed the next step was to interview local professionals, and a representative sample of those people who work at, and use the SLIS library. Those interviewed included:
   - head librarian of SLIS library
   - current & past G.A.’s in charge of serials control
   - 25% of the SLIS faculty (4 professors)
   - 3 I.U. branch head librarians (chosen on the basis of libraries of similar physical size, mission, and/or librarians with more than 10 years of experience at I. U.)

The general questions developed for each group are found in Appendix B. Notice questions developed for the head librarian of SLIS were to find out her concerns on this issue, and the current situation of SCD in the SLIS library. The G.A. interviews were concerned with what their job responsibilities are, how certain jobs are performed by student staff, and what impact an evaluation system would have on them. The faculty interviews were concerned with what selection processes of serials they are familiar with, their working relationship with the SLIS library, and their usage of the SLIS library. Lastly, the interviews with the branch librarians was to look at their serials selection/collection
policies, how costs are affecting their libraries, how they handle the problems of floor space in relation to their serials collection, resource sharing systems they use with other libraries, and the effect library automation is having on their library.

6.03 Observation. Observation of the SLIS library was used to determined the layout of the library (see Appendix C), limitations of space available, and job procedures used by the library staff. Notice the blank areas on this layout, they are filled with study carrels for patrons. The first two stacks, on the left side, in the upper right hand quadrant are for serials, and are full height stacks.

6.1 Method

6.11 Review of Literature. Historical evidence on SCD has shown that there are several problems in librarianship that demand an accurate way to collect data for the evaluation of serials.

- costs have continued to sky rocket for 20 years
- the number of serials for academic research has greatly increased
- serials budgets have not kept up with publisher prices
- comprehensive serials collections no longer realistic
- monograph budgets are raided to maintain serials collections
- space to house serials in libraries diminishing
- over the past four years ARL has been trying to organize university libraries to put collective pressure on publishers to lower the rate of rising serials cost.

6.12 Standards. Over the last twenty years a set of standards for data collection for serials has been developed. Serials data collection should include two types of processes; quantity data (number crunching), and quality data.

Quantity data
- “in house” usage
- circulation data
- ILL data
- current issues being copied

Quality data
- faculty and student evaluations
- serials cited in indexes
Data collection for SCD should include one or more processes from each of these two areas. All data collected should be balanced in relation to one another.

6.13 Observations. The layout of the SLIS library is important as it effects not only how serials are used by patrons, but how serials circulate through in-house use.

- patrons are asked to re-shelve their serials
- study carrels have serials left on them
- staff re-shelves serials left on study carrels
- serial stacks are nearly full
- areas not covered by stacks are covered by carrels
- copier near circ. desk, but difficult to supervise
- materials checked out tallied on clipboard
- serials are circulated when copier is down, and when library is closed
- current issue boxes of serials near copier

Example #2

VI Methodology

6.1 To carry out this needs analysis a number of qualitative methods was used to collect data. Some technology standards were collected by doing a literature review from the past year. Second, information on the latest development of computer networks was gathered at Networking 1995, a conference sponsored on Anixter. Third, ten members of the Technology Team made a site visit to Shoreline School District where they visited the district's technology center and two elementary schools and informally interviewed several staff members.

6.2 Fourth, the Technology Team surveyed the staff at TFE. This survey was developed to identify the current level of technology expertise in software and hardware, what curricular areas should be prioritized first and what obstacles the staff faces in using technology in the classroom. Lastly, two follow-up focus groups were conducted to clarify statements made in the survey. These two groups represented novice technology users and staff members who use word processing and keyboarding skills in their classrooms.

Write your Methodology here:
7) **Organizational Frame Factors**

Describe how the LMC fits in the over-all structure of the organization. Also, discuss the pressures the organization places on the LMC, and the areas the LMC has no control over, but must cope with in its operations.

