The critical and central role of school library media programs in equipping individuals with the skills and knowledge necessary to compete successfully in a learning society and an information world was explored. An analysis of patterns of information seekers' behavior provided the basis for a discussion of the importance of considering the proximity or availability of information sources, the time and energy required to find and use information, and perceptions of how much information is needed. The primary function performed by the school library media specialist or program was viewed as a mediation function. In this function, the specialist acts as an intermediary between the complex and rapidly expanding information world and the client. This intermediary function is performed in different ways. The provision of access to materials, equipment, and space is the most clearly perceived group of services provided by school library media programs. Further services to the information seeker include reference or information services, providing materials and assistance, instructing, and consulting. A discussion is presented on the problems facing the library media specialist and the fundamental components of a training program for school library media specialists. (JD)
LEARNING AT RISK

School Library Media Programs in An Information World

by

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American education has been described as severely problem stricken in *The Nation at Risk* as well as numerous other studies. The various studies approach the problems from different perspectives and use a wide variety of indicators as evidence of serious problems. As a result, the solutions that are recommended are also varied. However, the consensus appears to be clear that for this country to continue to progress and maintain a competitive position in the global village, significant improvements must be achieved in the educational enterprise.

America has historically expected a great deal of its educational institutions. Every new societal problem becomes a new challenge to at least be partially solved by some addition to the educational mission. In spite of these great and ever growing expectations, the level of resource allocations and the priority and status given to education in this society do not by any means parallel the expectations. It is very interesting in this light to see that the 1982 Gallup Poll referred to in the *Nation at Risk* suggests that people currently view education as the major foundation for the future. This national opinion poll indicated that education is considered "more important than developing the best industrial system or the strongest military force," that "public education should be the top priority for additional Federal funds" and that education took first place of the twelve funding categories covered in
the survey (National Commission on Excellence, 1983, p.16-17).

The Nation at Risk very appropriately urges the creation of a "Learning Society" as an effective approach to producing individuals who will be able to function and compete effectively in an information age. For this to occur, the concentration cannot be restricted only to the basic skills but must focus on higher order intellectual skills, for example: analytical, evaluative, inferential, interpretive and problem solving skills, which are necessary to achieve at the levels of sophistication required in the present and future societies.

It is a disappointment to see that in spite of the emphasis on learning and the development of the higher order skills necessary to function and achieve in an information society, so little attention is devoted in The Nation At Risk to the units and organizations that specifically deal with information resources and the facilitation of the learning of the information seeking and utilization skills alluded to throughout the report. It is discouraging that, though a behavior pattern of life-long learning is demanded in the report, one of the institutions most associated with and inherently dedicated to nourishing independent and life-long learning, namely libraries, is hardly mentioned in the report. This omission represents one of the major problems faced by school and all kinds of libraries in attempting to
perform their educational function. The role of library media programs and their potential for significantly contributing to the solution of information problems must be perceived clearly by clients or their potential will not be realized and others will have to perform the critical information intermediary function.

The objective in this paper is to look at the problems and prospects of school library media programs in contributing to the fostering of life-long learning and the development of the information seeking and utilization skills critical for succeeding in this complex and rapidly changing world. The particular focus in this paper, in contrast to the other papers, is the role of library media programs in the schools and their potential for contributing to the significant improvement being demanded of the schools and all educational institutions in this society.

INFORMATION AND EDUCATION

The Office of Technology Assessment of the U.S. Congress (1982) in its study of the impact of information technology on American education described the information revolution as follows:

Modern society is undergoing profound technological and social changes brought about by what has been called the information revolution. This revolution is characterized by explosive developments in electronic technologies and by their integration into complex information systems that span the globe. The impacts of this revolution affect individuals, institutions and governments—altering what they do,
how they do it, and they relate to one another. If individuals are to thrive economically and socially in a world that will be shaped, to a large degree, by these technological developments, they must adapt through education and training. (p. 3)

This report also presents two important basic conclusions regarding education:

1. The so-called information revolution, driven by rapid advances in communication and computer technology, is profoundly affecting American education. It is changing the nature of what needs to be learned, who needs to learn it, who will provide it, and how it will be provided and paid for.

2. Information technology can potentially improve and enrich the educational services that traditional educational institutions provide, distribute education and training into new environments such as the home and office, reach new clients such as handicapped or homebound persons, and teach job-related skills in the use of technology. (Office of Technology Assessment, 1982, p. iii)

This same study also concluded that the impact of the information revolution is affecting all institutions but "particularly those such as public schools and libraries that traditionally have borne the major responsibility for providing education and other public information services" (Office of Technology Assessment, 1982, p. 4).

The knowledge and skills required to survive and succeed in the technologically and stress-oriented society and world we presently live in are quite different from those required in less complex times. The development of higher level thinking skills is clearly not achieved by concentrating on a rather limited view of basic skills and on drill and practice. Both teaching and testing have to concentrate on
higher level skills as well as on the more basic skills.

Sorry to say, this is currently not the case in many situations. As with the learning of the writing process, the learning of information seeking and utilization skills and the fostering of higher level intellectual skills is only accomplished through the repeated use and evaluation of these skills in an adequate information laboratory. These kinds of skills are not developed and nourished in a passive lecture/recitation mode. The active and constant opportunity for the application and practice of these skills in an information rich environment with knowledgeable and accessible assistance is a necessity for success. Learners must have full and unencumbered intellectual and physical access to a wide range of quality materials and information services to attain this level of achievement. In addition, we need to nourish the development of an attitude of excitement regarding ideas and an attitude of ease and competence in interacting with the information sources and services that provide access to these ideas.

