School Media Standards

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The child is the center of the schooling process. All of the resources, services and programs offered by the school media center must, therefore, be designed to facilitate the child’s growth as an aware, productive and fulfilled human being. New opportunities for human development, encouraged and supported by modern technological environments, should be provided to capitalize upon the child’s encounter with all forms of information in order to accomplish this goal. Thus, one must begin any consideration of school media center standards with the realization that the real purpose for the development and promulgation of such standards is to assure the richest potential for the child’s encounter with information and ideas. Undoubtedly, the visionary approach, combined with the specific set of directives common in these standards, has provided practicing media specialists with appropriate sets of guides for such quality services.

Education has changed rather radically over the past several decades. At the turn of the century and throughout the early 1900s, there seemed to be much more uniformity in educational practice, reflecting what were then generally accepted national ideals.1 From about the fifties on, however, there has been an even more rapid acceptance of diversity in educational practice. What had been an attempt to conform all education to one mold became an allegiance to alternatives in educational approaches.2 The school library standards were a bit slow in incorporating this process of development, but the 1975 Media Pro-

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grams: District and School came closest to matching this philosophy of schooling. The flexibility inherent in this document recognized—although perhaps implicitly rather than explicitly—the need for an individual school district to evaluate the nature and extent of its particular program of media services and the resources required for the successful implementation of improved service to media center users. The guides given were simply measures of known quality throughout this country. This document is perhaps the first instance among all standards of a forced interaction in which users of the document are expected to determine priorities and make decisions about the management and operation of their programs in light of these priorities.

The debate about the lack of a research base for the standards is an interesting one, but not as significant as many authors would like us to believe. Repeatedly, the school library standards committees have, in some measure, used research findings—most often a combination of survey data and results of interviews with experts in both practice and theory. Neither of these approaches is invalid in research, although I would not make the claim that they are among the most tightly controlled research designs. To dismiss all of this research over the years, however, is neither a fair nor an accurate assessment. What is important to recognize is that much of the research was concerned with the state of the art in practice, the collecting (for the most part) of nominal data which reflected the nature and extent of services. It is obviously easier to collect facts on sizes of budgets, collections, facilities, and personnel; it is much harder to collect data that reveal useful statistics about programs and the achievement of targeted objectives, but this difficult task must not be buried under the accumulated statistics of that which is more easily documented. In this respect, the school media field is uniquely susceptible to error in that it is a part of a larger configuration—the school. The variables are not easily controlled nor are they isolated for study.

Any examination of the documents that have been labeled as standards in the school media field will reveal that they are not "standards" by most accepted definitions. Authors of these documents have used the word standards over time for various reasons, the most likely of which was the need to establish credibility and authority in professional practice. Many accepted the term standards without any understanding that certain criteria must be present if indeed that term was to be used legitimately and appropriately. The term guidelines was considered by many to be weaker, denoting a lesser quality; and therefore, professional leaders who had developed sets of documents simply determined that the terminology to be adopted would make use of the word standards.
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Despite this, the history of the documents in the school media field demonstrates that they have functioned over time as catalysts for various types of activities in schooling. It is important to recognize that standards for many years have been a combination of both descriptive and prescriptive information. In all instances there has been evidence of some degree of realism in terms of current practice, although obviously this is reflective of "best practice," rather than what is to be found in the "average" setting. In spite of the fact that the standards have never been legally mandated, and thus enforceable, they have served as a means of evaluation and judgment of educational excellence for many decades. Accreditation agencies do at least make use of the standards for comparison purposes. The School Library Media Program of the Year Award is based in part on conformity to the standards, and there is ample evidence that various states in this country have used the standards as a means for determination of excellence, and often for special funding, as well as for the development of their own sets of state standards. The funding of the Elementary and Secondary Education Act (ESEA) sites reveals that the standards were a part of the assessment and evaluative process. There is no question that they have been used by various schooling agencies or individual library media specialists in helping to gain support for improving services and programs.