*Example #1*

**Organizational Frame Factors**

7.0 **Branch libraries at I.U.** Their mission is to serve their respective schools, or departments on campus. This includes meeting the needs of their faculty research, students, and the curriculum. The SLIS library also serves the library faculty of the entire university. Theoretically, their serials collections are to be comprehensive, but, in reality, they meet only the present needs within budget constraints.

7.1 **Materials Budgets.** Budgets for the branch libraries are determined by a library committee that balances the library needs of the entire I.U.B campus. These budget requests are categorized into three areas:
- high priority department, or school requests
- a second level of priorities
- maintain current levels.

7.2 **SLIS SCD.** SCD for faculty, graduate students, and curriculum is a main focus of the SLIS library. The faculty as a whole feel the selection policy fills the vast majority of their research and curriculum needs.

7.3 **The library staff.** The staff, particularly the head librarian, see a need for serials evaluation, but they are not sure how it can be done within the current structure. The staff at times feel they are over worked. With 3 G.A.’s serving only thirteen and a half hours a week each, with four hours on the front desk, their time has to be thoroughly organized, so they can complete their work. The staff also includes five CWS students, and three graduate students working on an hourly wage scale.

7.4 **Faculty.** They are pleased with the service they receive from the SLIS library staff. They find the staff to be sensitive to their needs, and understand the constraints that face their library. Being a library faculty they have a knowledge of the library sciences that allows them to know what’s possible, and how to find sources they need that the average faculty member does not. This expertise allows for a close working relationship with the library staff. Various members have expressed that they feel comfortable working with, and respect the head librarian.

7.5 **Campus ILL.** Most faculty by-pass the inter-campus ILL system. They find it more convenient to physically walk over to the other branch libraries, or send their
G.A.’s to copy articles from serials for their research. Those who do use the campus ILL it find adequate for their needs.

7.6 ILL off-campus. The access to information off-campus seems to be a hit or miss situation. Some faculty find it to be adequate, and others complain of the lack of response time to their requests. The main library handles all ILL requests, and the management of these requests. But some branch librarians have, or are building informal and formal working relationships with other university librarians in their discipline for the express purpose of developing a better, and faster ILL between their departments, or schools. Currently the SLIS library does not use a regional network of library schools to help with the betterment of ILL’s.

7.7 Library Automation. The majority of material bought since 1976 has been entered into the I. O. system. Retrospective conversion of earlier titles is part of future planning. Automated circulation of materials will begin sometime in the spring of 1991. Currently, newly bound serials are receiving a barcodes on their covers. This gives the main library an option to keep records of the usage of these serials by faculty, and staff members. The SLIS library does allow check out of serials when the library is closed; mainly for overnight use, but also during holiday closings. Though a system for collecting statistics has not been developed yet. The potential for keeping serial usage records is up to whether the main library wants this information; programming a subroutine for this information is possible.

Example #2

VII Organizational Frame Factors

7.1 TFE is part of the Snohomish School District. The Snohomish School District is made up of eight elementary schools, two middle schools, a freshman campus and two high schools, one of them alternative. The community has supported the school system until 1994 when they turned down both the technology and regular school levies. The school system has had to cut back on programs, certified and classified staff. Though the community recently passed a one year levy the school system is still faced with more budget cuts for the 1995-96 school year.

7.2 Faced with an organized force against the school system the central office and school board has tabled plans for trying to pass a technology levy until the district is on sound financial footing and the political climate changes. The local TFE community overwhelming has supported TFE and its bid for a technology levy. The number one educational concern expressed by 75% of the TFE community in a parent survey in the spring of 1994 is in the lack of technology in the school.

7.3 TFE has earmarked $5,000 this year for technology, the PTO community has raised around $7,600 (6,600 in points from Computers for Education, $1,000 from its budget for software and two color printers), and the library has allocated $1,200
from its budget and a $1,000 for software from its book fair money. A local family has given the school $2,500 to use for technology. In addition, the state through its ESHB 1209 Instructional Materials/Technology Related Materials Investment - Objects 5 and 9 has given the school around $10,800.

