The effectiveness of four technical assistance-oriented services/products of one regional educational laboratory was studied. The services/products studied included a thinking skills activities workbook for classroom teachers, a videotape for rural educators on exemplary software for developing the thinking skills of at-risk students, a research report for urban school administrators on the interrelationships between student and teacher commitment, and a Chapter 1 program improvement and monitoring process (monitoring instrument, training, and ongoing consultation in the monitoring and improvement of Chapter 1 programs). A tracer study tracked the dissemination and use of services/products through exchanges of information with the external evaluators, following which the service/product providers and primary, secondary, and tertiary recipients were interviewed. Recipients were contacted by telephone by the evaluators between 6 months and 1 year after receipt of the service/product. The workbook and the program improvement and monitoring process were found to be more successful than the other two services/products in their degree of dissemination, assessment, and use. The workbook and the process met a defined need, they had a clearly specified target audience, their purpose and potential use were focused and unambiguous, and they could be used without extensive further direction; the videotape and the research report did not meet these criteria. Two references are included. (RLC)
Use of R&D Laboratory Services and Products for School Improvement

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Introduction

The impact of regional educational laboratories in fostering and strengthening state and local efforts to improve schooling for all students, especially those at risk, has come under increasing scrutiny over the past decade. With the growing numbers of at-risk students and fairly level funding for the ten laboratories, their ability to reach out and provide critical services that will directly impact on students has been stretched. As a result, the laboratories have chosen to devote some of their limited resources to develop services and products that can be used by others to improve schooling more directly. The dissemination and effectiveness of these technical assistance-oriented services and products is not widely known. This study thus attempted to collect information on a sample of one laboratory’s services and products as they were disseminated and used. This information, in turn, will be used to strategically plan future regional services and products.

The general approach to this effort was based on a framework for studying knowledge utilization and the methodology of tracer studies (Louis, Kell, Dentler, Corwin, & Herriot, 1984). In very simplistic terms, knowledge utilization occurs when an exchange of purposefully prepared information is communicated to a set of recipients (Louis, et al, 1984). In this particular case, knowledge utilization occurs when laboratory clients (e.g., state education staff, intermediate agency staff, central office and building administrators, classroom teachers) use laboratory services and products with
other educators who work more directly to improve schooling. These events help to compound the laboratory's efforts to improve schooling in the region.

**Study Methodology**

In this particular case, the tracer study methodology will track the dissemination and use of services and products (or exchanges of information) once they leave the laboratory (Louis, et al, 1984). The basic features of this approach involve the selection of services and products, interviews with the providers and a sample of primary, secondary, and tertiary recipients of the service or product with whom the information is shared. This methodology thus helps track the flow of information through the network of original recipients of services or products to others in the educational system.

**Tracer Study Exchanges of Information**

The particular laboratory services and products included in this set of tracer studies were selected in the late spring of 1991. Although over 15 different services or products were initially discussed at a laboratory staff meeting, eventually the sample was narrowed to four and included the following:

- a thinking skills activities workbook for classroom teachers
- a video tape for rural educators on exemplary software for developing the thinking skills of at-risk students
- a research report for urban school administrators on the inter-relationships between student and teacher commitment
- a Chapter 1 program improvement and monitoring process, which includes a monitoring instrument, training, and ongoing consultation in the monitoring and improvement of Chapter 1 programs.

These services and products were selected to provide a mix of dissemination strategies, contents, and clients. They also featured particular approaches that the laboratory was considering reusing in future work in the region.
Tracer Study Samples

A list of first level recipients (i.e., those recipients who had received the service/product directly from RBS) was generated for each service or product included in the tracer studies. A sample of first level recipients was randomly selected for each service or product. The size of the four first level samples varied depending on the size of the original pool of recipients. The first two products involved dissemination to hundreds of clients and so approximately 12-14 percent of the first level sample was contacted. Because of the limited dissemination of the research report (i.e., approximately 50 recipients), the tracer study sample was enlarged to include about 34 percent of the recipients. The Chapter 1 program improvement and monitoring process sample comprised 10 percent of the state monitors and 15 percent of the districts completing monitoring. First level recipients were asked to identify others (i.e., second level recipients) with whom they had shared laboratory services or products. Similarly, second and then third level recipients also were asked to identify others. Given the fairly small numbers, (i.e., less than 15), all second, third, and fourth level recipients were included in the tracer study samples.