One problem that is significant in the examination of the current Media Programs: District and School is the terminology used within the document. Since 1975, many professionals, and indeed the American Association of School Librarians (AASL) itself, have returned to the terms school librarian or school library media specialist. I suspect this is linked to an attitude of survival, rather than to a logical analysis or philosophical decision. In other words, many persons became conscious of cutbacks and layoffs, and determined that, to keep their jobs, they would have to return to a job title that made clear to the public the role they performed in the school. As a result, what had taken years of negotiation to accomplish was wiped out by the board of AASL without consultation with the Association for Educational Communications and Technology (AECT) or the membership at large. Despite the fact that the "standards"—as they are called—was an official document of the two associations, the unilateral action of one association disavowed the language already accepted and adopted as official policy of both associations. It is pointless to argue the merits of these decisions: what is important to acknowledge is that a communication process should have occurred. The association was undoubtedly anxious to preserve the rights and futures of its members. To do so at the sacrifice of communi-
cation and accord with the companion organization seems both irresponsible and inappropriate. What we are called is less important than the need to pull together to achieve the best possible professional climate for members and, ultimately, the best quality education for children and youth.

There appears to be general agreement that Media Programs: District and School is no longer in tune with the educational times. The professional community is uneasy with it, and recognizes the need to address a revision. Should AASL go it alone? This is a question that might be answered by suggesting that, of course, we could do so and be more efficient in the use of our person-power. It might be noted, however, that school library or media center standards have historically been produced collaboratively with AECT, and probably the two bodies should continue to work in tandem to improve opportunities for children in schools. The challenges to this continued cooperation may not be reflective of our best professional judgment. A survey currently being conducted by the AASL Standards Implementation Committee neither addresses research data collection, nor does it ask fundamental questions that might lead to more objective decisions about revisions. Even more important, however, is the fact that this survey was undertaken with no involvement by AECT.

One point that has always been considered very important by AASL, and (to some degree, at least) by AECT, was the recognition and ratification of the standards by the various educational groups named on the title page of the 1960 standards. It has been thought that the support of such groups as the International Reading Association (IRA), the National Council of Teachers of English (NCTE), the Association for Supervision and Curriculum Development (ASCD), and the Public Library Association (PLA) would add immeasurably to the influence of the document in schooling. The cost of this approach in terms of a dollar amount, as well as time, may be in excess of the benefits. There is no hard evidence that the support of such groups, or the placement of their names in any document, enhances its chances of acceptance or implementation. It might be more useful to seek input from the agencies that have a more immediate impact on media services, such as groups in computer technology and network interfaces, as well as groups within ALA working on standards for special users such as the handicapped and the deaf.

Although I have suggested that research has been and should continue to be a part of the history of the standards, it is true that the level of sophistication of such research is rather low. The approach to the development of standards should be twofold: the professional com-
community at the national level should set general guidelines and directions for the profession that have a form of authority, while, at the same time, including quantitative figures for those aspects of services that reflect measurable activities. The day in which the standards should suggest uniformity is long past. Whenever possible, the developers of documents to be used or considered as standards should make use of any opportunities for research information, particularly now that national statistics are less easily available because of cuts in the U.S. Department of Education. The involvement of state agencies in obtaining data is critical, and should be encouraged to the fullest. What is of importance is recognition that the gathering of statistics must be related to the information needed.

Media Programs: District and School might best be approached for revisions by first identifying those overriding principles that will necessarily affect any decisions we will make. The first principal I would identify is that of personal freedom. My understanding of personal freedom includes a recognition of our responsibility to analyze and evaluate the message content of various technologies, such as book, film, newspaper, game, disc, photograph, toy, or computer software, and to help young people develop a similar competence. Additionally, my concern for personal freedom includes addressing the problems of piracy, information packaging and the invasion of privacy. Certainly, computer technology enables one either to enhance or to limit personal freedom, and the profession needs to consider the ramifications of such possibilities. The second principle of overwhelming importance is that, in this age of information overload, human beings must still be recognized and respected as the orchestrators and controllers of that information. The availability of information to the consumer is readily recognizable, but the means of negotiation through the enormous amount of information is more difficult to discern. These two principles come together in a consideration of how we teach students to sort out the discursive and nondiscursive meanings they encounter.