7.4 Except for the regular school budget money the rest of the money is soft and may be temporary. However, the state is still considering extending its technology program for the next biennium. TFE should not depend on this money in determining its long term technology goals.

Write your Organizational Frame Factors here:
8) Results of Methodology

All of the findings of the report are listed here by methodological technique. Sometimes the data is summarized in this section, so the report doesn’t exceed 25 pages. When this happens the raw data is placed in the appendices.

Example of a partial methodology section

8.4.2 Technology Skills

Software

- 82.9% know how to use wordprocessing and 40% use it in the classroom
- 65.7% know keyboarding skills and 28.6% use it in the classroom
- 37% know how to use dB, but no one is using it in the classroom
- 37% know how to use spreadsheets and 11.4% use it in the classroom
- 34.3% know how to use graphic arts/draw and 11.4% use it in the classroom
- Bottom four in recognition
  - 65% - presentation
  - 60% - charting
  - 48.6% - logo
  - 48.6% network user
- We have at least one staff member in each area who is willing to teach others except in Logo

Hardware

- 91.4% know how to a VCR and 68.8% are using it in their classroom
- 68.8% know how to use Mac computers and 42.6% use it in the classroom
- 65.7% know how to use a camcorder and 42.6% use it in the classroom
- Bottom three in recognition
  - 28.6% - Xap Shot
  - 22.9% - scanner
  - 22.9% - telecommunications
- We have at least one staff member in each area who is willing to teach others except in telecommunications

9) Value Analysis

At this point in the analysis you must weigh the worth of the project in the analysis.
Worth = Value - Cost

Value is the benefits the project will have for the LMC and its community. The costs are the money, required effort by staff and political considerations that will affect whether this project will succeed or fail. If the value of the project is higher, then continue the analysis. If the cost is higher, then end the report.

Example

IX Value Analysis

9.1 Should TFE implement a technology plan for the school? The value of such a plan receives high marks for a need to systemically change the school with the help of technology. Also, there is an almost unanimous agreement by the staff that if they had technology in the classroom they could expand the school curriculum beyond their class, properly integrate technology into the curriculum and teach students how to use technology in a variety of learning situations. Third, there is very strong support by the TFE community to develop a technology plan and help in implementing this plan. A technology plan would allow the school to prepare TFE students for their world.

9.2 The costs of a technology plan almost out weigh the value of this plan. The costs of this plan include a lack of support from the district to provide hard moneys to sustain a long term plan for technology. Most of the moneys available are soft and could disappear within the next two years. Since the school is almost starting from the beginning with technology it will take a sustained effort of several years by the staff and community to bring the school up to standards.

9.3 However, if the technology plan takes in consideration that it must conduct extensive training with staff and community over the next few years it has an excellent chance of succeeding. Therefore, it is recommended that the Technology Team finish its technology plan and implement it as soon as possible.

10) Force Field Analysis

This is a new concept to needs analysis, but an important new development. As you go through the results of the analysis certain themes will continue to emerge from the data. Many of these themes will have a positive effect on the project, and others will have a negative effect. Depending how many times these themes are repeated by people (and by whom), the literature, and the surveys will determine how important they are to the success or failure of the project.
Take these themes and rate them from +1 to +5 for positive themes and -1 to -5 for negative themes. These ratings are subjective so you might want several people who are involved in the project to help you rate them. Place these ratings on a graph and add up their points. Now subtract the negative points from the positive points, if you come up with a positive number then the project will have a greater chance of succeeding. If the number is near zero, or negative then the project has a greater chance of failing.

