UNC Media / Technology Programs
Statewide Interest Status Report

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The UNC College of Education and the Division of Research, Evaluation and Development have supported the development of on-campus and off-campus courses and programs in Educational Media / Technology by providing time, energy and resources to promote program revision, development and implementation. Thanks to this support and the support of the Division of Statewide Programs, equity between on-and off-campus course design and delivery will be more easily accomplished.

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Part I - Project Rationale

Introduction

The motivation for undertaking this project is multifacted. The primary need to assess interest in UNC Media / Technology programs stemmed from the desire to match UNC state-wide program development endeavors mandated under Colorado House Bill 1187 with actual current interest / need for programs administered by UNC within the state at large. Yet, other factors not directly associated with the H.B. 1187 mandate strongly influenced decisions to perform a general program needs / interest assessment statewide. Factors which have had the greatest influence upon decisions to assess program need or interest can be traced back to the Educational Technology faculty's desire to take a proactive stand with regard to Media / Technology program planning:

(1) **The Interest / Needs Assessment provides a means through which a baseline for assessing program efficiency may be established, and through which program quality control endeavors may be implemented.**
The institutional reorganization which took place in 1983 disrupted the continuity of graduate instruction in educational media available through UNC. This, in turn, has continued to affect both the quality and the quantity of UNC's media-specific courses and programs. The reorganizational impact has resulted in a more comprehensive approach toward the design and development of courses leading toward endorsement or toward the M.A. degree. Unfortunately, some of the reorganization activities did not have immediately positive outcomes, as the following discussion suggests.

UNC is one of two universities in Colorado which are currently accredited by the State of Colorado Department of Education to provide graduate courses and programs in Educational Media, through which Colorado media endorsements may be obtained. Yet, UNC's "Plan for the Future" resulted in a total reorganization of graduate programs in Educational Media. These programs were restructured so that Educational Media courses, which were required by the State of Colorado for different varieties of media endorsements, continued to be offered throught the Division of Research, Evaluation and Development's Educational Technology program. The M.A. degree in Educational Media, used by many Colorado educators as a means of meeting another State of Colorado endorsement requirement, was eliminated as a consequence of the reorganization process.

Informal needs assessments conducted by the Educational Technology faculty of the Division of Research, Evaluation and Development, along with feedback obtained from the community of Colorado Educational Media practitioners, resulted in the revision of the UNC non-degree programs in Educational Media. They also resulted in the re-establishment of the M.A. degree in Educational Media in 1985. This M.A. program matched UNC master's requirements with State of Colorado endorsement requirements so that a student completing this program of study would meet both graduate degree and endorsement goals.

The lesson learned is that programmatic quality control must be maintained in a consistent manner so that drastic measures of total reorganization may be avoided in the future. The assessment of interest / need for UNC media courses and programs, as perceived by the general audience for whom they are intended, provide a feedback mechanism to evaluate the efficacy of recent program revisions. It also provides an indication of arenas within which existing needs are not being met so that program development may continue to proceed in a proactive fashion.

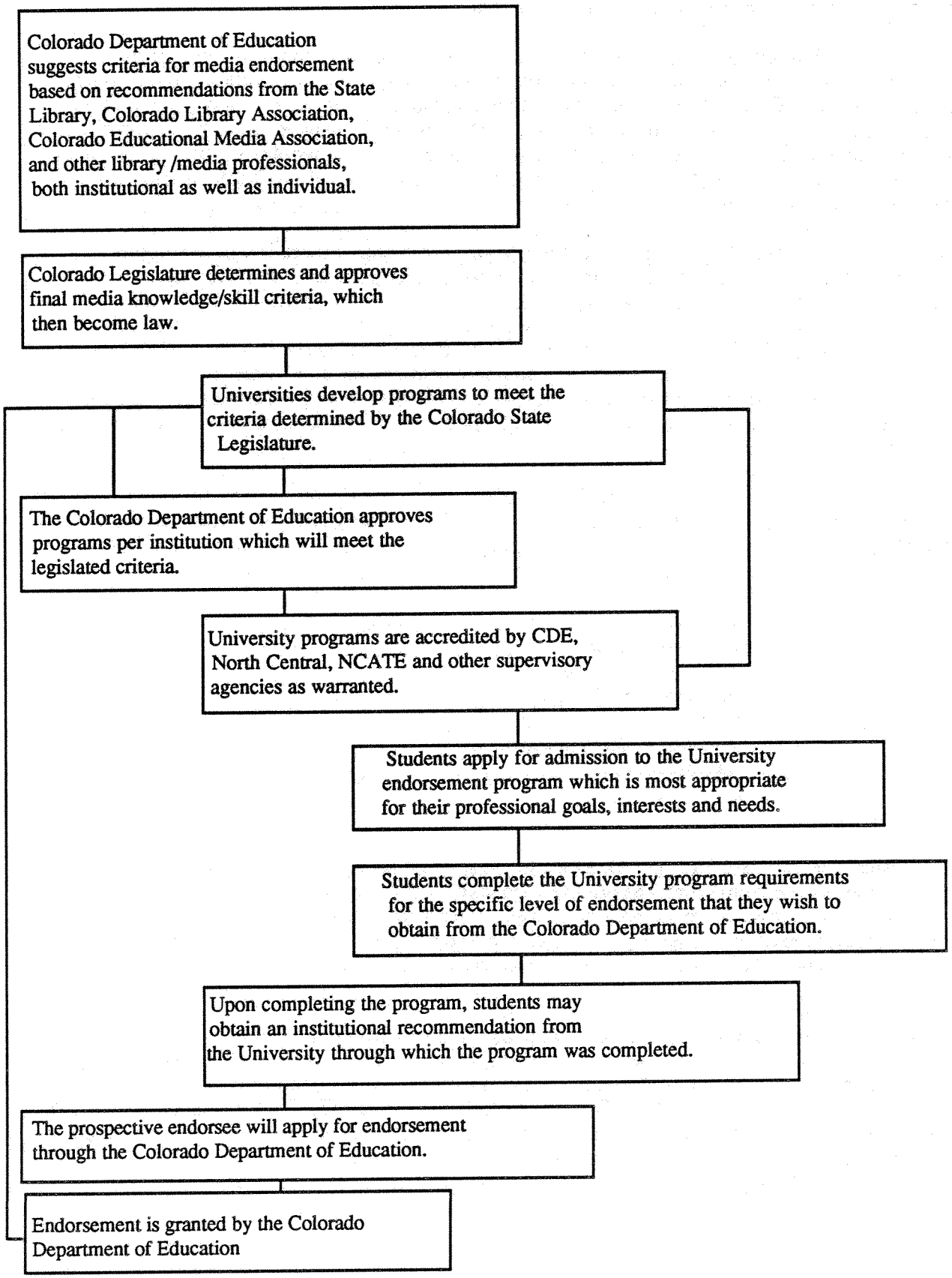
(2) Indications of the need for courses to help practitioners stay abreast of technological innovations must come from those for whom such courses are intended.
The UNC College of Education assessed the perceived strengths and weaknesses of professional teacher education programs by asking first and third year teachers to indicate their own perceptions of preparation in a variety of arenas (Nutter, 1985). This current project builds upon that 1985 assessment endeavor by asking people which of the courses required in the UNC media endorsement / degree programs would be of greatest interest as well as the greatest need. (Need may be intrinsic - where personal interest drives the need; or extrinsic - where State requirements provide the motivation to pursue certain courses.) Courses being offered to help media personnel attain or improve knowledge and skills in media / technology areas do need to reflect current and upcoming issues in the field. Practitioners themselves are able to provide valuable insight by identifing the deficient arenas as they perceive them to exist, for any number of reasons.

(3) It is important to determine when, where and how courses should be made available to the audience for whom they are intended.
If a course is offered at a time when people are unable to attend, or if it is offered in a instructional delivery mode which interferes with learning or at a location where nobody will (or can) attend, then the course's value is minimized . Scheduling needs to be addressed for on-campus as well as for off-campus audiences, and must deal with course availabilty during summer sessions as well as during the academic year. Scheduling will be even more challenging when one must match schedules from a variety of locations with courses offered on the UNC campus, or with courses pursued through other regional colleges and universities. It also must contend with UNC's conversion from a quarter system to a semester system, commencing with the Fall, 1988 semester.

(4) As technologies of instructional delivery continue to become more readily available and become easier to use, the need for courses / programs to encourage practitioners to make efficient use of those technologies within their own instructional environments is clear.
Strategies to make the best use of hardware and software within instructional systems will have the greatest impact upon media practitioners if those strategies can be modeled within the context of instruction designed for practitioners. The basic tenets upon which most contemporary media programs are built include Analysis, Design and Evaluation: one begins by assessing instructional needs, develops a design through which objectives can be met, and then provides a plan through which the efficiacy of the design can be determined. Instructional delivery systems need to be selected which are appropriate for the constraints of a particular instructional situation. Obviously, if this is what graduates of the UNC Media / Technology programs are expected to do, then it is essential that the UNC faculty responsible for these courses and programs model these behaviors.