REALISM AND INFORMATION USE AND USERS

The challenge to teach higher order cognitive and problem solving skills more effectively cannot be responded to successfully with a naive view of information use and users. An overly simplistic view of the information world and information use has dictated our past approaches to the
provision of library and information services and the teaching of information seeking skills. The advent of computerized data bases and on-line searching has forced us to evaluate our understanding of information seeking behavior and some of what we have learned challenges our previous perspectives. At this point, a more realistic and knowledgeable approach to the provision of information services to children and youth is mandated.

Simply "preaching" the wonders and benefits of using libraries in the traditional manner and exhorting users to reform when nothing in the last twenty-five years gives us any encouragement that they can or will seems to be a futile and nonproductive exercise. From our limited understanding gained relatively recently of adult information use behavior, serious consideration should be given to a number of factors which appear to be fundamental principles regarding information use. It cannot be asserted at this time that these principles, described in the following paragraphs, have been clearly documented in terms of their applicability to children and youth. Many would feel however that these ideas have at least face validity and there seems to be at least some empirical support in the research literature for some of these ideas (Mancall & Drott, 1979).

**Proximity**

As common sense would tend to indicate, there is a very
solid relationship between proximity and use. This probably explains why home libraries play a more important role than was originally assumed. Evidently, the greater the distance either physically or psychologically, the less likely it is that a resource will be used whether it is a library or any other kind of resource.

Considerations Of Time and Energy

The time and energy required to find and use information is a serious consideration for most people and it appears that less pertinent or adequate information is frequently preferable to the expenditure of more time and effort to get more and/or better information to satisfy a need. Obviously this consideration is relative to a given individual and a particular situation. In terms of expenditure of time and effort, there does seem to be a serious discrepancy between what library media specialists and most library and information professionals feel is reasonable and what clients feel is reasonable.

Amount Of Information Needed

Users evidently have a considerably different perception of how much information is "reasonable" to satisfy a particular need than information professionals. It appears that individuals have a certain sense of what is reasonable and that is difficult for information professionals to change. One of the most insightful analyses of these particular issues was done by Patrick Wilson (1977), which
he refers to as the "limits of information gathering." In doing an analysis of an individual's available time, it is apparent according to Wilson that the time for information gathering and use is limited and that there are a number of competing factors. The consideration of time needs to be considered from the standpoint of being a valuable commodity and not "free," as we seem to consider it particularly when it comes to children and youth.

Preference For Personal Intermediary

Numerous studies indicate that when confronted with an information problem, many individuals' first preference is to consult another person who they know and perceive to be knowledgeable and who will assist them. (1) in refining the question, (2) in screening or presifting the information alternatives, and (3) in some cases, in providing the answer. This strong preference for personal assistance at least in the early stages of an information inquiry needs to be taken into account when planning and developing library and information services.

It would seem that a more productive approach to planning and developing library media programs that have greater prospects of being successful in meeting the needs of students and teachers would be based on a realistic understanding of user behavior. We need to test the validity of a number of these ideas that have come out of the analysis of adult information seeking behavior in terms
of their applicability to children and youth. It is strongly suspected that many of the behavior patterns presently recognized in adult information seeking behavior might very well also apply to students at different levels.

In addition to trying to understand the information behavior of youth, it is also critical to recognize the information needs of teachers in a realistic manner. Teachers probably have a greater diversity of information needs than most other categories of users but yet have fewer serious and sophisticated efforts being made to provide them with realistic and effective assistance. This is true at the school level in spite of the valiant efforts of some library media specialists but generally also in terms of district services and commercially available services.

How many sophisticated current awareness services exist for teachers in the various subject areas and grade levels? What proportion of teachers have available to them in convenient and realistic ways, on-line searching of appropriate data bases and information intermediaries prepared and willing to provide searching and synthesizing services? What kind of awareness and skills do teachers have in accessing the information world? From all available evidence, the assessment points to an incredibly low level of both awareness and skills. It is true that there are noteworthy exceptions in terms of both the level of service provided teachers in some districts and the level of
awareness and skill exhibited by some teachers. However, these cases are definitely in the minority.

Is it possible that (1) our failure to reach a larger proportion of our potential client population and (2) the apparent ineffectiveness of our public relations and instruction in the past could be largely due to the unrealistic expectations of users or at least due to the lack of understanding of information seeking behavior? Can we afford to ignore the possibilities here?

WHAT ROLE FOR SCHOOL LIBRARY MEDIA PROGRAMS?

It doesn't take much of a perusal of the literature to discover a diverse and rather confused panoply of perceptions of the roles and functions of school library media programs. This confusion and total lack of consensus creates a serious problem in attempting to develop programs. The question at this point is what role is necessary and what functions need to be performed by library media programs considering the view of the information world and the requisite learning needs described previously. The particular problems and issues that arise in trying to develop and sustain what is needed will be dealt with in the next section of the paper.

The older concepts of passive culture repositories or centers for the development of an enjoyment and appreciation for reading good books while identifying very important functions, do not appear to be actively responsive to the
entire range of needs identified as crucial for survival and achievement in an extremely complex, information abundant and rapidly changing world.