Example of a single set Force Field Analysis

X  Force Field Analysis

10.1 During this needs analysis several themes emerged from the data and from the school. Many of these themes were positive and many negative. These are the forces that will help or hinder any technology plan developed by the Technology Team. These themes have been rated from 1 to 5 for positive themes and -1 to -5 for negative themes. By subtracting the negative points from the positive points the analysis can determine to some degree of confidence whether the implementation of a technology plan will succeed or fail.

10.2 Positive Forces

- Strong support for a technology plan from the principal. 5
- Strong community support for having more technology in the school 5
- Strong PTO support to help fund technology 4
- Strong staff support to embrace technology 4
- Literate staff willingness to train and mentor novice staff members 4
- First year budget for technology 4
- State support for technology 3
- Local community willingness to train staff 3
- Medium use of technology in school 2

Total 34

10.3 Negative Forces

- Lack of support by district for providing hard moneys 5
- Lack of support for technology bond 5
- Uncertainty of soft money 4
- Lack of computers in classroom 4
- School starting from scratch 3
- Lack of room for computer lab 3
• 1/3 of staff technology illiterate 2
• Most staff lack networking knowledge 1

Total 27

10.4

The analysis of forces has a rating of a positive seven. Therefore, a well designed technology plan with attention to training has a good chance of reaching its goals.
Example of a two set Force Field Analysis

Force Field Analysis for Fall of 1990

Figure 1: This diagram depicts the seventeen forces influencing the success of implementing data collecting for SCD in the SLIS library as of the fall of 1990. If you add up the total of weight scale points of the seven driving forces it equals 24; total of restraining forces equals 28.

Force Field Analysis for Fall of 1991

Figure 2: This graph depicts the Fall of 1991, and what will happens to the SCD forces if data collecting processes are implemented in the spring of 1991. Notice there are now eight driving forces, eight restraining forces, and one force that has been neutralized. Also most restraining forces have decreased in strength. If you add up the weighted forces now you get 28 for driving forces, and 15 for restraining forces.
9.4 **Interpretation of Graphs**

9.41 **Figure 1.** This design depicts the current library force field in SCD shows the restraining forces out numbering the driving forces 28 to 24. This analysis means that without changing the restraining forces any implementation to collect data for SCD will not greatly improve to present system, or the project will fail due to these negative forces.

9.42 **Figure 2.** Most of the restraining forces facing the SLIS library are due to a lack of structure that will improve SCD in the library. By implementing the recommendations in this needs analysis these restraining are reduced, or become driving forces by the Fall of 1991. Notice the driving forces out number the restraining forces 28 to 15. The reasons for these changes, or no changes are discussed in the next section.

9.5 **Reason for changes in Force Field Analysis after one year**

<table>
<thead>
<tr>
<th>Force Field number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. First evaluation will help decide what to do with some duplicate serials but not all.</td>
</tr>
<tr>
<td>2. Same reason as one, but space problems become a greater concern as shelf space decreases.</td>
</tr>
<tr>
<td>3. Continued rapport in making important decisions brings staff closer together.</td>
</tr>
<tr>
<td>4. Head librarian still wants quality serials collection.</td>
</tr>
<tr>
<td>5. When data collection can be correlated, head librarian will appreciate process.</td>
</tr>
<tr>
<td>6. Budget is management more efficiently.</td>
</tr>
<tr>
<td>7. Staff will have better idea which serials in SLIS are indexed, but changes to buy serials in indexes will not have been implemented in first year.</td>
</tr>
<tr>
<td>8. Staff will know what their jobs responsibilities, but new staff will have to be trained.</td>
</tr>
<tr>
<td>9. No change in this area.</td>
</tr>
<tr>
<td>10. First year of data valuable, but multiple years are needed to see trends, and to make major decisions.</td>
</tr>
<tr>
<td>11. Process now in place, but quantity data is imperfect.</td>
</tr>
<tr>
<td>12. It will take more than one year to implement this process completely, and depends on the cooperation of all parties.</td>
</tr>
<tr>
<td>13. No change in this area.</td>
</tr>
<tr>
<td>14. Will take several years to make a major impact</td>
</tr>
</tbody>
</table>
on this force.