According to Richard Braddock, "The challenge confronting education and educators is not to produce more electronic technology, but rather to develop creatively the educational potential that the current new technologies offer. "(cited in Ofiesh, 1986, p. 301). The Statewide Access Project has provided the framework within which UNC graduate teacher education programs will be formatted for distance delivery. Braddock's challenge is a particularly appropriate one for the UNC Media / Technology faculty and student / practitioners. It provides a rationale to showcase the methodologies of instructional design, information management, instructional delivery systems development and evaluation. This assessment project report represents the preliminary level of proactive program development upon which strategic planning, message delivery and evaluative endeavors can ultimately be built.

A Brief Overview of the Media Endorsement Process



Educational Media Endorsement: A Brief Discussion

What do you call a professional endeavor which promotes access to and utilization of the continuum of print, non-print and electronic resources through which educational messages are transmitted? What if the utilization of those resources must bring about an improvement in the user's performance? What do you call it if the program of study designed to promote information access and utilization also provides instruction to produce various media from among this array of resources? Or teaches others the strategies to locate and make use of those information resources for themselves?

Depending upon your philosophy of teaching, your profesional orientation or even your geographic location, one will find that these activities are the domain of the "librarian", the "teacher", the "school librarian", the "library teacher", the "media librarian", the "media specialist", the "media technologist" or the "educational / instructional / performance technologist". The reality of providing information services in educational settings means that one must, at times, wear all of these hats if one is to function in an appropriate manner. The academic programs developed to prepare such minded people need to relate these domains of expertise within a comprehensive framework. Regulations controlling the entry of potential practitioners to the field need to reflect a similar comprehensive intent.

Bullough (1979) suggested that the integration of print and non-print oriented as well as librarian / teacher oriented academic programs of study into the single entity of **instructional / educational technology** could be accomplished by emphasizing competency development in the following seven arenas:

Reseach & Theory
Instructional Design
Evaluation and Selection
Organization and Retrieval
Production
Utilization & Dissemination
Administration

suggesting that:

> Briefly, research and theory provide a basis for the applied functions that are to follow. Instructional design relates purpose to procedure. The evaluation and selection of resources are necessary precursors to application. Organization and retrieval are essential functions if the resources are to be available when needed. Production skills permit the creation of resources to meet specific needs. Utilization and dissemination relate to the on-line use of the resources. Administration has to do with the operation of a resource facility. (p.33)

In this type of configuration, instructional / educational technology functions as the methodology of performance problemsolving, while print and non-print media served as the means through which information impacting performance was transmitted. The integrative, "systems" based approach described by Finn (1972), Banathy (1968), AECT (1977), Dick & Carey (1978, 1985), Clark (1983) and others placed the concerns for specific media within a larger context, from which generalizations about media efficiacy would be more meaningful.

UNC'S Media Endorsement / Degree Programs

In keeping with recommendations such as Bullough's (1979) or those of the Association for Educational Communications and Technology (1977) (whereby one can better accomodate public concerns for enhanced excelence in teaching and more efficient utilization of hardware and software resources affected by development in miccroporocessor technology) UNC's Educational Media programs were among those targeted for revision in 1983. The UNC Educational Media Degree / Endorsement programs have been administered by the Division of Research, Evaluation and Development, College of Education, since that time. Educational Media courses and programs were combined with the Educational Technology (Computer Technology in Education) section of the Division. The Division also administers Educational Psychology programs as well as Educational Foundations. This particular administrative configuration has conceptually unified a continuum of concerns affecting educational technologists as described by AECT (1977).

Interestingly, the 1983 reorganization had been foreshadowed by a similar type of program reorganization which had occurred in 1967. During that year, the Colorado State College submitted a proposal to the Colorado Board of Trustees and Commision on Higher Education to create a new program. This proposal called for combining the existing program in Library Science with the existing program in Audio / Visual Instruction to produce a new program in Educational Media. The program was to be available to students as a minor at the undergraduate level and as a major at the graduate level. At the graduate level, the program would lead to the degree of Master of Arts (Colorado State College, 1967). The proposal was the direct result of recommendations made by a committee representing the Colorado Library Association, the Colorado Association of School Librarians, and the Colorado Audio-Visual Association, who had been called together by the Colorado State Department of Education. The preliminary draft of their report said in part:

> This statement is designed to stimulate the growth of school libraries and create a pattern of guidelines for the transition to an instructional materials center concept. ...the modern school library should be implemented by more than books alone. It should encompass all of the media that can effectively communicate knowledge to students. (...and should include) a trained staff of certified personnel, who are knowledgeable in the use of audiovisuals as well as printed matter. ...print and non-print media can be more effective when they are used together, to complement and supplement each other; ...such joint use, at the individual school level, is more likely when library and audiovisual programs are unified.
>
> (Colorado State College, 1967, p.2)

It is clear that the need to stay abreast of technological developments has required the ongoing modification of philosophies and operational constructs which have traditionally driven media related fields of endeavor. It is also clear that the logrithmic proliferation of information technologies during the past two decades has required practitioners to adopt a global view of the information management process, moving from audio-visual instruction to educational media, from library science and school library media toward information systems management, instructional development and performance technology. A media practitioner must look beyond the most apparent arenas of competence for library / media / technology specialists. Practitioners must perceive the entire system within which they function so that their specific role within that system is more easily discerned.

The Status of Colorado Endorsement Regulations, 1978

The Colorado Legislature appeared to heed AECT's recommentations regarding educational technologist competencies when enacting Colorado media endorsement revisions in 1978 to the 1975 Teacher Education legislation . The regulations declared that individuals wanting to work in elementary and secondary school libraries / media centers be called Educational Media Specialists,

and required that any individual working as an Educational Media Specialist needed to hold a Colorado Educational Media Specialist endorsement in addition to the regular teaching certificate if one wanted to work in a North Central Association accredited school. It was also possible to be endorsed in Elementary School Media, although one holding level of endorsement was still generically referred to as the "media specialist". While the requirements for obtaining the Elementary School Media endorsment were not as thorough as for the Educational Media Specialist, the general competencies were very much the same for both groups. To obtain an Educational Media Specialist endorsement, one had to pursue coursework which would develop knowledge and skills in the following areas:

* Cataloging and classification;
* Reference and information management;
* Media design and production;
* Evaluation and Selection of Educational Media;
* Media / Library Administration.
* Instructional Design / Curriculum Development
* Research
* Services for children and youth

In doing so, media /technology personnel pursue programs of study which resembled the recommended programs described by Bullough (1979) and AECT (1977). The University of Northern Colorado, University of Colorado - Boulder and Denver University, accredited by the Department of Education, provided graduate programs through which a prospective endorsee would develop these State required competencies. Each accredited institution developed graduate programs which reflected the orientation of the host institution toward media services. As could be expected the UNC programs placed Educational Media within the context of teacher education, and perceived media services to be a subset of instructional facilitation.

Combining State Endorsement Criteria with Graduate Program Criteria: Take 1

UNC's Educational Media program continued to focus upon audio-visual and library science instruction through the 1970s into the early 1980s. UNC's 1983 program revision combined these already hybrid concerns of Educational Media with Computer Technology in Education to develop the UNC Educational Technology program. The newest "hybrid" program stressed both product and process outcomes of instructional development, with a major emphasis placed upon the planning of instructional delivery systems to maximize performance outcomes. The emphasis focused upon instructional systems analysis while maintaining and enhancing the traditional concern for designing and producing the materials actually used to transmit educational messages. The multiple roles and functions of information management were more efficiently accomodated by merging Educational Media with Computer Technology in Education to form UNC's Educational Technology program.

Unfortunately, the hybrid "educational technologist" didn't really fit the generally held perception of who the school media specialist was and vice versa. There was concern expressed about the heavy electronic media emphasis at the (apparent) expense of print or non-print emphases of instructional delivery. There were concerns raised about losing sight of the role and function of the school media center. Ironically, the revision of the UNC media programs incorporated the wholistic, integrative "systems" approach recommended by AECT and others. Coming in 1983, these were timely and appropriate changes. Unfortunately, general perceptions of educational technology, educational media and library media were still different enough that the continuum of activities represented historically represented by Educational Media, Library Science and Educational Technology fields were not easily discerned. It became apparent that while Educational Technology may have represented the next wave of Educational Media's evolution, people needed to be shown that the connection was, indeed, present.