The level of expectation that is satisfied with a nice and genteel but fairly superfluous resource is no longer relevant or appropriate. The value and utility of information of all kinds has become much more visible and appreciated and it appears that an expectation of a more active and a broader approach to providing information services is developing. It would seem that if we are serious about the learning needs of children in our society, a quantum leap is not only required of what we expect of educational agencies generally but also in terms of what we expect of the sophistication and contribution of such a key ingredient as the information intermediary and information laboratory. The development of higher level intellectual and problem solving skills can only be developed in an environment where they can be repeatedly applied and tested throughout the learner's school experience. The cumulative effect of many of these kinds of experiences is what leads to the development of a self-directed learner able and motivated for lifelong learning. This kind of information learning laboratory requires a level of sophistication and responsiveness far beyond the current service level of "materials availability" combined with the possibility of some limited assistance.
A great deal of progress has been made in the past decade in providing organized and carefully selected collections. The various federal programs that followed the launching of Sputnick in 1957 provided some of the funds and the stimulation that led to the rapid growth in the 60's and 70's. However, this did not result in a well-stocked library media center in every school or the kind of staffing that could provide the services required to serve the needs even as they were defined during those times. Of course the 80's have seen a decline in staff and collection budgets as well as buying power due to declining enrollments, inflation and Proposition 13-like tax limitations. As a result, we have been losing ground at a time when we need to expand and refine the kinds of services we provide to meet the new and expanding learning needs of an information society.

What then is the role of school library media programs in fostering the development of young people who are capable, uninhibited, willing and yearning to deal with the ideas, aspirations and problems of humankind? Our philosophy has always included the goal of nurturing a lifelong inquisitiveness and a comfortableness both with ideas and the variety of media that present these ideas. We believe that knowledge, understanding, appreciation and skills in the critical and discerning use of information in its different forms are fundamental to a democratic society as well as to effective functioning in an information world. A
much greater emphasis however needs to be placed on developing an analytical posture toward ideas and the capability of critically evaluating information from different perspectives. It is also important for students to develop an interest and positive attitude toward the vehicles that express ideas if a lifelong positive relationship with ideas and information is to be achieved. The independence of mind that comes with a personal, free and independent interaction with ideas also kindles the kinds of appreciations and understandings that permit the enjoyment of the subtleties of life and the aesthetic aspects of our world.

It is critical at this time to have a clear and comprehensive concept of how school library media programs blend into this scene. The abstract and ambiguous conceptions of the past will not be sufficient. The conception of the function and services of a school library media program that will be used in this discussion was developed by the writer over a period of years as a critical part of the development of a systematic planning and evaluation process for school library media programs (Liesener, 1976). It was discovered early in this work that the conceptualizations and definitions of school library media programs were very inadequate when it came to trying to apply more systematic and rigorous approaches to the planning and evaluation of programs. In order to be able to
analyze programs more carefully it was necessary to develop a more comprehensive and cohesive definition. This approach attempts to define from a user's perspective the function and services of school library media programs as comprehensively as possible. This definition is used to illustrate the role of the school library media program in developing the kinds of learners required in our striving for excellence.

The primary function performed by the school library media specialist or program can be viewed as a mediation function. From this perspective, the specialist plays the role of an intermediary between the incredibly complex and rapidly expanding information world and the client. In this sense, the library media specialist is no different than a librarian or information specialist in any other environment. It is the particular environment and the particular needs of the clients served that provides the special focus. Obviously, the environment in this case is the school and the clients are the students, teachers, school staff and, at times, parents.

The concept of intermediary implies that some assistance is frequently required for clients or users to effectively and efficiently interact with the information world. The term information is used here in its broadest sense to include all representations of ideas, including the arts, and in any media format. Assistance is used to indicate
anything from a little help to higher level services such as formal instruction, assessing and interpreting information needs, stimulating interest, and actually providing the information in some cases.

The information revolution has provided us with an almost unbelievable array of information options. This information world is incredibly large and complex and in spite of the advances in information technology and the much greater potential access this provides us, the need for an intermediary to assist in achieving effective access to this information world has become more apparent. Even though the microcomputer technology particularly has made direct access possible to considerable quantities of information for many users, the need for an intermediary is still vital for most users and at times probably for all users.

The school library media specialist performs this intermediary function for the purpose of facilitating the achievement of learning and instructional objectives. This intermediary function is performed in quite a number of different ways. In order to be able to grasp and deal with the whole range of services provided by school library media programs, these services were clustered into five major service categories (Access, Reference, Production, Instruction and Consulting) which are described below.

**Access**

The provision of access to materials, equipment (for
example, audiovisual equipment), and space is the traditional area of strength and most clearly perceived group of services provided by school library media programs and libraries in general. It involves providing intellectual and physical access to the whole range of print and non-print media. This also involves providing access to equipment as well as the procedures and facilities for the use of both materials and equipment. The provision of access to materials that are not in the particular collection of a specific school library media center but are provided through various interlibrary loan or networking arrangements is also included. The provision of access would also include such considerations as copying facilities, making arrangements for special collections either in the media center or in the classroom, etc. Currently the greatest areas of expansion are in the area of provision of access to computers and computer software and services for learners with special needs. In a number of cases computer facilities are being added to school library media programs and the library media specialists are becoming the computer coordinators for the school.