Tracer Study Procedures

Once the selection of laboratory services and products was completed, the initial laboratory staff providers were interviewed by one of the third party, external evaluators (i.e., the second and third authors of this paper). These interviews focused on determining the history and goals of the service or product, the reason for its initiation, a full description of the planning and implementation process, and their assessment of the quality and usefulness of the service or product. In essence, laboratory staff provided contextual information for the subsequent interviews of recipients.
Recipients were contacted by telephone by the external evaluators. Interviews typically were conducted between 6 months and one year after they received the service or product. This allowed sufficient time for the service or product to be disseminated further and for the service or product to be used in a meaningful way. During these interviews, the external evaluators asked the recipients questions on:

- their work setting
- their recollection of having received the service or product
- the content of the service or product
- their assessment of the quality of the service or product
- a description and assessment of the assistance received
- ways in which the service or product was used
- ways in which the recipients' organization may have benefited from the service or product
- ways in which the service or product was processed, discussed, and shared in their organizations
- the degree to which recipients typically look for new ideas and their usual sources for seeking such information.

They also were asked to identify other people with whom they shared the laboratory materials (i.e., next level recipients).

Information obtained from these interviews was analyzed to answer a series of critical questions. Foremost was the determination of the effectiveness of the individual service or product in reaching and being used by regional educators to help improve schooling. In addition, analyses were conducted to compare the results for each service or product so that critical features in the services or products themselves, or their dissemination strategies, could be identified.
Tracer Study Results

As might be expected, the effectiveness of the four services or products varied considerably. The results for each are presented separately. Following these individual presentations, several overall comparisons are made.

Thinking Skills Activity Workbook

The workbook was very successful, based partially on its ability to reach the proper audience. It relied on a reactive dissemination strategy. Individuals purchased the workbook through the laboratory's publication catalog. The workbook scored high in its use and effectiveness. Looking at appropriate use (which includes both direct use in the classroom and placement in a professional library as a resource material), the workbook was used appropriately by 89 percent of the first and second level recipients. It was used directly in the classroom by 68 percent of the first and second level recipients. All but two of them rated it as very effective. Respondents tended to express their views about the workbook enthusiastically as illustrated in the two (of many) statements quoted below.

This is one staff development specialist who will recommend the book highly and put it on a list of printed and visual resources for use in the schools. Teachers are not interested in theories; they want something they can use. Compared to other material, this is not didactic, but rather practical and fun.

I, the principal here. I ordered the book at the request of the Chapter I teacher. I looked it over and loved it. When the teacher left the school, she wanted to take it with her but I said "oh no, we paid for it and we want to keep it."

The thinking skills activity workbook clearly reached its target audience, was passed on, and used by practitioners in their classrooms.
**Thinking Skills Video Tape**

The video tape was disseminated using a proactive strategy. Rural superintendents and others were sent a copy of the video tape along with a letter explaining its purpose. The tracer study results showed that it was used directly by 45 percent of the combined first and second level recipients, receiving greater use at the second level than at the first. In addition, 82 percent of the first and second level recipients handed the video tape on to someone else, indicating that recipients did try to make sure that the video tape was received by the right audience.

In spite of this valiant dissemination effort, the effectiveness of the video tape must be considered mixed. Some recipients thought the video tape was:

...on target for our school although there's nothing major that's new. It dealt with a specific population that we are familiar with, people have always thought that thinking skills are only for smarter kids, but now we use the idea across the curriculum. Might be good for parents because ideas might be new to them.