Combining State Criteria with Program Criteria: Take 2

By 1984 it also became clear that additional "fine tuning" revisions to the UNC media endorsement programs could be undertaken to meet the State - required endorsement criteria more directly. At about that same time it was increasingly evident that the Interdisciplinary Studies: Educational Technology M.A. program did not complement the coursework required in the Educational Media Endorsement Programs. People interested in obtaining an M.A. degree and in completing the media endorsement program were looking at programs as long as 80 quarter hours, just 16 credits less thanan entire Ed.D. program. Consequently, program revisions were undertaken so that the M.A. degree in Educational Media could be re-initiated as a part of the overall Educational Media Specialist and Elementary School Media Endorsement program revision endeavors.

All pending program and degree revisions were successful. The M.A. degree in Educational Media was appproved in May, 1986, while the Department of Education Accreditation team was favorably impressed by the Educational Media endorsement programs in November, 1986 whereby re-accreditation followed shortly thereafter.

The upcoming semester conversion, scheduled to take place in Fall, 1988, has provided an additional opportunity to revise and fine-tune various earlier revisions. The M.A. degree in Educational Media is in place if one wishes to earn a Master's degree as well as obtain an Educational Media Specialist endorsement from the State of Colorado. Those wishing to pursue a Media Specialist program without earning an M.A. degree are free to do so; those wishing to pursue the Elementary School Media endorsement may do so in a program designed for that endorsement level. Revision to Colorado endorsement law are expected sometime in 1991; all endorsement programs will be fine-tuned to deal with any last minute, unanticipated changes which may arise as anticipated revisions are enacted.

The UNC Educational Media M.A., Educational Media Specialist and Elementary School Media endorsement programs are completely in place; they are fully accredited by the Colorado Department of Education, NCATE and by the North Central Association. Courses required to complete all programs are regularly scheduled in two time tracks: courses scheduled during the academic year (September - June) are offered in late afternoon / evening blocks to better meet the needs of the population for whom these courses are intended; UNC also offers a full summer program for those who want to come to campus to pursue coursework on a full time basis. The four regular, full time Educational Technology faculty members work with the Educational Psychology faculty, Educational Foundations faculty and with faculty from the Division of Educational Studies to provide full access to all courses. Adjunct faculty have been and continuing to be appointed to help facilitate the delivery of UNC courses from State-designated Access sites, but the primary responsibility for designing, delivering and evaluating Access program courses will rest with the regular faculty.

Each respective endorsement and degree program description herein deals with expectations structured as of December 4, 1987. Revisions to Colorado endorsement law precludes program revision as a matter of course. Consequently, additional program or degree revisions may be enacted in the future to contend with endorsement requirements dictated by the State of Colorado.

Elementary School Media Endorsement

(NOTE: Information obtained from the Colorado Department of Education indicates that the Elementary School Media endorsement will not be available after the Colorado Legislature enacts pending revisions to the existing endorsement law in 1991.)

To be endorsed in Elementary School Media by the State of Colorado Department of Education, an applicant must meet the following criteria:

* **An applicant must hold a bachelor's degree** from an accredited four year institution of higher education.

* An applicant must have completed an approved teacher preparation program and **be certifed in Elementary Education.**

* An applicant must have completed **two years of successful teaching or library / media experience** while holding a valid elementary teaching certificate.

* **An applicant must have completed a** 27 quarter hour / 18 semester hour **graduate program in Educational Media.** Coursework must enable applicants to develop knowledge and skills in the following areas:

Cataloging and classification;
Reference and information management;
Media design and production;
Evaluation and Selection of Educational Media;
Media / Library Administration.

* An applicant must submit an **institutional letter of recommendation** from the university where the graduate media program and field experience was completed.

The UNC Elementary School Media Endorsement Program is a 27 qurater hour program designed to help prospective endorsees meet the requirements of the Colorado Department of Education for Elementary School Media endorsement. Course requirements for this program have been noted below.

Required courses:

ET 410 - Introduction to Educational Media	2
ET 520 - Media Design and Production	3
ET 530 - Cataloging and Classification of Media	4
ET 533 - Reference Materials: Basic School Reference Service	3
ET 536 - Evaluation and Selection of Educational Materials	3
ET 575 - Administering Educational Media	5

Elective Credits: 7

(Students are strongly recommended to take at least one class in computer applications and/or a class in children's literature. However, since this elective coursework, students are free to choose courses which fit their needs and interests.)

Number of Credits: 27

Educational Media Specialist Endorsement

(NOTE: Information obtained from the Colorado Department of Education indicates that several criteria required for the Educational Media Specialist endorsement will be modified after the Colorado Legislature enacts pending revisions to the existing endorsement law in 1991. Criteria which are likely to be affected by revision have been marked by noting anticipated changes in parentheses.)

Educational Media Specialist endorsement may be obtained at the K-6 (elementary) level, the 7-12 (secondary) level and the K-12 level. To be endorsed as an Educational Media Specialist by the Colorado Department of Education, an applicant must meet the following criteria:

* **You must hold** or be eligible for a Colorado Type A (or equivalent) **teaching certificate.** (A Colorado Type P may be substituted for the Type A)

* **You must hold a Master's degree** or higher from an accredited institution of higher education. (An M.A. degree may no longer be required for endorsement.)

* You must have completed **three years of teaching and/or library/media experience** while holding a valid Type A (or equivalent) certificate. (One year of teaching experience may be required.)

* **You must have completed a graduate program in Educational Media** at an institution approved by the Colorado Department of Education. The program must include coursework to develop the following knowledge and skills:

  * **Cataloging and classification;**
  * **Reference and information management;**
  * **Media design and production;**
  * **Evaluation and Selection of Educational Media;**
  * **Media / Library Administration.**
  * **Instructional Design / Curriculum Development**
  * **Research**
  * **Services for children and youth**
  * **Technology and automation** (pending)

* **You must complete field experience** appropriate for the level(s) of endorsement you desire.

* You must submit an **institutional letter of recommendation** from the university where you completed your graduate media program and field experience when you apply for endorsement.

The UNC Educational Media Specialist Endorsement Program is designed to help prospective endorsees meet the graduate program / knowledge and skills proficiency and the field experience requirements of the Colorado Department of Education for Educational Media Specialist endorsement. Course requirements for this program have been noted below.

<u>Required for all levels of Endorsement</u>:

ET 516 - Utilization of Educational Resources	3
ET 520 - Media Design and Production	3
ET 521 - Design and Construction of A/V Materials	3
ET 526 - Orientation to Computer Assisted Instruction	3

ET 530 - Cataloging and Classification of Media	4
ET 533 - Reference Materials: Basic School Reference Service	3
ET 536 - Evaluation and Selection of Educational Materials	3
ET 575 - Administering Educational Media	5
ET 610 - Instructional Technology: Philosophy, Theory & Practice	3
EDF 667 - Modern Curricular Trends and Issues	3
EPRE 600 - Introduction to Graduate Study and Research	3

Required for specific levels of endorsement:

EDRD 614 - Literature in the Elementary School (required for K-6, K-12 endorsement)	3
EDRD 615 - Seminar in Children & Young Adult Literature	3
or	
EED 602 - Seminar in Literature for Adolescents (required for 7-12, K-12 endorsement)	4
EDFE 610 - Field Experience:	
at the elementary level for K-6 endorsement	3
at the secondary level for 7-12 endorsement	3
at both levels for K-12 endorsement	6

M.A. in Educational Media / Educational Media Specialist Endorsement

If an individual is interested in obtaining an Educational Media Specialist endorsement but does not already hold an M.A. degree, he or she is advised to enroll in UNC' s M.A. in Educational Media / Educational Media Specialist Endorsement program. This program has been designed to meet the requirements of a UNC M.A. degree as well as to meet the Educational Media Specialist requirements of the Colorado Department of Education. This program combines two distinct programs of study and meets criteria established for these two differing programs; consequently, the M.A. / Endorsement program of study does not provide for elective credit. Equivalent or advanced courses may be substituted by a student's academic advisor when warranted.

(NOTE: Even though an M.A. degree may not be required for endorsement when the pending revisions to endorsement law are enacted, it may still be to one's advantage to pursue the combined M.A. / Endorsement program. Some \Colorado school districts base their pay rate upon a "degree plus hours" differential arrangement. In any case the number of credits to complete the M.A. in Educational Media may only exceed the total media endorsement program by 6 - 9 credits.)