These services not only provide the basic information laboratory for both teacher and library media specialist initiated instructional activities but also and possibly more importantly, provide an encouragement and hospitality for learner initiated and directed activities which extend
well beyond curricular interests and needs. Considerable strides have been made for some adult populations in providing much greater intellectual access as well as physical access in many areas through computerized searching and resource sharing via networking. However, in the majority of cases these advances have as yet to reach young learners. The problems related to providing the level of service needed here, as well as in the other service categories, will be treated in the next section of the paper.

Reference Or Information Services

This service category involves two types of service; the provision of a collection of reference materials for self use and the provision of various kinds of personal assistance to the client in identifying, seeking or interpreting information. This assistance could include: simply helping and identifying where something is in the collection of the school library media center; identifying materials not in the collection but possibly available elsewhere; providing various alerting or current awareness services regarding information on materials or information that clients may not be aware of but which may be of value once they are conscious of them; providing various kinds of bibliographies and pathfinders to assist users in becoming aware of and locating various kinds of sources; as well as the actual answering of questions which could vary from
simple to extremely complex kinds of questions.

Very typically the emphasis has been on the lower level services of providing a reference collection and some identification and location assistance. More emphasis has typically been placed on reference services at the secondary level with a heavier emphasis placed on instruction at the elementary level.

The provision of on-line searching of appropriate databases for staff, and in rare instances for students, is available in some districts and this will certainly increase. The provision of various computerized services, the development of more data bases appropriate for and accessible to children, and the production of various helping tools to assist clients in analyzing questions and designing search strategies are the activities in this service area that demand immediate attention. Any advance in the development of sophisticated problem solving and information utilization skills will require significant improvement in the level of services in this area. The issue of information services for children and youth needs to receive the level of attention given to these services in the health field, for example, which has been a leader in the development of high level information services. The current approaches to providing reference and information services have not generally been designed on the basis of the understanding of user behavior discussed earlier.
Therefore, a significant improvement in this area will require some attitudinal changes as well as technical changes.

Production

Production services involve providing materials, equipment and assistance to teachers, students and staff for producing or adapting various kinds of print but particularly non-print media. In some cases the production is actually performed for the client but this is normally done only for teachers or school staff and in areas where special equipment or expertise is required. Production can involve anything from making a transparency to producing a television program. These services are provided not only to help make instruction more effective but also to stimulate and facilitate the creative abilities and basic skills of students in effectively communicating their ideas. It will be interesting to see if this function extends in the future into the area of production and adaptation of computer software.

Instruction

Services in this category involve both formal and informal instructional activities as well as reading, viewing and listening guidance activities. Activities can vary from providing various specifically designed self-instructional materials to assist clients in finding and using information, to providing formal instruction programs.
for both teachers and students in the use of various information resources and information access tools, as well as to providing access and instruction in the use of the newer information technology such as microcomputers. This area also normally involves a great deal of informal instruction for both teachers and students specifically related to particular problems or questions and also involves a variety of guidance activities aimed at stimulating or motivating interest in reading, viewing, and listening. Greatest emphasis has been placed in many cases on the lower level information locating skills; significant improvement is needed in order to develop the strategies and processes necessary to focus more attention on the higher level intellectual skills. A continuing serious problem is the difficulty of integrating the instruction and application of information seeking and utilization skills into the various instructional areas.

Consulting

This group of services involves the library media specialist consulting with teachers regarding the use of various services and the design of instruction with appropriate attention to information utilization skills. This also includes contributing to the curricular and instructional planning efforts at various levels including the district level. Consulting with students would be considered under either reference or instruction depending
on the type of activity.

Consulting services focus on the activities of the school library media specialist with individuals as well as groups of teachers. This area includes the work of the school library media specialist in providing suggestions and information for instructional planning to individual teachers as well as the cooperative planning of various instructional kinds of activities, some of which are conducted by the teacher and some by the media specialist. The level of service may vary from the simple suggestion of a few resources to be used in a particular unit to the actual participation in the design and evaluation of various instructional strategies. This category may also involve assisting and performing the function of a clearinghouse in terms of providing information about and sample copies of various instructional materials which are being considered for use in an instructional area. In some cases, the coordination of the selection and evaluation of all instructional materials is also a function of the school library media program in addition to performing the same selection and evaluation function for the library media center collection.
BARRIERS OR CHALLENGES?

There should be no doubt regarding the need for active and expanded library media programs in schools to provide the kind of intellectual and physical access to ideas and information so necessary for the development of the kinds of higher level skills being demanded. The term program here refers to a library media program capable of performing the important intermediary function as well as providing information services and an information learning laboratory at a very high level of sophistication. To presume that excellence, or for that matter even minimal survival can be achieved in an increasingly complex and competitive information world with horse and buggy information systems and services is absurd. If we are really serious about developing highly capable and competitive adults we must begin by developing the requisite skills and application opportunities at the elementary level and continue facilitating the maturation of these skills. Lifelong learning is not simply a catchword but a concept referring to a constantly evolving set of skills and understandings necessary for effective participation in society and the achievement of a full life. This challenge demands serious attention and a significant and continued commitment of resources if we are to succeed in substantially improving our educational effectiveness.

If we are to going to make any substantial progress
toward our goal we must take a realistic view of the obstacles in the road ahead. The literature includes an assortment of perspectives on the problems faced in this field. The particular barriers and challenges identified here simply represent one view of some of the most critical issues that must be dealt with if we are to provide the kinds of learning opportunities now being demanded. These problems can be perceived as barriers or challenges and hopefully we will confront these barriers as challenges to be analyzed, confronted and solved.