The standards have for years skirted the issue of teaching, and have never offered sufficient information or direction on this topic. We have not sought to locate appropriate information on teaching from educational practice, nor have we sought to identify the specific areas of competence to be considered the territory of the school media specialist. Nowhere has the profession determined the scope and sequence of our responsibilities to students and to the schooling process. We have continued to suggest that learning the location and use of simple materials or library skills is our goal, forgetting that finding or obtaining access to information is only a relatively small and, to some extent, an insignifi-
cant part of the need of an individual learner confronted with information. Have we examined whether our teaching responsibilities include subject disciplines? Should media specialists be expected to acquire competencies in teaching strategies? If so, what competencies can be identified, and how is this competence to be acquired? To what extent are we to be responsible for the teaching of children's literature and media? When and how should our teaching be influenced and altered by various groups of students, including those with mental, linguistic and/or physical handicaps? Vandergrift has identified a key facet of the media specialist's responsibility:

We need to develop the kind of sensitivity to students, teachers, and issues associated with technology that will enable us to ask appropriate teaching questions in a technological environment....In many situations in teaching, the critical content is not the logical, linear, factual presentation of an event or subject matter but humane judgments about the way it affected persons and society.

There are a number of tools that may aid in our understanding and increase our capacity to address this aspect of the changes needed in the development of standards. It may be useful to design instruments to identify and measure the degree of teaching competence now exercised by media specialists. The resulting data should inform any recommendations that might be made. Again, one must keep in mind that diversity, rather than uniformity, is sought.

The increased availability and capability of small personal computers, along with a concern for individual learning styles, introduces the possibility of greater interactive personal instruction provided by the computer. This is one of the most remarkable factors I see in the coming years, but can the computer replace the teacher and the school media specialist? For some aspects of information-processing, I believe that this is possible, but human facilitators will continue to be essential to encourage and enhance social interaction and metaphorical learning. Perhaps it is true that students of the future will learn in a computerized environment, either at home or in a place called "school," but there will continue to be agents of learning to help them find their ways through the electronic maze, just as there will be those persons who will be creative in the process of developing programming for the computers. These persons will probably continue to be called "teachers," or perhaps "school media specialists."

Computer architecture will require thoughtful consideration of the needs in schooling and the changes in the capability of computers. It is indeed probable that computer use in schools will increase at such a
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rapid rate that we will soon not have any school without computer technology. This will obviously have an impact on the standards in terms of specifications for both hardware and software, and in terms of the required competencies needed by the professionals who will work with students and teachers as they encounter the complexity of this electronic equipment. We will need to determine the degree of programming competence and computer language skill that must be acquired, as well as the ability to evaluate and select materials for the computer. Such competencies will naturally form a part of the standards in any contemplated revisions. Allied to this are the resultant configuration of computers that will communicate with one another for purposes of greater efficiency of media center operations, and also permit a vast array of resources to be identified and used by the individual. The need for, and use of, data bases in schooling is only at the beginning stages. Some consideration will have to be given to OCLC or other network utilities that permit efficient results in terms of the products offered. There also may be some danger in the concentration on functional aspects of the computer environment, and not on the service aspects for the clientele of the media center. The computer environment will probably require some additional education of the professionals in school media centers in order to provide various levels of service to users. We will need to identify the capacity of each computer in a large and complex architectural configuration. We will need to ask and to answer such questions as: Which tasks are most appropriate for one type of processor rather than another? Is cost-effectiveness the criteria for acceptance or rejection of specific computer configurations? What appears to be the most cost-effective approach to linking one or more of these computers needs to be considered also in terms of the human cost of such decisions. No action which alienates or inconveniences users can, in the long run, be cost-effective.

The school media specialist will have to face an increase in electronic publishing and determine how the user of informational and imaginative content will cope. We have developed some interesting approaches to criticism of literature and film, but we have not begun to determine the criticism necessary for assessing the computer software that is now published and will undoubtedly escalate. The standards will have to deal with this question in a more realistic fashion than have our earlier attempts to cope with technology, as witnessed by the failure to deal effectively with film.

A related area of concern in revising the standards is that of telecommunications and cable growth. Fiber optics have made possible a lowering of costs in dealing with communication. Interactive systems, such as
the experiment with Qube allowing viewers to make simple responses to information by manipulating dials or buttons on their home television screens, will undoubtedly increase. What seems to be the relevant question for the school media specialist is best expressed in the following: Will such interactive systems be accepted passively by the user, or will we in schooling educate young people to interact in creative fashions and to exercise some control over the content of these systems? For instance, might an interactive system be used in the near future to give citizens more direct access to their political representatives, allowing citizens to introduce their own concerns into the system as well as to respond to predetermined content?