Degree Program Requirements

EPRE 505 - Elements of Statistics	4
EPRE 541 - Human Information Processing	4
EPRE 570 - Tests and Measurement for Educators	4
EPRE 661 - Orientation to Educational Psychology/Technology	1
*EPRE 600 - Introduction to Graduate Study and Research	3
* ET 520 - Media Design and Production	3
* ET 526 - Orientation to Computer Assisted Instruction	3
* ET 610 - Instructional Technology: Philosophy, Theory & Practice	3

(* also required by the Colorado Department of Education for endorsement)

Endorsement - Specific Requirements

ET 516 - Utilization of Educational Resources	3
ET 521 - Design and Construction of A/V Materials	3
ET 530 - Cataloging and Classification of Media	4
ET 533 - Reference Materials: Basic School Reference Service	3
ET 536 - Evaluation and Selection of Educational Materials	3
ET 575 - Administering Educational Media	5
EDF 667 - Modern Curricular Trends and Issues	3

Required for specific levels of endorsement:

EDRD 614 - Literature in the Elementary School (required for K-6, K-12 endorsement)	3
EDRD 615 - Seminar in Children & Young Adult Literature	3
or	
EED 602 - Seminar in Literature for Adolescents (required for 7-12, K-12 endorsement)	4
EDFE 610 - Field Experience:	
at the elementary level for K-6 endorsement	3
at the secondary level for 7-12 endorsement	3
at both levels for K-12 endorsement	6

Semester Conversion at UNC -- Curricula for Endorsement and M.A. Programs

UNC will convert from a quarter system to a semester system in the Fall of 1988. In anticipation of the conversion, the semester curricula for the M.A / Endorsement program, the Educational Media Specialist Program and the Elementary School Media Program have been noted below.

Semester: M.A. Educational Media / Educational Media Specialist

ET 500	Systems Approach Toward Education	3
ET 502	Instructional Development	3
ET 503	Computer Applications in Education	3
ET 504	Instructional Materials Design	3
ET 530	Cataloging and Classification	3
ET 533	Reference and Information Management	3
ET 535	Media Administration	3
ET 536	Evaluation, Selection & Utilization of Educational Resources	3
EPRE 600	Intro to Graduate Research	3
EPRE 540	Principles of Learning	3
EDRD 614	Literature for Children and Adolescents	3
EDFE 610	Field Experience, K-6 (3)	3 - 6
and/or		
EDFE 610	Field Experience, 7 - 12 (3)	
	TOTAL CREDIT HOURS:	36 - 39

Semester: Educational Media Specialist Endorsement Program

ET 502	Instructional Development	3
ET 503	Computer Applications in Education	3
ET 504	Instructional Materials Design	3
ET 530	Cataloging and Classification	3
ET 533	Reference and Information Management	3
ET 535	Media Administration	3
ET 536	Evaluation, Selection & Utilization of Educational Resources	
EPRE 600	Intro to Graduate Research	3
EDRD 614	Literature for Children and Adolescents	3
EDFE 610	Field Experience, K-6 (30	3 - 6
and/or		
EDFE 610	Field Experience, 7 - 12 (3)	
	TOTAL CREDIT HOURS:	30 - 33

Semester: Elementary School Media Endorsement

(NOTE: This program may not be available after the Colorado Legislature enacts pending revisions to the existing endorsement law in 1991.)

ET 503	Computer Applications in Education	3
ET 504	Instructional Materials Design	3
ET 530	Cataloging and Classification	3
ET 533	Reference and Information Management	3
ET 535	Media Administration	3
ET 536	Evaluation, Selection & Utilization of Educational Resources	3
	TOTAL CREDIT HOURS:	18

Semester Curricula

Media Spec. M.A. / Endorsement	Media Specialist Endorsement	Elementary
ET 500		
ET 502	ET 502	
ET 503	ET 503	ET 503
ET 504	ET 504	ET 504
ET 530	ET 530	ET 530
ET 533	ET 533	ET 533
ET 535	ET 535	ET 535
ET 536	ET 536	ET 536
EPRE 540		
EPRE 600	EPRE 600	
EDRD 614	EDRD 614	
EDFE 610	EDFE 610	

Quarter Curricula

Media Spec. M.A. / Endorsement	Media Specialist Endorsement	Elementary
		ET410
ET 516	ET516	
ET 520	ET 520	ET 520
ET 521	ET 521	
ET 526	ET 526	
ET 530	ET 530	ET 530
ET 533	ET 533	ET 533
ET 536	ET 536	ET 536
ET 575	ET 575	ET 575
ET 610	ET 610	
EPRE 541		
EPRE 570		
EPRE 661		
EPRE 600	EPRE 600	
EDRD 614	EDRD 614	
ERRD 615\EED 602	EDRD 615/EED602	
EDFE 610	EDFE 610	

PART II - PROACTIVE PROGRAM DEVELOPMENT

Project Focus

It is important to keep in mind that this project report focuses upon interest in **UNC Media / Technology programs**. State-wide developments over the past ten years indicate the desireability of establishing formal, inter-institutional cooperation among programs to efficiently utilize scarce resources during times of program reorganizations / revisions / closures. Several Media Technology cooperative programs (most notably the University of Northern Colorado / Adams State College cooperative Media M.A. program and the UNC - US West Learning Systems (Mountain Bell Training and Education Center) Cooperative Instructional Development Program) have developed during the past several years in which UNC serves as a partner with another institution to improve access to its programs and courses.

Partnering is indeed a highly attractive solution to the problem of scarce resources, yet that issue is not appropriately addressed in this report. One must first establish that a need or interest truly exists before going ahead with plans to fill an undocumented need. Similarly, while it may be of interest to quantify statewide interest in supporting the establishment of an American Library Association (ALA) accedited library school in Colorado, the establishment of such a program does not necessarily comply with existing State-mandated program development guidelines for UNC.

The primary intent of this project *was to assess Colorado-wide interest in UNC Media / Technology programs*. It stemmed from a need to match UNC state-wide program development endeavors mandated under H.B. 1187 with actual current interest / need for programs administered by UNC within the state at large. Specific objectives met as a consequence of thie data collection effort included the following:

(1) The survey has enabled program faculty to match requests for courses and programs with actual demand for such courses. The likelihood of scheduling courses for which enrollment will be sufficient to actually hold the course is greatly enhanced when scheduling decisions are data based rather than intuition - based. At the same time, the indications of interest / need have enabled low enrollment courses to be scheduled in specific locations if it appeared that doing so might "underwrite" future program development efforts.

(2) The survey has assessed demand for courses leading to an initial media endorsement in relation to demands for recertification courses. Rather than assuming that the existing "endorsement driven" program is sufficient, the survey data provided information which will help program faculty develop a consistent curriculum specifically for recertification / re-endorsement.

(3) The survey provided the data needed to establish program parameters within which adjunct media /technology projects may be undertaken. For example, it has already been determined that some components of media courses may be delivered on a state-wide basis via teleconferencing. By identifying a finite need within the context of an ongoing project, it is more likely that sponsorship and/or grants may be obtained. (In other words, it is much easier to ask forand receive 4 Darome conveners and two hours of audio bridge time to help delivery specific components of a course than it is to "establish a teleconference course in educational media" with no other information available to support the request.)

(4) The survey provided an empirical basis upon which to define the role of UNC in providing graduate coursework and program in Educational Media / Technology / endorsement. After all, it would be inappropriate to assume that having a media program in place implies general public interest in that program. By asking what courses people want to see, when they'd like to see them and how they'd like to see them delivered, it is more likely that courses and programs can be proactively developed to meet existing real needs.

METHODS

Survey Design

A survey was prepared to serve as the instrument through which information regarding interest in or need for courses and programs in Educational Media/Technology could be determined. The general format of the Media / Technology interest survey matched another interest survey being generated by the Division of Statewide Programs (DSP) in the late summer of 1987. Modifications to the existing DSP survey were made to assess the scheduling preferences of the survey respondents, as well as their preference for a variety if instructional delivery modes.

The survey consisted of 52 questions, calling for a variety of responses. Responses asking the survey respondent to indicate a preference were rated by means of the 5-point Likert Scale of Summated Ratings. All responses were structured in such a way that they could be directly entered into the EXCEL data base for subsequent analysis using STATVIEW. All data descriptions, all analyses, and all graphs were prepared using an Apple Macintosh Plus.

The survey questions themselves could be grouped into three distinct categories of questions:

Demographic issues - These questions considered gender, position currently held by the survey respondent, number of years as an educator and so on. The demographic questions provide the information needed to generate a profile of the survey respondents.

Interests in programs / courses - These questions considered the programs to be selected for Access development based upon the interest / need expressed by the survey respondents. These are also the questions which asked about course preferences so that high demand courses could be scheduled appropriately, while low demand courses would not adversely impact the continuation of the Media Access project. We also wanted to know just how far you would travel to take a class, and how many classes you may want to take in any given semester.