Attitude Problems

A number of serious problems exist in the area of attitudes toward school library media programs and library media specialists. Considerable confusion exists regarding the roles library media specialists do or do not perform and the roles they are capable of performing. Roles cannot be performed and services cannot be used effectively if they are not perceived accurately by potential clients or if there is a lack of acceptance of these roles by either the individuals receiving the benefits of them or the individuals attempting to perform them. Role conflicts of this sort almost inevitably lead to job dissatisfaction and ineffective performance. This condition ultimately affects the ability of a field to retain talent as well as to recruit talent.

What field am I in anyhow? Who am I? What am I? Am I a
teacher like one of my client groups or am I something unique and different? These questions and our inability to answer them satisfactorily present a major problem in developing the kind of role described in this paper. The literature is overloaded with studies which analyze the perceptions of school library media specialists and programs by various individuals including principals, students, teachers, parents and library media specialists themselves. It is not difficult to summarize the conclusions reached in the overwhelming majority of these studies:

Many of the findings of these studies have negative connotations. In the numerous studies carried out in the past twenty years, a number of conclusions are common: that the school librarian's perception of that role (school librarian's) differs significantly from that of others in the educational system, that the school library seems to play only a marginal role in the total educational program, and that the low regard for the school librarian militates against a direct involvement in the instructional program of the school. (Hambleton, 1982, p. 18-20)

The uniqueness and particular role or function of library media programs desperately needs to be established at this time. It is tragic that the behavior we commonly see is the desperate maneuvering to also be perceived as a "teacher" and to possess a curricular territory inorder to increase the odds of preserving one's job. This behavior, while understandable, is serving to further obfuscate the issue rather than contribute to any clarification. The decline in leadership positions at the district and state levels and the organizational and professional isolation of building
level library media specialists not only has contributed to
the problem but also has created a condition where the
likelihood of constructive and effective counter efforts are
significantly decreased.

Attitude problems also exist regarding the products of
library media programs. Considerable progress has been made
in the scope of material formats which we now include in
collections but the preoccupation is still too much with the
idea - containers rather than with the active manipulation of
information to facilitate the transfer of ideas to the minds
of learners.

The term information itself is a problem in the schools.
"Information", as it is used in the schools, seems only to
include nonfiction or "fact books" and does not include
every form of expression of ideas including fiction. The
all inclusive definition which includes all forms of
expression of ideas is the way the term is used here and
this appears to be the customary use of the term now in
library and information science. The "really desirable" use
of information according to some library media specialists
seems to refer only to the reading of "good books" which
typically refers only to literature of acceptable merit.
The development of understanding and appreciation of great
literature and literary expression is certainly desirable
but it is far from being the whole information ball game.
All judgement aside, the rest of the information world is
going to play a larger and more important role in the lives of the majority of individuals and therefore needs much more adequate attention.

An attitude that is more understanding of clients' information seeking behavior will be necessary if more clients are to be served and if students and teachers are to develop the higher level problem solving skills which require more sophisticated information skills and knowledge. We have basically designed services in the past on the basis of the philosophy "here we are, come and get it." The objective is to provide a carefully selected collection of materials and equipment and to provide instruction in how to use them. The rest is up to the client with the library media specialist supplying a little assistance and support if necessary. This concept presumes that it is possible to make clients self sufficient in their use of information and other services and that this knowledge and the skills learned will provide the basis for lifelong learning. We have implemented organized instruction programs to develop these skills beginning at the elementary level and continuing through the secondary schools but most of the evidence to date suggests that other than a hard core group of "readers", users are neither becoming self sufficient nor expanding their use of libraries as they mature.

It is time that we take a serious and hard look at this view of providing information services and instruction.
Twenty years ago Leonard Freiser suggested that we quit this nonsense and instead of forcing kids to spend the majority of their time searching for information with usually poor results, we should give them the information under certain circumstances so that they do have a foundation of good information to work with and as a result, develop the skills and knowledge necessary to understand, use and appreciate ideas and information sources. (Freiser, 1963)

The belief is that these skills and knowledge are not only more important but must precede the attempt to develop information seeking skills if such efforts are to be effective. This idea would appear to suggest a very heavy emphasis on information provision and reference services at the elementary level with much of the instruction at upper levels, especially the middle and secondary schools. This, of course, is just the opposite of the current pattern and may explain some of our ineffectiveness in the development of higher level or even lower level locational skills.

The question of the effectiveness of this instruction is very troubling since many of the studies seem to show that the end result of all of this instruction produces college students unable and disinclined to use college and university libraries effectively. There are many studies in this area and most show that if the instruction is isolated from what is going on in the classroom and is not integrated into the classroom instructional activities, the results are
dismal (Blazek, 1975). The really discouraging thing however is the fact we have known this for a long time yet our efforts to integrate instruction have, in most cases, been frustrated.