The standards should probably address the career development of professionals, including the process of continuing education. Standards have ignored the educational specifications or requirements of the school media specialist other than outlining the specific functions that person should perform. Perhaps it is time to link these identified skills and competencies to specific patterns of career development and educational levels. It may be appropriate for the specialization question to be addressed in such a document, as well as an analysis of the interrelationships among professionals, paraprofessionals, technical, clerical, and even volunteer workers in school media centers. The personnel segment needs a great deal of intense study to determine possible alternative career plans and ladders that might be suggested in the standards. Personnel is a critical area in any revision of the document, but consideration of this topic must be based on sound evidence.

The varieties and interrelationships of certification laws, and the needs of the school media specialist for continuing education to meet licensing requirements should be addressed. Continuing education should also be considered in relation to technological innovations, such as the computer, and to possible areas of emphasis or specialization by professions. School media specialists have always been anxious to develop relationships with children and youth through literature and film or through curriculum projects. They may be less and less interested in managerial tasks. Most will accept that it is necessary to operate a well-managed center, and seek to do so, but more and more professionals are looking to greater interaction with students and teachers as the primary emphasis of their work (perhaps as a reaction to the stress on technical and managerial skills of the past decade). Even in the use of the newest technologies, such as the personal computer, many media specialists are concentrating on this technology as a means to facilitate interaction with young people and attempting to make everyday interaction with young people and attempting to make everyday
managerial tasks a part of the machine load so that more time is freed for
direct involvement with learners. At the same time, there are those
professionals who carefully study the technology itself and consider
their role to be that of engineers of the system. Again, diversity is of the
greatest importance, and the personnel section of the standards might
provide a genuine service with a consideration of alternative paths to
career development within the school.

The role of unions and other bargaining agencies is clearly some-
thing that has been consistently neglected in school media standards.
Although there are some ramifications of this question that must be
examined in order to avoid legal jeopardy for any of the associations,
this does not obviate the responsibility to examine the issues. Perhaps
references to helpful resources on bargaining or factual statements on
rights should be included. For example, grievance procedures are
neither understood nor used in the best fashion by most school media
specialists, whose job responsibilities have been altered radically with
arbitrary decisions by a school administrator.

It is inevitable that the merging of the school-building and district-
level operations in the same document will present some additional
problems. Standards might be separated into two distinct documents in
order to best tackle this situation. For the time being, the current
approach of placing them within the same document is a viable com-
promise. Any revisions group should examine this question carefully.
More and more networking modes require cooperation at the district
level, as well as at the state or regional level, rather than at the building
level. It is also true that a great deal of information about district
operations and decision-making is necessary for informed decisions at
the building level. In spite of these interrelationships, it seems that the
time is appropriate for the development of separate standards for each
distinct level. District standards might include, for example, a thorough
examination of interagency cooperation, and the interrelations of the
district with state and regional organizations. Accountability and use of
funds will be key factors for discussion in any such document, as will be
the development of a research base for all future documents. It is true
that the connections between the two sets of standards would have to be
strenuously overseen, and that professionals at both levels would have
to be fully cognizant of the content of the other document and the lines
of communication identified. It is also true, however, that the content of
information is so radically different now from that of only a few years
ago that the potential of such an approach should be obvious.

It might be useful to consider the changes that should be made in
Media Programs: District and School through examining the various
sections as they now exist. The chapter on media programs, objectives and user-centeredness should be rewritten in simple sentences that clearly express what is meant.²¹ We need more examples of the kinds of objectives that lead to good programs. We might choose to sift through the literature in order to determine various objectives that could be identified as examples in standards, or we could seek the information from practicing professionals. We should at least consider some indication of the process for determination of objectives and user behavior that will help the professional community in working out various priorities. If we are to succeed in rewriting this chapter, we must use language that readily communicates to all who might use the document. Precision of terminology is essential, but unnecessary use of jargon or convoluted language is self-defeating. This chapter needs to include some consideration of the standards that are developed by other groups, particularly those of other ALA agencies. Recognition of the work of others in highly specialized areas that overlap with schooling is critical in this age of cost-accountability. The work of the Association of Specialized and Cooperative Library Agencies (ASCLA) on the development of standards for library service to the deaf is quite pertinent to our work, considering the effects of public law 94-142 on total library service.²² The functions identified in this chapter are probably not as useful as now presented. If the analyses of those functions were moved to a chapter dealing with the management of a media center, the document might make more sense to the user. For example, the consultant role is neither explained in enough detail, nor is it related to the actual kinds of things the school media specialist might do. One of the inexplicable results of listings such as those in this chapter on the media program is the interpretation that all media specialists should be doing all these things. This kind of unreasoned response is not one sought by the profession, and is, at the same time, both impossible and limiting. We need to spell out quite precisely that the selection of alternatives and of some activities or objectives over others, in relation to the uniqueness of the particular setting and users, is the proper function of the school media specialist.