Preferred modes of instructional delivery - These questions considered the times of the week which were most prefered for taking a course, number of course sessions preferred during a semester, and preferences for the media being used to deliver Access Project courses. Instructor-led instruction is the most common mode of teaching in higher education, yet is probably not the most appropriate mode for widespread use within the Access Project. Various media of instruction will most likely be employed to facilitate delivery in both on-campus and off-campus settings. It is important to find out if the audience for whom instruction is intended is willing to make use of multi-modal or other instructional delivery formats before novel modes of instructional delivery are actually employed.

NOTE: A copy of the complete survey can be found in Appendix A of this report.

Selection of Survey Recipients

The most obvious group to be contacted for this interest assessment project were public school media personnel. Yet, media personnel already holding an endorsment (looking to stay current), even when combined with not-yet-endorsed school media personnel (looking to comply with endorsment laws as well as to upgrade technological proficiencies), represented only part of the total potential interest pool. Classroom teachers looking for a change in professional direction frequently used media endorsement as the means of moving away from direct instructional endeavors. In other cases, teachers did not necessarily want to get involved in an endorsement program per se, but were interested in obtaining access to courses which would upgrade one's technological proficiencies.

Keeping these potential interest pools in mind, the final survey recipient list was comprised from two groups: those individuals described by the Colorado Department of Education (CDE) as "Media Personnel" comprised one, while the second consisted of all Colorado Department of Education-identified Principals. The decision to include principals in the sample was based upon our interest in reaching someone through whom information about media / technology courses could be disseminated. The principal, a central administrative figure, seemed likely to provide access to a pool of interest which would otherwise not be directly available. Media Specialists were provided with yellow surveys, while Principals received green surveys. By using this color coding it was possible to assess relative interest per targeted group. Several individuals' names were also taken from the membership directory of the Colorado Educational Media Association (CEMA) and included with the Media Personnel sample. Complete duplication of the CEMA membership directory was not undertaken since the CEMA lists appeared to duplicate most of the CDE media personnel list. All surveys which were distributed via CDE mailing lists were accompanied by a addressed, postage paid envelop, in which respondents were asked to return the completed survey.

A third responding group, represented by respondents who heard about the assessment project from either a media specialist or a principal, was discernable by the number of returned surveys which were photocopied on white paper. Respondents needed to provide his or her own envelope and postage. By color coding our various interest pools we would have a better idea of how to focus developmental endeavors, based upon interest measured by volume of response.

Analyses

Of the 1,295 yellow surveys mailed to Media Personnel, 595 were returned by the September 25th deadline, for a 45.94% rate of return. Of the 1,260 green surveys mailed to and distributed from school principals, 159 were returned by the September 25th deadline, for a 12.6% rate of return. 72 white surveys were included among those which had been returned by the September 25th deadline. The total number of respondents included in all subsequent analyses by the deadline was 826.

While we did examine differences between one subgroup within this sample and the sample at large, we did so to look for comparable patterns of interest rather than to make any direct comparisons between the two groups. Consequently, a sampling fraction was not utilized in the analyses described and discussed in this report.

Analyses were performed in two phases. In the first phase, the analyses were performed upon the total number of survey responses, n = 826. Frequency distributions described the number of respondents arranged by variety of configurations; Demographic Issues questions, Interest in Program / Courses questions and Preferred Modes of Instructional Delivery questions were all interpreted by means of frequency distributions. ANOVAS were performed on mean scores among delivery system preferences and time/scheduling preferences. All missing data was coded

as a "1", which was then used in mean calculations. A planned Fisher PLSD multiple comparison was used to look for significant differences among means where ANOVAS were initially used to detect significance where preferences for mode of delivery and scheduling preferences were assessed. Comparisons among site distance and distance to be driven were conducted to assess the value of Access Project site designation.

Phase 2 of the data analysis cut the total group of respondents into two groups based upon responses to the question which called for a specification of interest in media / technology courses, (n = 518). We hoped to determine if the pattern of interest differed among a population for whom a program is designed when compared to the responses of a more heterogeneous population. As in Phase 1, frequency distributions described the number of respondents arranged by variety of configurations. Two tailed t-tests were employed to compare the Media sub-group responses with the total sample's responses.

Results of Analyses: Frequency Distributions, Phase 1

Description of Data Report: A narrative summary has been provided in the following section. Frequency distributions tables and charts visually depicting arrays of responses have been included in Appendix B of this report. Missing data in the frequency distributions can be discerned by comparing the responses per question with the total number of survey responses received (n = 826).

Formed Used - 72% (n = 595) returned the yellow, "Media Specific"surveys, while 19% of the respondents (n=159) returned the green, "Principal Specific" surveys. A suprising 9% (n=72) of the returned surveys were "second generation" surveys, being copied from color coded surveys distributed via the two primary access channels. These self-motivated survey returns indicate a high degree of interest among those who had heard of the UNC Media / Technology Interest Assessment Project from collegues or friends. It suggests that program planning, promotional efforts and other related endeavors need to include strategies for going beyond media -specific or central administration-specific comunication channels.

Current Position - 12% (n = 95) of the respondents described themselves as Teachers. 63% (n= 503) of the respondents were Media Staff; another 2% (n = 15) described themselves as both Teacher and Media Staff. Administrators made up 14% (n = 109) of the sample, with Support Staff contributing 3% (n = 22) and Aides contributing another 7% (n = 59) to the total group. Interestingly, the number of respondents who indicated that they were not media staff members (35%, n = 285) is comparable to the number of respondents (35%, n= 282) indicating thet they were not specifically interested in Media / Technology coursework / programs. When Interest in Media Technology courses was compared with Current Position, the distribution noted in Table 1 was discerned.

In order to further examine these indicators, the second phase of analyses were scheduled to look specifically at the interests / needs of those specifically interested in Media.

Gender - 79% (n = 649) of the survey's respondents were Female, while 21% (n = 173) were Male. The geographic distribution of respondents by gender by Access Site has been noted on the following page.

Position	Interest in Media yes N =	%	no N =	%
Teacher	46	51	45	49
Media Staff	371	76	120	24
Administration	20	19	86	81
Support Staff	14	61	9	39
Aide	40	71	16	29

Table 1: Comparison of Interest in Media/Technology Courses with Current Postion Held by Survey Respondent

(NOTE: Only those individuals who specified a single position were included in this analysis. Those who indicated that they serve multiple functions in a school were excluded. This explains why the total n = 767.)

Location	# of Females	# of Males
Denver	317	76
Grand Junction	55	21
Greeley	119	34
Gunnison	18	4
Pueblo	119	35

Table 2: Gender Distribution

Residency - 93% (n = 765) indicated that they were Colorado residents for tuition purposes, while another 7 % (n = 58) who reported that they were not Colorado residents.

Career Change / Type of Change - 22% (n = 182) respondents indicated that they did anticipate a career change over the next five years. 76% (n = 622) suggested that they did not. Of those anticipating a change, 52% (n = 101) suggested that the change would be within education, while 10% (n = 20) belived that the change would come outside of education. 16% of the respondents indicated that they would retire; 22% (n = 42) of the sample did not provide a specific arena of their anticipated career change.

Interest in Media / Technology Coursework - 64% (n = 522) of the respondents indicated that they were interested in the Educational Media / Technology courses, while 35% (n = 282) suggested that they were not. Those not primarily interested in Media / Technology programs indicated that they *were* interested in other UNC graduate teacher education programs. When looking at the related responses to Program specific preferences, it was still possible to examine the course-specific interests indicated by all of the survey's respondents despite reported interest or lack thereof in Media / Technology programs. (Course specific data will be reported in a following section of this report.)

Interest was highest for Recertification coursework; 29% (n = 355) rated recertification courses a top priority. 27% (n = 339) indicated their strong interest in occasional media / technology courses. 26% (n = 323) indicated top interest in the Educational Media Specialist endorsement courses, while 9 % (n = 116) expressed interest in the Elementary School Media endorsement courses. This latter endorsement level may not be available beyond the next several months due to anticipated revisions in Colorado endorsement law. It is likely that many of these 116 respondents would choose to pursue the Media Specialist program of study once those anticipated changes are enacted.

Course Specific Interests - Respondents were asked to indicate their interest in pursuing specific courses from the required core of the UNC Educational Media / Technology program under the soon to be enacted semester curriculum. One would eventually need to take all of these or equivalent courses in one wanted to obtain a Colorado Media endorsement through the UNC program. Nevertheless, it was worth noting overall preferences in order to assess the perceived value of the required endorsement courses. There appears to be a direct, positive correlation between course preference and perceived practical need for a course. Unfortunately, this relationship was discerned as a consqeuence of the survey itself; by not anticipating it, we neglected to ask respondents to rank their perceived need of courses to match requisite practitioner competencies. The value of this determination is that it allows a better , objective look at what people report needing in order to to a good job on the job.