Concern also needs to focus on the content of instruction in information seeking and information use. Ineffectiveness may also result from inadequate or invalid content and a number of factors suggest that this may be the case. Our understanding of information search behavior is still very primitive but considerable insight and new knowledge has resulted from our recent experience with on-line searching. A detailed discussion of this is not pertinent here, but it is certainly critical at this time to analyze what we have learned and introduce this content into instruction programs wherever appropriate. It is very apparent that the "front end" or question formulation and analysis stage of any search or query needs a great deal more attention. Concerns such as the following must be introduced and applied: how to ask or frame questions, how to proceed to narrow or broaden a topic, how to translate questions into a search strategy, and how to match the strategy with the information system (including traditional manual ones and not only computerized systems). These kinds of considerations are not only important for the development of higher level intellectual skills and knowledge but also intimately relate to many of the curricular content areas, for example, set theory in
mathematics and classification concepts in science. It is high time that this profession confront these issues and redesign library media instruction and services in the light of our primitive but growing understanding of information seeking behavior as well as the impact of more sophisticated technology and services. It is also clear that we need to reconsider the concept of self-sufficiency in information seeking activities and consider the strong possibility that at least for some activities and groups of individuals, an information intermediary may not only be a luxury but a necessity.

**Personnel and Economic Issues**

It would seem that if we recognize the need for the development of basic and higher level intellectual skills and that we are not satisfied with our current performance, the logical response would be to improve and expand the programs necessary to accomplish what is desirable. The current scene however does not represent that kind of picture, undoubtedly at least partially because of declining enrollments, inflation and tax limitation restrictions. Accurate data is hard to find here but some things appear fairly clear. Miller and Moran did a very interesting study of expenditures for resources in school library media centers in 1982-83 which reflects a disturbing picture:

LIBGIS I (1974) reported an average per-pupil expenditure of $4.52 for books and LIBGIS II (1978) an average expenditure of $4.25 per pupil for books. The LMCs are seriously
continuing to lose ground in the purchasing of resources can be verified by comparing those amounts with the 1982-83 mean expenditures of $4.58 (median, $3.71)—a modest average increase of $0.33 over a five-year period during which juvenile book prices rose 30 percent. Media specialists purchasing adult nonfiction and reference books face even greater increases. (Miller, 1983, p. 113)

It is also apparent that in the area of audiovisual materials the picture is even worse.


In that year (1981), three million pupils (7 percent of the total) attended schools without a library/media center. This figure included a decrease in media centers of secondary schools. (p. 24)

Of course the existence of a center and the existence of a program are two different things with the difference being professional as well as support staff. Here the picture also shows a decline.

The writer conducted an informal survey of enrollments and placements in training programs and also queried some library media supervisors to get some idea of the degree of decline in positions as well as in the supply of new school library media specialists. The results of this informal survey revealed a decline in the number of positions from between five and ten percent with district and elementary positions being most heavily effected. The supply side of the picture however revealed a serious decline in enrollments of students planning to be school library media
specialists. A number of the preparation programs have folded entirely and the percent of decline in numerous programs is approaching 90 percent. Several parts of the country which have not been as severely affected economically as others, or have shown increases in population are already faced with shortages. Other parts of the nation will very likely also face shortages before long particularly as we move into a period of increasing enrollments, the so-called "shadow baby boom" which is to begin in 1985 and which is already apparent in some primary school enrollments.

This economic and supply/demand situation obviously creates a whole series of problems for program development and improvement. It is exceedingly difficult to be committed to achieving excellence in a "management of decline" climate. It is also especially disturbing to see the loss of positions in the leadership ranks and at the elementary level which is so crucial to the early development of the attitudes and problem solving skills so in need of improvement and support.

Discussions with educators involved in preparing school library media specialists pointed out another disturbing element. It appears that we are having difficulty attracting the level of talent that we once did. This has been pointed out as a problem of the field of education generally but it also appears to be occurring in the school
library media field. This very likely is the inevitable result of an employment situation which provides comparatively low financial incentives and low status but still attempts to maintain extremely high performance expectations. An environment which does not respect or treat individuals as professionals may very well be the most serious problem we face.

A principal who was interviewed in preparation for this paper suggested that a climate of infantilism pervades relationships of all kinds in the schools. The feeling that one is not being treated as an adult and certainly not provided with the supporting systems and arrangements typically provided professionals appears to be widespread. This is obviously demeaning and not conducive to attracting or retaining capable people and certainly is not an environment which stimulates effectiveness no less excellence. A similar idea was expressed to the writer by a former student who was riffed from her school library media specialist position after ten years due to cuts resulting from a tax limitation provision being passed in her district. She was the kind of person who had always wanted to work with children and was very effective in her role but when asked if she would ultimately return to a school library media position, she said very definitely not. Her rationale for this decision reflected an awareness which was made apparent to her when she secured another job as a
librarian in a government agency. She commented that, "For the first time in my professional career I was respected and treated as a professional" and as a result she would not consider being reemployed in the schools. If we are really serious about trying to improve the education of children, we have to face the serious issue of the status, treatment and financial remuneration of educational personnel. It should be readily apparent that without a substantial psychological and economic improvement in this work environment, no significant improvement in the learning environment can or will occur.

Planning And Evaluating Programs

Progress in the planning and evaluating of school library media programs has been extremely slow; it also has been slow in other kinds of library and information environments. Some progress has been made in terms of developing improved approaches but the frame of mind in the field is still centered around the traditional standards approach of measuring ones goodness by comparing what one "has" rather than what one "does" to what is recommended in some arbitrarily derived set of standards. Inadequate progress has been made toward defining the goals and objectives of school library media programs in terms of services provided to clients and contributions made toward achieving instructional and learning goals. As a result, much of the evaluation of library media specialists which is
currently performed is based on strictly subjective judgements of the degree to which library media specialists compare to some list of characteristics or attributes that may have nothing to do with the development and delivery of an effective program of services to users.