The facilities chapter should be revised to include the alternatives technological changes allow and, in some instances, demand.²³ The concept of large media centers with elaborate space allocations may not be the direction of the future. If the national position is to be valid and consistent, it should offer alternatives to this. Some treatment of the process of removing those spatial configurations that are not viable should be included. For example, if small conference rooms no longer work in the educational process, what do we do about altering the use of
such spaces? If large classrooms assigned for library instruction do not seem necessary, how can we convert them to alternative uses? One topic of importance in this chapter might be exploring how to take a media center apart once a building has been closed. This presents some serious questions on reallocation that have not been studied by the standards committees of the past.

Problems of security are paramount in the atmosphere of the eighties, and standards must also address this very real problem. How can we make the spaces that house our programs and resources safe to use and safe from theft and vandalism? This problem might be examined in terms of how we perceive our roles as educators who value positive attitudes toward human responsibility. To some extent, the problems of discipline and control of behavior are a small subset of the larger question. Previous standards never considered this problem, perhaps assuming, or at least hoping, that it did not exist.

The facilities section is probably the best place to explore some of the problems that arise in relation to invasion of privacy through technological means, including teacher access to student work on computers and reading records of any individual. It may also be the appropriate section in which to suggest standards for duplication of materials through technological means. Piracy is not unknown in the schooling community. Lastly, the potential of maintaining joint facilities with public libraries may be a viable alternative for some communities. How will standards provide for this and deal with new questions about the use of space, facilities and security which will inevitably result?

The chapter on collection design and management offers some very real suggestions to the professional community. It should, however, be revised in light of some of the changes that have occurred in technology. For example, it may not be necessary to have as many differing types of media formats as once thought essential. Video capability, for example, may obviate the need for some other formats, although recent court decisions on the use of VTR equipment present a set of constraints that need to be examined. Obviously, a section on computer hardware and software is a priority, as is some guidance on the use of videodisc systems. Data base use, and the criteria for such participation, should also be included. It is probably in this chapter that a section might be devoted to standards regarding intellectual freedom and censorship in schools. Previous standards have only referred to very basic principles in this area and the various tools to aid in dealing with problems that arise, but never have they approached realistically the question in school media terms. Since the freedom/censorship issue is a current priority of the professional community, and a most frequently asked question by
practitioners, we should not ignore it in dealing with revisions. It is not the identification of the agencies from which help might be received in times of censorship that we need, but rather what specific principles should be the guidelines for action in schools. Although the rights of individual communities need to be considered, there may well be some identifiable principles that override such parochial approaches.

The question of charging for specific services that may or may not be available to all is a serious one, for which guidelines should be developed. Should students have to pay a fee for data base searches? Should teachers? Should students circulate computers and video recording equipment? Should libraries house a large collection of software that might be borrowed by students and teachers? What guides are necessary and useful?

Revisions in Media Programs: District and School should include a chapter devoted to managerial functions. The competencies necessary to operate a media center could be identified and described. Budget alternatives may be outlined and guidelines provided for the selection of an appropriate budget system that would enhance the posture of the media center in the total schooling budget. The need to comprehend the financial picture of purchasing plans and contracts, maintenance contracts, bidding procedures, and buying plans is more acute than ever before. Nowhere does the current document address these issues, and the professional community would benefit greatly if they were confronted and guidelines determined.

The planning process is indeed one of the most important aspects of this chapter, both in terms of immediate planning and long-range endeavors. Targeting outcomes to meet the specific needs of schooling in a particular community may be critical to survival in that school. To some extent, a discussion of the funding process should be included in this chapter, with some attention to the grants process and the development of proposals for various state, federal and private funding agencies. The budget cuts of the past few years seem to call for a thorough discussion of alternative funds development.