Respondents were asked to indicate degree of interest in each of the UNC required core of endorsement courses. Analyses examined the number of responses which rated a course as a "5" (most interest), then combined the responses in categories "5" and "4" (interest) to get a more complete look at course preferences. The combined totals have been noted in Table 3 on the folowing page.

Interest appears in a bimodal distribution,with Computer Based Education forming one mode (n = 469) and Literature for Children andAdolescents serving as the second mode (n = 403). Remembering Bullough's (1979) desire to integrate print and non-print media issues within a single program, it appears as if the ability to integrate such concerns comes from familiarity with both classes ofmedia. Interest in courses dealing with clearly discernable, directly applicable content reamined fairly constant with 7 - 10 % interest ratings. Courses dealing with content which is not generally perceived to deal directly with library / media center activites were ranked at percentages of 3 - 5 %.

Reason for Pursuing Courses - Reported reasons for pursuing coursework in Educational Media / Technology were consistent with reported interest in the courses themselves. 28 % (n = 237)suggested that recertification was a prime motivator. 31% (n = 263) indicated that they wanted to "stay current", while another 12 % (n = 102) suggested that they were motivated by their curiosity. 19% reported their interest in terms of pursuing an Educational Media endorsement. Only 10% (n = 81) matched their interest in media / technology courses with possible step increases in salary.

Name of Course	Percent of Preference	5	4	5+ 4
Systems Approach Toward Education	4	81	97	178
Instructional Development	8	153	129	282
Computer Based Education	15	296	173	469
Instructional Materials Design	7	134	139	273
Cataloging and Classification	7	137	84	221
Reference and Information Management	10	184	112	296
Media Administration	10	185	107	292
Evaluation and Selection	8	160	114	274
Intro to Graduate Study	3	63	37	100
Principles of Learning	4	79	72	151
Literature for Children / Adolescents	16	304	99	403
Field Experience, K-6	5	99	49	148
Field Experience, 7-12	3	59	51	110

Table 3: Relative Interest Expressed in Media / Technology Courses

Years as a Colorado Educator - 23% (n = 188) respondents have served as Colorado educators for 15 - 19 years. 20% (n = 161) have worked for between 10 - 14 years, while 13% (n = 107) have 5 - 9 years of experience. On the other end of this "longevity distribution" 17% (n = 137) of the respondents had 20-24 years of experience, while 13 % (n = 104) reported between 25 - 29 years. 4% (n = 30) indicated that they had worked as a Colorado educator for between 30 - 34 years.

Closest Site / Distance from Site - Not suprisingly, the strongest demand for courses lies along Colorado's eastern slope, where one will find a correspondingly large population. 49% (n = 395) of the survey respondents identified Denver as the closest population center; 19% (n = 154) named Greeley as the closest center site, while another 19% (n = 154) indicated that Pueblo was their closest population center. In other words, fully 87% of the respondents (n = 703) are located along the eastern edge of the Colorado Rocky Mountains. 10% (n = 77) named Grand Junction as the closest site to home; 3% (n = 22) chose Gunnison as being the closest.

However, the distribution of respondents in terms of the number of miles from each indentified State Access Project site did indicate a demographic pattern which influence any program development to be implemented in Western Colorado.

Table 4 shows the reported distance of the survey respondent to his or her preferred Access site.

In reviewing the matrix, an interesting pattern began to emerge. The northcentral Eastern Slope sites, particularly Denver, showed a tendency to function as a population hub. Pueblo drew upon local as well as distant populations, whereas Western Slope sites functioned as designated cluster point to which people would travel to pursue a course.

Closest site	Distance 1-10	11-25	26 -50	51-100	>100
Denver (395)	159	112	63	33	21
Grand Junction (77)	14	0	6	29	28
Greeley (154)	36	35	41	24	18
Gunnison (22)	6	0	0	8	7
Pueblo (154)	29	7	56	42	20

TABLE 4. Geographic Distribution of Survey Respondents

The assumption that the designated Access Project sites from which UNC courses would be offered were truly representative of the locale from which potential students were drawn was accurate in the case of Denver, where only 13% (n = 54) of the respondents were more than 50 miles from that site. It was also somewhat accurate in Greeley's case as well, where 27% (n = 42) of the respondents were more than 50 miles from UNC. A sizable 40% (n = 62) of the respondents choosing Pueblo as their preferred site for course delivery lived more than 50 miles away.

However, In the case of the Western Slope sites, the largest percentage of the respondents lived more than 50 miles from the Access site. 74% (n = 57) of those noting Grand Junction as their preferred site are greater than 50 miles distant. The15 people noting Gunnison as the closest site who also noting that they live more than 50 miles from Gunnison comprise 68% of the group choosing Gunnison.

What this means is that while it may be practical to schedule classes on a 3 hours per night, 1 night per week basis in Denver and Greeley, it may be appropriate to configure courses offered in Pueblo in a configuration where approximately 50% of the course follows an instructor led approach (perhaps meeting for 1 three hour session every two weeks during a semester) with 50% of course content delivered via telecommunicated delivery: videotapes, audioconferencing, electronic mail, discussion / activity sessions and a "programmed" activities manual. In the case of the Western Slope locations, it will be highly advantageous to deliver courses using the same 50 - 50 arrangement of instructor-led and media facilitated course delivery as was proposed for Pueblo. However, in these locations, the instructor -led instruction may need to be arranged on two complete days with the mediated delivery arranged to meet a student's schedule.

Closest site	Distance 1-10	11-25	26-50	51-100	>100	
Denver (395)	159	112	63	33	21	= 54
Grand Junction (77)	14	0	6	29	28	= 57
Greeley (154)	36	35	41	24	18	= 42
Gunnison (22)	6	0	0	8	7	= 15
Pueblo (154)	29	7	56	42	20	= 62

Table 5. Distances from Preferred Access Site: Number of Respondents per City More than 50 Miles From the Site

Likely Enrollment Sites - The most likely enrollment site for UNC media / technology courses is Denver; 350 respondents, 36% of the total number of respondents, indicated their preference for UNC courses taken in Denver. Greeley ranked second in order of overall preference, with 16% (n = 156) of the respondents indicating that they would enroll in the on-campus program. Colorado Springs ranked third, with 14% (n = 141) choosing it as the most likely site of enrollment. Pueblo ranked as the fourth most likely site of enrollment, with 12% (n = 114) choosing Pueblo as their most likely site of enrollment.

The remaining potential UNC instructional delivery centers / sites have been ranked and displayed in Table 6.

Site preferred	by this %	by this number
Grand Junction:	6%	(n = 62)
Sterling:	5%	(n = 46)
Alamosa:	4%	(n = 36)
Gunnison:	3%	(n = 29)
Durango:	3%	(n = 25)
Craig:	2%	(n = 20)

Table 6: Enrollment Preferences by Site

Instructional Delivery Preferences - Respondents indicated their preferred modes of instructional delivery by rating five different delivery systems on a scale from 5 ("most preferred") to 1 ("least preferred"). 27 % (n = 270) preferred the laboratory / workshop approach toward course delivery. 23% (n = 234) chose the interactive multimodal delivery system, where two-way teleconferencing would work in conjunction with instructor led instruction, videotapes, workbooks, whereas 15% (n = 150) selected passive multimodal delivery as the system of choice. The traditional classroom system of delivery was chosen by 19% (n = 195) of the respondents, while 16% (n = 158) were most drawn to courses offered via independent study.

Scheduling Preferences - Respondents indicated their preferences of course scheduling by rating five different time / day configurations used for both on and off campus scheduling on a scale from 5 ("most preferred") to 1 ("least preferred"). In this question, multi-modal time / day arrangements were preferred by 24% (n = 260) of the total sample. Saturday / Sunday combinations meeting 3 times a semester were the second overall choice, with 21% (n = 225) selecting this option. Meeting times set for Friday nights / Saturdays, 3 times a semester were ranked third overall, with 18 % (n = 195) choosing this option. Meeting once a week for 16 weeks attracted 26% of the total population, although the group was split in their preferences for either meeting early (4 - 7 p.m.) or late (7 - 10 p.m.); 12% (n= 130) selected the early time while 14 % (n=153) opted for the later time block. The least preferred scheduling option called for meeting on Thursday and Friday nights and all day Saturday, 3 times during a semester. 10 % (n = 108) selected this block of time.

Analyses of Data: ANOVA, Phase 1

Concerns for instructional delivery preferences and scheduling preferences motivated further analysis of frequency distribution data. The means for all five categories of Instructional Delivery Preferences and of Scheduling Preferences were calculated to enable the performance of an Analysis of Variance using a repeated measures design. All missing data was re-coded as a 1 ("least prefered") to facilitate the calculation of preference means. A planned Fisher multiple comparison was conducted to identify significant differences among category means for both questions.