Another problem resulting from this approach to planning and developing library media programs is the kind of reporting and communicating that results. The focus is not on the goals and achievements of library media programs but rather simply on the means of these programs. The result of this kind of reporting and communicating behavior is the reinforcement of an already exceedingly confused picture of what the library media program is and does. A more rapid movement toward more output and outcome oriented program management and program communication is desperately desired and needed.

Research must also focus on identifying measurable indicators of program quality that are related to learners and the achievement of instructional objectives. This is an extraordinarily complex problem but without something considerably better than what we currently have available, we will continue to evaluate using tests that frequently focus on simple and often irrelevant facts or extremely subjective judgements of people and programs which can be, and are, extremely unfair and unrelated to program effectiveness.
School library media programs need to be brought into the mainstream of library and information activity. In spite of decades of idealistic and involved discussions of cooperation and participation in networking etc. we have too few examples of active participation. It is time to look more realistically and critically at what is possible and what is really desirable! We presently have several examples of extensive participation of school library media programs in networking, such as New York and Maryland. These experiences as well as other emerging cooperative activities need to be carefully evaluated to identify what works and why. It would be merciful however to the profession also to face the realities of cooperative and networking efforts and move ahead with what seems feasible and reduce the rhetorical abuse directed at those who raise serious questions.

Education Of Library Media Specialists

The training pattern for school library media specialists has been essentially different from that of most other library and information professionals. Many individuals have entered the field via undergraduate programs following the training pattern in most of the other teaching fields. Some say that this is one of the reasons why school library media specialists frequently feel like second class citizens since their initial professional training is less than in other areas of library and information services.
result may be a primary acculturation into the field of application (Education) rather than the specific professional field one is applying (Library and Information Service). This only serves to reinforce the identity problem.

A number of recent analyses of education have suggested a revamping of the structure of teacher training. It has frequently been suggested that a prime requirement of all educators is a "good basic education" and attempts to combine professional education with this objective at the undergraduate level have only resulted in seriously hampering the achievement of both a basic and a professional education.

This writer is very much in sympathy with the suggestion of moving professional education to the graduate level so that both undergraduate and professional programs can be strengthened. A good basic education must be fundamental to the preparation of all information professionals and even though there are theoretically many ways to accomplish this, the time is ripe for a definite move in the direction of graduate level professional training.

Another crossroad which should be faced at this juncture is the responsibility for the preparation of school library media specialists. There has been some confusion regarding who is responsible for the education of school library media specialists and even who or what group has responsibility...
for accrediting these programs. Some confusion in this regard exists in many disciplines, particularly in the preparation of secondary teachers since there is a split of responsibility frequently with Colleges of Education being responsible for the instructional aspects of the role and the various academic departments being responsible for the subject matter training preparation of teachers. Both of these concerns or perspectives are important and should be respected and the particular organizational handling of the problem left to the higher education institutions.

This writer believes that it is absolutely crucial for the responsibility for the substantive or subject matter content of the programs to be with the various disciplines if the quality of these programs is to be raised and maintained. Faculty who are at the cutting edge of their field should be providing the substantive input here and that inevitably means they are in departments devoted to their discipline. How one conceives of the function and role of school library media specialists will also influence how one answers the question of who should be responsible for what in the educational preparation of school library media personnel. If one conceives of this person as a teacher who dabbles with media on the side, that is one kind of perspective, but if the information intermediary function is paramount which is the perspective in this paper, then one also must think differently about the discipline of the
school library media specialist. The point of view being expressed here suggests that the discipline of the library media specialist is the discipline of any library and information specialist except that the particular application of the discipline or specialization in this case is in the school. Even from the standpoint of instruction, the discipline or instructional specialization of the library media specialist is library and information science and not something else. This is not an attempt to diminish the importance of the application environment but simply to clarify the role and as a result the educational preparation implications. An understanding of the application environment, in this case education, is obviously required but in the case of the school library media specialist a thorough knowledge and skill in the design of instruction is particularly crucial because instruction and participation in the design and planning of curriculum and instruction is an important part of the role of a library media specialist. It is interesting to note that in many other environments the user education function is also being given much more prominence and attention.

The issue of educational responsibility also relates to the identity problem in that it is time for us to come to terms with how we perceive ourselves and our role. We have had innumerable studies relating to the role and it is time we "take the bull by the horns." It is time that we accept
and develop the information intermediary function that we perform and not worry about whether we are a teacher or not. Of course we perform a teaching function, but it should be based on our own discipline and related to the essential intermediary role we are playing and need to expand and improve.

Another current danger in relation to educational preparation programs is the diminished scale of the school library media component because of incredibly reduced enrollments. Many of these programs were never very strong but we are now losing relevant faculty positions and our future capacity to continue these programs. The danger of relegating these programs for token attention to Colleges of Education or maintaining them at a token level in Schools of Library and Information Science should be a major concern. At this time we need the highest level of competence by professionals who have been thoroughly trained in their discipline and not some minimal level of performance by individuals who have only had the benefit of some superficial kind of preparation.