However, other felt that the video tape content did not reflect the rural school emphasis suggested in the title. Still others questioned the quality of the video tape and reported that they:

...had trouble staying awake. I guess it's as good as anything else that introduces a canned program that can be used in school districts if they have computers and want to purchase materials.

Overall, there were significant questions from many recipients about the video tape's emphasis on rural school settings and its quality.

**Research Report on High School Commitment**

Both reactive and proactive strategies were used to disseminate the research report. In terms of the former, the report was sent to educators purchasing a copy through the laboratory’s publication catalog. The report
also was sent to the five urban superintendents who had initially requested the study. The results for each dissemination strategy are presented separately.

The research report was not used by any of the first level recipients who had purchased the report. Twelve of the 13 turned out to be "dead ends" in that they did not remember the report at all, or if they did remember, they had not read it. One of the recipients who recalled receiving the report but had not yet read it, made the following comment:

I have always been happy with RBS materials, but haven't gotten around to this one yet. From the outward appearance, this book looks like a dissertation. This may be part of the reason I have not read it yet. I find that the easier a book or manual is to read (in appearance and content), the more likely it will actually get read. I prefer material that has "at least one immediate application spelled out." If it is up to the reader to go to the application level, then it is less likely to be of value.

The one person included in the tracer study sample who had read the book, a teacher in a "school without walls" had very mixed reactions to it. He found the summary and recommendations at the beginning to be interesting, but the remainder to be too statistical and dry. He also found it to be too "problem-oriented" and would have preferred to know more about what is working.

Tracing the use of the research report via the five superintendents turned out to be very difficult. In two of the five urban districts, there had been extensive turnover at the senior level and so there was no point of entry for this study. Another superintendent did not respond to numerous requests for an interview. In the other two districts, the superintendents praised the report, but could not pinpoint any use of the study.

Together, these findings suggest that the presentation of the findings and dissemination strategy were not very successful. Educational
administrators were not able to use the study's findings in their current form to help lead improvement efforts in their schools.

**Chapter 1 Program Improvement and Monitoring Process**

The methodology used for the Chapter 1 program improvement and monitoring process was somewhat complex in that it included both staff members who conducted Chapter 1 monitoring and school district staff members whose Chapter 1 programs were monitored. Unlike the earlier studies that traced the dissemination of a discrete product from one level of recipients to the next, this tracer study interviewed two groups of recipients who used laboratory products or services in carrying out their Chapter 1 program monitoring responsibilities. The results for each are discussed below.

**Monitors of Chapter 1 programs.** As noted above, 25 individuals who served as monitors of Chapter 1 programs were interviewed; half of the group was recommended by personnel from the state department of education, the other half were selected randomly from the roster of current Chapter 1 monitors. They were interviewed about the training they received, the monitoring approach, and the quality of the monitoring instrument and process. Although many offered substantive feedback to improve the monitoring process, they generally endorsed the importance and value of the monitoring process devised collaboratively by the laboratory and the state department of education. They perceived the emphasis on placing Chapter 1 within the entire educational context as essential to the program's success, and they tried hard to fulfill their role as purveyors of this practice.

**School districts monitored using this process.** Telephone interviews were conducted with 25 educators in eight school districts located throughout the state. The interviewees were chosen from suggestions made by monitors who visited the districts. In each, the Chapter 1 coordinator was interviewed,
along with others including Chapter 1 reading teachers, principals, assistant superintendents, and superintendents. They were interviewed about their preparations for the monitoring visit, the monitoring approach, the quality of the instrument and monitoring process, and the outcomes of the monitoring visit.