According to a comparison of means scores calculated for each delivery mode, data indicated that the most preferred mode of instructional delivery for graduate courses in Educational Media / Technology were those conforming to a laboratory / workshop format. The interactive, multi-modal format (which would make use of a combination of instructor led instruction, teleconferencing, videotapes, audiotapes and workbooks) was ranked second in overall preference by respondents. Traditional instruction ranked third, while directed independent study and totally packaged, "passive" multi-modal instruction ranked fourth and fifth, respectively. There was a significant difference discerned among delivery system options, with an F = 53.411.

The Fisher multiple comparison detected significant differences among various groups per category. The workshop / laboratory approach was preferred by significantly more people when compared to all delivery modes except the interactive multimodal approach toward instructional delivery. There was a significantly greater preference for multi-modal course delivery than for all other modes, with the exception of the laboratory / workshop course. Preferences for the laboratory / workshop course were not significantly greater than for the interactive multimodal approach. Appendix B displays the data from which these multiple comparisons were drawn.

Table 7:
Instructional Delivery System Preferences

Instructional Delivery Preferences	Mean	St Dev	St Error	Var	N
Traditional classroom	3.07	1.5	.05	2.25	825
Interactive multimodal	3.37	1.44	.05	2.08	825
Laboratory / Workshop	3.53	1.42	.05	2.01	825
Independent Study	2.89	1.49	.05	2.22	825
Passive Multimodal	2.68	1.56	.05	2.43	825

Table 8:
Source Table: One Factor ANOVA - Repeated Measures

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P :value
Between subjects	824	2969.904	3.604	1.834	1.0E-4
Within subjects	3300	6484.8	1.965		
treatment	4	394.753	98.688	53.411	1.0E-4
residual	3296	6090.047	1.848		
Total	4124	9454.704			

Reliability estimates for all treatments: .455

Reliability for single treatment : .143

Table 9:
Time and Day Scheduling Preferences

Scheduling Preference	Mean	St Dev	St Error	Var	N
Th/Fri, 6 - 10, Sat. 8-4, 3X / Semester	2.23	1.51	.05	2.27	825
Fri, 4 -10 /Sat 8-6, 3X / Semester	2.75	1.64	.06	2.69	825
Sat / Sun 8 - 4:30, 3X / Semester	2.67	1.74	.06	3.02	825
1 late afternoon (4 - 7) per week for 16 weeks	2.37	1.58	.06	2.49	825
I evening (7 - 10) per week for 16 weeks	2.53	1.61	.06	2.58	825
Multi-modal scheduling	3.2	1.62	.06	2.62	825

Table 10:
Source Table: One Factor ANOVA - Repeated Measures

Source:	df:	Sum of Squares:	Mean Square:	F-test:	P :value
Between subjects	824	2741.01	3.326	1.289	1.0E-4
Within subjects	4125	10644.833	2.581		
treatment	5	480.493	96.099	38.952	1.0E-4
residual	4120	10164.34	2.467		
Total	4949	11385.843			

Reliability estimates for all treatment: .224

Reliability for single treatment : .046

According to mean comparsions among the scheduling options, the multi-modal approach toward course scheduling was ranked as the most highly preferred "time" among all survey respondents. The Friday / Saturday configuration ranked second, while the Saturday/Sunday option ranked third. The one meeting per week options were presented in two time slots: 7 - 10 p.m. and 4 - 7 p.m. These options ranked fourth and fifth, respectively. The least preferred scheduling option was the one which made use of Thursday night, Friday night and Saturday day. There was a significant difference among scheduling preferences with an F = 38.952 reported.

The planned Fisher muliple comparisons determined where the significant differences amiong scheduling oreferences could be found. The multimodally scheduled time option was significantly preferred above all other scheduling options. The expressed preferences between the Thursday / Friday / Saturday option and the 4 - 7 one time per week option were not significant; preferences between the the Friday / Saturday option and the Saturday / Sunday option did not differ significantly. Saturdy / Sunday scheduling was not significantly more attractive when compared with the 7 - 10 p.m., one night per week option. There was a significant preference for 7 -10 p.m. scheduling over the 4-7 p.m. scheduling when looking at the one night per week approach. Appendix B, displays the data from which these analyses were drawn.

Analyses of Data: Frequency Distributions, Phase 2

Description of Data Report: Phase 2 of the analysis was undertake to compare responses from the total sample with those responses coming from subjects who indicated that were *specifically* interested in the Media / Technology courses and programs. This component of the analysis was undertaken to ascertain whether or not the total sample of respondents were similar to those for whom media / technology courses were specifically germain, since the pool of respondents included media personnel, administrative personnel, support staff as well as teachers. A representative sample of the frequency distributions extracted from the Media / Technology Interest subgroup have been included in the following section. The Media / Technology subgroup n = 515.

Current Position - 9% (n = 46) of the respondents described themselves as Teachers. 74% (n= 371) of the respondents were Media Staff; another 2% (n = 12) described themselves as both Teacher and Media Staff. Administrators made up 4% (n = 20) of the sample, with Support Staff contributing 3% (n = 14) and Aides contributing another 8% (n = 40) to the total group.

Gender - 85% (n = 436) of the survey's respondents were Female, while 15% (n = 79) were Male.

Residency - 94% (n = 487) indicated that they were Colorado residents for tuition purposes, while another 6 % (n = 29) who reported that they were not Colorado residents.

Career Change / Type of Change - 20% (n = 102) respondents indicated that they did anticipate a career change over the next five years. 79% (n = 401) suggested that they did not.

Reason for Pursuing Courses - Reported reasons for pursuing coursework in Educational Media / Technology were consistent with reported interest in the courses themselves. 24 % (n = 138)suggested that recertification was a prime motivator. 34% (n = 197) indicated that they wanted to "stay current", while another 8 % (n = 49) suggested that they

were motivated by their curiosity. 26% (n = 149) reported their interest in terms of pursuing an Educational Media endorsement. Only 8% (n = 81) matched their interest in media / technology courses with possible step increases in salary.

Closest Site / Distance from Site - 47% (n = 235) of the survey respondents identified Denver as the closest population center; 20% (n = 100) named Greeley as the closest center site, while another 19% (n = 97) indicated that Pueblo was their closest population center. 11% (n = 56) named Grand Junction as the closest site to home; 3% (n = 15) chose Gunnison as being the closest.

Course Specific Interests - The following course preferences were reported by the Media sub-group have been noted in Table 11.

Name of Course	Percent of Preference	5	4	5+ 4
Systems Approach Toward Education	4	60	68	128
Instructional Development	7	111	91	202
Computer Based Education	15	219	96	315
Instructional Materials Design	7	103	103	206
Cataloging and Classification	8	112	66	178
Reference and Information Management	10	151	81	232
Media Administration	10	143	79	222
Evaluation and Selection	9	126	81	207
Intro to Graduate Study	3	51	26	77
Principles of Learning	3	50	44	94
Literature for Children / Adolescents	16	236	68	304
Field Experience, K-6	5	78	37	115
Field Experience, 7-12	3	42	33	75

Table 11:
Interest in Media / Technology Courses as reported by Subjects Most Interested in UNC Media / Technology Courses and Programs

Interest appears in a bimodal distribution, with Computer Based Education forming one mode (n = 315) and Literature for Children andAdolescents serving as the second mode (n = 304). As with the total sample, interest in courses dealing with clearly discernable, directly applicable content remained fairly constant with 7 - 10 % interest ratings. Courses dealing with content which is not generally peceived to deal directly with library / media center activites are ranked at 3 %.

Likely Enrollment Sites - The most likely enrollment site for UNC media / technology courses is Denver; 218 respondents, 33% of the total number of respondents, indicated their preference for UNC courses taken in Denver. Greeley ranked second in order of overall preference, with 17% (n = 110) of the respondents indicating that they would enroll in the on-campus program. Colorado Springs ranked third, with 15% (n = 102) choosing it as the most likely site of enrollment. Pueblo ranked as the fourth most likely

site of enrollment, with 12% (n = 77) choosing Pueblo as their most likely site of enrollment.

The remaining potential UNC instructional delivery centers / sites have been ranked below:

Site preferred	by this %	by this number
Grand Junction:	7%	(n = 47)
Sterling:	4%	(n = 27)
Alamosa:	4%	(n = 24)
Gunnison:	3%	(n = 22)
Durango:	3%	(n = 21)
Craig:	2%	(n = 13)

Table 12: Enrollment Preference by Site: Media Subgroup.

Instructional Delivery Preferences - 27 % (n = 187) preferred the laboratory / workshop approach toward course delivery. 23% (n = 163) chose the interactive multimodal delivery system, , whereas 16% (n = 92) selected passive multimodal delivery as the system of choice. The traditional classroom system of delivery was chosen by 18% (n = 129) of the respondents, while 16% (n = 113) were most drawn to courses offered via independent study.