A number of related issues should at least be mentioned. The growing power of state departments of education in accrediting or approving the training programs for school library media specialists as well as certifying these personnel has in some cases intruded on the capacity of higher education institutions to design effective programs.
When specific credit and course requirements are specified at the state level for every new concern that comes along, it becomes utterly impossible for a University program to design a cohesive and integrated curriculum. It is important at this time that substantive and technological developments as well as significant changes in function be paramount in a major rethinking of the competencies and educational preparation programs for school library media specialists as well as all information professionals. Obviously, the focus of this attention must also include an analysis of the content and effective delivery of continuing education opportunities. Although there has been significant improvement in inservice and continuing education opportunities for school personnel, there is considerable room for improvement particularly in the content of these programs if they are to be a major vehicle for acquainting professionals with the major substantive developments in the field.

Information Systems For Youth

Considering how much research and development activity is currently underway in the information field, it is discouraging to see how little is being done to develop and make available better and more extensive information systems for children and youth. Data bases seem to be multiplying like rabbits but none seem to be addressed to the learning
and information needs of children and youth. Some data bases like the New York Times Information Bank could be rich resources for children but they are obviously aimed at other audiences and the organizations marketing them are not sensitive or interested in making any special accommodations for students. It would seem that, considering the number of schools and students in this country, it would be commercially feasible to develop and market data bases designed to support instruction and learning in some or the most common curricular areas. The development of data bases that will facilitate children's access to ideas by allowing them to interact with relevant information and ideas in a more free and efficient manner should be seriously encouraged. School library media specialists are in a position to identify particularly opportune areas for this kind of development and should be encouraged either to pass on the suggestions or to cultivate an entrepreneurial bent if such is the inclination.

Subject access to information for children is currently extremely weak and in a number of ways is getting worse. Very likely something around 80 percent of the searching for information in any school library media center is searching by subject. Subject access for books and non-print items usually consists of three subject headings per item in the card catalog which would seem to be a logical approach for a large library but an inadequate approach for a small library.
that needs to mine its collection in much greater depth to satisfy the needs of its clients. The indexing of periodicals frequently offers the opposite kind of situation where more in depth indexing may be done but the collection may only have a small proportion of what is indexed leading to a different kind of frustration. Students are also frequently new to a topic so they need assistance in identifying aspects of a subject or in some cases broader terms that would include their term. They also need to have a little information about the items they identify as potentially useful so that they can reduce their actual physical search to items that have a high probability of satisfying their need. What is described here is a small example of an intelligent search strategy and the kind of approach we should be teaching students. A major problem however is that the subject access we provide in school library media programs make the application of that kind of search strategy or any kind for that matter very difficult and time consuming. As a result, most users don't follow such a strategy and accept what can be found in more efficient but less effective ways.

The critical need here is for a better and very likely computerized indexing system designed to meet the needs of students at different school levels. What is needed is certainly conceivable and feasible but the intellectual work necessary to develop such a system is not underway,
undoubtedly because the incentives for such effort are being directed into other areas. It is even difficult to find individuals in the school field who are interested in this area no less prepared and committed to making a contribution. More and more school processing operations are being discontinued in favor of commercial processing and as a result we are moving more and more to the use of the national schemes devised for adults and large libraries and in many cases inappropriate for small libraries and children. This situation cannot be allowed to continue and substantive efforts directed at devising improved systems for children and youth must be initiated.

CONCLUSIONS

The report of the National Commission on Excellence in Education has identified a number of critical problem areas which must be addressed if we are to achieve our aspirations for excellence and if we are to equip our youth with the skills, knowledge and inspiration necessary to compete successfully in a learning society and an information world. The critical and central role of school library media programs in this venture has been the topic of this paper and the problems that have been identified will have to be solved in concrete and realistic terms if even a modicum of success is to be achieved. It should be clear that library and information programs and personnel of all types and at all levels must be intimately involved if we are to produce
the self-directed problem solvers who are not only information literate but who have developed the higher order intellectual skills and attitudes regarding learning that we all seem to feel have become the "new basics."

Our focus must be the intellectual health and productivity of America and it is obvious that there is a serious discrepancy between our current level of performance and our aspirations. This society has the resources and the capability to achieve educational excellence but does it have the will? The educational community has been the whipping boy for all kinds of social issues for too long. It is time that the first class expectations of education be supported with something significantly more that the third class support of the past and simply more rhetoric is not the answer. Possibly even more important, an attitude of respect and regard for the fostering of learning and intellectual health must be developed in this society that compares to the respect and stature given the fostering of physical health.

This shift in national priorities must be combined with a direct attack on the problems areas identified in this paper. In addition, national information policy discussions cannot continue to ignore children and youth. Teachers must be information literate if kids are to be information literate and they must be able to capitalize on the information resources and services available to them. We
must be able to recruit and keep a high level of talent. The implications here for teacher training as well as the preparation of library media specialists are readily apparent.

It is inevitable that this kind of analysis raises more questions than answers but this particular field has as many questions or probably more than most particularly as a result of the information revolution. Consequently, research and development must receive a high priority in the multitude of efforts that should be initiated. The highest priority however should be the improvement of the economic and psychological environment for educational personnel including library and information personnel of all kinds so that the talent and commitment that we already have can be retained and actively nourished as well as replenished with a high level of competence. Hopefully these papers and seminars will contribute to the raising of the national consciousness and the mobilization of the national will that will be necessary to achieve the educational excellence we see as a national and individual necessity and challenge.
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