For most of the districts, the recent monitoring process was positive. Staff liked the holistic approach developed by the laboratory and the state department of education. They approved of the monitoring instrument, and especially enjoyed the opportunity to prepare for the monitoring visit with self-response forms. Although they reported that the monitoring process helped school personnel to clarify and refocus their Chapter 1 objectives (a primary purpose of the revised monitoring process), none had made any significant changes to their program in response to the monitoring visit.

Tracer Study Summary and Conclusions

The first three products (i.e., the thinking skills activity workbook, the thinking skills video tape, and the research report on high school commitment) differed in their extent of dissemination and use as well as their users' estimates of their effectiveness. In order for these products to be effectively used, they must first reach the hands of their intended audiences. Reactive and proactive dissemination strategies were used to distribute the three: the workbook was disseminated by responding to orders through a laboratory's publication catalog or other information media (reactively), the video tape was distributed proactively through mailings to superintendents and others initiated by RBS, and the research report was disseminated using both reactive (publications catalog) and proactive (sent to urban superintendents) strategies. None of these methods was foolproof -- people can order a book
and forget they have it, receive a video and misplace it, and ignore a research report that arrives on their desks.

Nevertheless, it appears that the thinking skills workbook navigated the treacherous channels of dissemination more successfully than the video tape or research report in terms of reaching its audience and being judged effective. The reasons for its successful dissemination appear to be:

- the publications catalog description represented the product accurately and non-ambiguously
- the target audience was abundantly clear, even from the title
- its use was clear and apparent without additional written instructions.

This is in contrast to the video tape in which the target audience was not clearly defined, the title was somewhat misleading, and the use was not clear despite the suggestions for use that went out with it to superintendents. It is important to emphasize the difference between a target audience (those who use a product directly) and target recipients (such as the superintendents), who are really intermediates in that they are expected to figure out the proper audience and pass the product on to them. While it was appropriate to send the video tape to superintendents as the major contact point in rural areas, it would have been useful to suggest in the accompanying letter who should use the video tape as well as how to use it.

The fate of the research report also can be attributed to the problems of ambiguous description, targeting, and lack of clarity or specificity as to how it could be used. In the publication catalog, the report was represented as a guide for improvement, targeted to administrators. In actuality, it is a summary of research, with recommendations based on findings. It would take a sophisticated "knowledge user" to be able to use the recommendations in an
active program of school improvement. The path to lead recipients in its use is not well-marked.

It is difficult to draw direct comparisons of the above three products with the fourth, the Chapter 1 program improvement and monitoring process. In one very real sense, this service had a captive audience -- state Chapter 1 monitors and programs who were required to use the revised Chapter 1 program improvement and monitoring process. Nevertheless, the results of tracer study interviews suggest that the revised process was being accepted and used extensively throughout the state. Its success was certainly due, in part, to its clearly defined purpose and role in the state's Chapter 1 monitoring process.

In conclusion, the results of the four tracer studies showed that two of the laboratory services and products were more successful than the other two in their degree of dissemination, assessment, and use. These are the thinking skills activity workbook and the Chapter 1 program improvement and monitoring process. Although different from each other in scope, substance, and complexity, the two shared certain basic factors:

- they met a real and clearly defined need
- they had a clearly specified target audience
- their purpose and potential use was focused and unambiguous
- they could be used without extensive further direction.

The two other products, the thinking skill video tape and the research report on high school commitment, were not as successful and did not meet these criteria as well.

The tracer study results have been shared with all of the laboratory staff. To date, the findings from the first year tracer studies have affected work by the laboratory or its clients in two ways. First, the two RBS staff
members who developed the original video tape have revised their plans for dissemination of a second video tape, incorporating ideas gleaned from the above tracer studies. Second, the state Chapter 1 coordinator has used feedback obtained from both Chapter 1 monitors and districts being monitored to modify an upcoming state Chapter 1 monitoring cycle. Both of these uses occurred within weeks of presenting the first year tracer studies results. It will be important to track the more long-term impact of the results on the development and dissemination of future laboratory products and services.
References