The ALA Standards Committee was established to act as a liaison among all the various divisions and units of ALA. Through its manual and its continual monitoring of all ALA standards, it has tried to bring together the best possible information for the profession. I do not believe that AASL, or many other divisions, have used this committee effectively or to any great measure. Much could be learned from interaction with such a body that would enhance the final product, and those working on revisions should be encouraged to seek the counsel of this group.
Throughout this paper I have tried to identify some of the factors concerning standards for school media programs. I have supported the opinion that the current document is in need of major revision, and that any revisions should take into account all of the changes that have occurred in education during the past few years. It is probably true that the time is past for any single-minded approach to service-oriented standards. The national association(s) must use its authority to suggest to the profession a set of acceptable positions that might help us move forward in our work for children and youth. At the same time, it may be that we have reached a crisis point at which the association should ask if it is viable to continue standards as we have known them. It may be that each state and/or local governing body should develop its own media programs and services as it sees fit. I would like to believe that this is not the pattern to follow, that we should seek to provide more authoritative statements which offer to the professional community a set of guidelines indicating a kind of direction that will eventually enable the children of this country to enjoy and profit from the best qualities of our information-rich world. At the same time, I would like to see opportunities for diversity increased, and the individual media specialist encouraged to experiment with new and different approaches to meeting the needs of children and teachers. It may be that a reconsideration of some of the issues raised here will lead to a new vision of what school media program standards might become. Perhaps a new set of standards could set forth overriding principles which would be truly enforceable, just as professions such as medicine and law exercise some control over their practitioners. At the same time, these new standards might incorporate a greater recognition of the uniquenesses of individual situations and settings and the consequential need for practitioners to interpret such general principles into specific practices that best serve their own users. Standards should be seen as a means of encouraging the development of the best possible environments for learning and for personal growth for all users of school media centers. Effectively revised and implemented, these standards can provide guidance to school media specialists which will enhance their own competence and sense of relationship to a community of professionals; and ultimately these people can provide services to youngsters that will help them develop the critical abilities necessary to function effectively and happily in today's world and that of the future.
References


5. Comparison to the various definitions as set forth by Bloss (cited above) indicates that school media standards do not meet criteria of acceptance. The most useful comparison is through the use of Lancaster's requirements for formulation of standards, including: research, measurability, definability, appropriateness, authoritativeness, and realism. See Lancaster, *Measurement and Evaluation*, p. 290.

6. *Evaluative Criteria*, 4th ed. Washington, D.C.: National Study of Secondary School Evaluation, 1969, used by several of the accrediting agencies, does at least acknowledge the existence of standards. The School Library Media Program of the Year Award, in conjunction with Encyclopaedia Britannica, assumes the principles and expectations of the standards in much of its evaluation process to determine the school system of merit. States such as Massachusetts and Pennsylvania have established standards that relate in some measure to the national standards. The state of Maryland has developed not only state standards for media programs, but also individual standards for facilities-planning based, in part, on national standards. Many of the state plans under federal legislation called for the use of the standards in evaluating programs throughout the state. For example, Massachusetts included the standards as a guide for advisory board review of model sites for the state demonstration program.


8. The decision of the Board of Directors of AASL was an action that was to effect only the official documents and letters from the office of the executive director. In practice, it became the pattern in all of the literature from AASL. Indeed, the journal of the division has recently changed its name, despite the lack of formal action on the part of its editorial board. The membership at large was not asked to ratify its name change to *School Library Media Specialist*.


10. A three-page document, "Standards Data Collection Instrument," 10 Oct. 1981, was sent to the presidents of AASL-affiliate organizations, requesting them to survey 10 percent of their various memberships. The instrument is primarily concerned with title change, terminology and interest/usefulness levels of the previous standards. No indication is given that new areas are contemplated in any revisions.


12. Obviously, there are instances in technical matters when uniformity should be maintained, and these would be accounted for in what has been identified as "technical"
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standards. Procedural standards may also be placed in the category of uniform approaches, although I think there may be some room for diversity.


16. __________, Teaching Role, pp. 9-10.


19. Probably the most useful languages to acquire as a school media specialist will be BASIC, PASCAL and LOGO.

20. The American National Standards Institute has developed ANSI X3.88-1981, guidelines for producing informative abstracts to describe computer programs. The abstracts are intended to aid the user to choose a program best suited to his or her needs and resources. This standard recommends that the abstract give sufficient information to a potential user, including the identification of required hardware and software.

21. See AASL and AECT, Media Programs, pp. 4-9.


23. See AASL and AECT, Media Programs, pp. 87-104.

24. Ibid., pp. 62-86.

25. Ibid., pp. 36-61.
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