15. No change in this area.
16. No change in this area.
17. Using database and spreadsheet software will be a major force in evaluating serials collection.
11) Needs Identified

Your needs are identified by comparing the differences between the results of your analysis with the standards of the profession. The major needs of this analysis are placed in your executive summary.

Example

XI Needs Identified

11.1 TFE lacks the basic technology to develop a meaningful technology program in the classroom. With eight computers in the wings teachers don't have enough access to computers in order to train students in their use or to integrate technology into the curriculum. If teachers and students are expected to be computer literate, then the school needs to greatly expand its access to computers. Within the next few years the school should develop a computer lab and have up to six computers in each classroom to integrate technology within the school.

11.2 Though TFE has some educational software for its existing technology there isn't a preview policy for the selection of new material nor is there a way for staff to make software decisions that effect the entire school's curriculum. The staff survey has prioritized three areas for immediate integration of software within the school's curriculum: word processing, keyboarding and math. The staff and reviews of the literature have identified several programs in these three curricular areas that should be previewed this spring.

11.3 The school's computer network is partial and is out-of-date. The cabling has limited ability to expand and there are no active network hubs in the wings. The school needs to upgrade its network to include every room, expand service beyond the school to the community, online services and the Internet. However, more research needs to be conducted in this area in order to determine the best option for networking TFE.

11.4 Currently, the school has no formal training for using technology in the classroom. Novice computer users are remaining so because they haven't received any training. The school has enough staff willing to train other staff members in technology equipment and software. This source of peer coaching needs to be exploited to develop a staff that is 100% technology literate.

11.5 The school has no technology curriculum. The development of such a curriculum is paramount to the successful integration of technology within the school curriculum. The school has a copy of Shoreline's technology goals. This document needs to be analyzed along with other quality technology curriculums. The school needs to visit other sites to see how technology was integrated in those schools and to determine effective ways to integrate technology at TFE.
12 Recommendations

Group your needs under themes, and recommend solutions based upon how the LMC should meet the standards of the profession, and how to neutralize or minimize negative force field factors (needs assessment). These recommendations then become the objectives for carrying out the LMC project, or plan. The most important recommendations are placed in the executive summary.

Example

Recommendations (see Appendix B - Technology Goals Activities to Date)

12.1 First phase, buy enough computers so that every teacher has one in their classroom. In addition, place these computers on movable carts so that they can be shared by each pod in a wing. This will give each classroom teacher an opportunity to have three computers in their classroom on a part time basis. Lastly, teachers will have an opportunity to practice their training, prepare for classroom assignments for students and take the computer home with them for the weekend and over the summer.

12.2 This spring semester the staff at TFE should preview word processing, keyboarding and math software. A software review form should be designed for evaluating all types of software. Consensus should be reached on which programs should be bought for school wide use. Once programs have been selected for the school, then training should be given on how to use this software within the school curriculum.

12.3 Networking the school should be placed on hold for this year while more research can be conducted in this area. Also, a couple of experts in the field should be brought in to consult on the best options available for networking the school and in developing preliminary budget proposals. In addition, research in building a community communications system through a computerized network should be explored. A final decision on network costs and options should be part of the final technology plan. This might be a good area in which to write grants to pay for the installation of this network.

12.4 Staff training is key to the success of this technology plan. The first training sessions should be given to novice computer users on using the Mac computer. Once the word processing, keyboarding and math programs are selected, then training in using these programs should be developed and taught. After the first training sessions are complete then novice technology users should be paired up with a staff mentor so their follow up questions can be quickly answered by a colleague.
12.5 A sub-committee of the Technology Team should look at various technology curriculums and develop a curriculum that fits TFE's current technology level. The integration of this curriculum should come with the development of short training sessions on ways to integrate technology goals with classroom subject matter objectives.
References