Scheduling Preferences - multi-modal time / day arrangements were preferred by 6% (n = 191) of the total sample. Saturday / Sunday combinations meeting 3 times a semester were the second overall choice, with 21% (n = 159) selecting this option. Meeting times set for Friday nights / Saturdays, 3 times a semester were ranked third overall, with 18 % (n = 134) choosing this option. Meeting once a week for 16 weeks attracted 24% of the total population, although the group was split in their preferences for either meeting early (4 - 7 p.m.) or late (7 - 10 p.m.); 11% (n= 84) selected the early time while 13 % (n=97) opted for the later time block. The least preferred scheduling option called for meeting on Thursday and Friday nights and all day Saturday, 3 times during a semester. 10 % (n = 76) selected this block of time.

Analyses: t-Tests

A series of two-tailed t-Tests were performed to look for any significant differences between the total sample and the media sub-group. While the descriptive data noted above had indicated that the two group were highly similar regarding demographic composition it was suspected that the degree of interest in media specific coursework as well as the willingness to make use of non-traditional modes of instructional delivery may differ. It was determined that the Media sub-group differed significantly from the total sample in the following ways:

(NOTE: Tables including specific data per significant t-Test have been included in Appendix B.)

The Media sub-group expressed significantly more interest in the Media Specialist, 7- 12 ($p < .028$) Media Specialist, K - 12, ($p < .001$) and M.A., Educational Media ($p < .0012$) than did the group at large.

The Media sub-group is significantly more likely to pursue occasional media courses ($p < .4.000E-4$) for recertification and to stay current.

The Media sub-group are significantly more interested in the courses which can be directly matched with competencies required for endorsement: Computers ($p < .03$); Media Production ($p < .0061$); Cataloging ($p < 6.0000-4$); Reference ($p < 9.0000E-4$); Administration ($p < .0015$); Children's Literature ($p < 1.0000E-4$); Selection, Evaluation and Utilization of Media ($p < .0021$); and Graduate Research ($p < .03550$).

The Media sub-group was significantly more willing to make use of multi-modal instructional delivery than the total sample ($p < .0093$), and was also significantly more interested in pursuing multi-modal scheduling than was the entire sample ($p < .0117$).

III. Discussion of Results

Major outcomes of the data analyses have been noted and briefly discussed in the following pages. The four issues already indentified as project outcomes have been presented in the following paragraphs

1) Is there any interest in or need for UNC Media /Technology Courses? The data indicated that there is. With this information, the Educational Technology program faculty are better prepared to provide courses which match requests with actual demand for such courses. The likelihood of scheduling courses for which enrollment will be sufficient to actually hold the course is greatly enhanced when scheduling decisions are data based rather than intuition - based. At the same time, the indications of interest / need have enabled low enrollment courses to be scheduled in Western Slope locations since it appears that doing so will "underwrite" future program development efforts. The motivating factors describing reasons why people may be interested in pursuing courses provides some insight into the type of courses which can be developed to meet previously unmet professional growth needs.

(2) **The survey has assessed demand for courses leading to an initial media endorsement in relation to demands for recertification courses,** and has indicated that there is there is as much relative interest in staying current as there is in recertifying. Initial endorsement also represents a fairly sizable component of the group which should (at least according to the intent of Colorado endorsement law) already possess endorsements. The existing "endorsement driven" program is serving a critical function in that it provides a means through which compliance with endorsement regulations may be accomplished. Additionally, the survey data provided information which will help program faculty develop a consistent curriculum specifically for recertification / re-endorsement, as well as courses which are specifically designed to stay abreast of current issues.

(3) The survey provided the data needed to establish program parameters within which adjunct media /technology projects may be undertaken. For example, it has already been determined that some components of media courses will be delivered on a state-wide basis via teleconferencing. What we did not know was that teleconferencing will be *essential* for Access programs on the Western Slope to succeed. It is much easier to think of specific modes of teleconferencing to employ when the general size of group for whom instruction is intended is known. It is also much easier to plan for the development of telecommunicated courses when the relative interest in a course or set of courses have been determined.

(4) The survey provided an empirical basis upon which to define the role of UNC in providing graduate coursework and program in Educational Media / Technology / endorsement. This issues is far more critical than it may initially appear. Due to the number of relocations, revisions and closures which have beset all of the academic programs through which media competencies are engendered, the availability of programs through which media endorsements may be obtained has become a highly emotional issue: The disappearance of Colorado's sole A.L.A accredited library school has been a source of great concern; one frequently hears of the need for courses in western and eastern Colorado; in recent years, the need for courses is discussed with greater frequency even in the Denver Metropolitan region. Yet when courses are scheduled the attendance figures fluctuate from very high to nonexistent. An off-campus course must

enroll at least eleven students for the course to be held; in many cases, courses which have been announced in the UNC Division of Statewide Programs Bulletin are not held because enrollments do not reach that number. It is an minor annoyance if one has drivenacross town, only to discover that a scheduled course will not be held; it is a major issue of concern if one has driven, say, from Craig to Denver only to learn that the anticipated course has been cancelled. Even though current Division of Statewide program policy is to cancel a course if sufficient enrollments have not been obtained by the pre-registration deadline, the variability of course scheduling cannot help but deter potential students who are not convinced of a program's longevity or permanence.

An empirical assessment of library oriented practitioners as represented by the Colorado Library Association and other similar groups need to be conducted in order to ascertain their perceived need for library and information science programs. By doing so, a more complete picture can be drawn from which to answer questions about an A.L.A. library school, about library education and so on. UNC's institutional focus in upon education. Specifically, UNC has a state mandate to be the primary deliverer of graduate teacher education for the State of Colorado. Educational Media / Technology deal with methodologies which are specifically oriented toward improving performance outcomes as a consequence of instruction via print and non-print media of instructional delivery. Complementary interests in courses such as children and young adult literature, or in programs such as the Type D (Administration) and other certification programs mean that UNC Media / Technology courses and programs will be generically oriented toward an education - based audience.

Limitations and Practical Significance of the Project

As one begins to consider the implications of the analyses of these survey data, two issues must be addressed. The large number of survey respondents in this study suggests the greater likelihood that significant differences would be discerned when scheduling preferences, delivery system preferences and course availablity were compared. Interpretations of significance should be made with the large N of the study in mind. The practical significance of the study provide the arena within which statistical significance can be assessed, especially when one does so while keeping the frequency distributions in mind. By looking at the actual numbers and percentages of respondents who are interested in UNC Media Technology courses, the demographic indicators of population dispersment, and the preferred times and modes through which instruction may be delivered, it is possible to establish a plan through which statewide access to UNC courses and programs may be facilitated.

Recommendations:

General recommentations regarding a variety of concerns related to this needs assessment project have been noted below:

Interest in Access Programs: The number of respondents to this interest survey suggest that there is a high degree of interest in the State Access Project, in general, and with Media / Technology programs in particular. Not suprisingly, the greatest degree of relative interest in the development of a *state-wide* system of delivery appears to lie on Colorado's western slope, in southern Colorado and on the eastern plains. It was interesting to note that approximately 35% of the survey respondents were not necessarily interested in media / technology courses and programs but *were* interested in other UNC graduate teacher education programs. Media sub-group responses indicated that over half of that group were also interested in other UNC graduate programs. Funds need to be allocated so that Access Project developmental endeavors may be

furthered; the development of alternative modes of instructional delivery needs to be perceived as the scholarly activity that it indeed is. State Access needs to function as a partnership venture among the Colorado universities, colleges and junior colleges, and K-12 schools so that existing delivery resources may be utilized in the most efficient manner; newly acquired resources may then be focused upon the arenas of greatest need. Cooperative program development and delivery will continue as a means through which resource allocation may be accomplished more efficiently. Examples of parterning may be illustrated in the following ways. While UNC has no plans to develop and implement an American Library Association accredited Library School, the Educational Technology faculty are working with faculty from A.L.A. accredited institutions to provide the basis of cooperative courses exchanges. The model for such cooperation is similar to an existing agreement between UNC and Adams State College (ASC), whereby ASC students pursue approximate one-half of their Educational Media program at ASC. These ASC credits are subsumed within the UNC Educational Media program; a student completing the ASC / UNC program ultimately obtains their M.A. degree in Educational Media and their letter of institutional recommendation for endorsement from UNC.

Modes / Scheduling of Instructional Delivery: Courses and programs need to be scheduled at times and in configurations which are appropriate for a specific Access Site's population. While it may be practical to schedule classes on a 3 hours per night, 1 night per week basis in Denver, it seems less appropriate to do so in Greeley, even though Greeley is the site of the campus. Similarly, it may more be appropriate to configure courses offered in Pueblo in a configuration where approximately 50% of the course follows an instructor led approach (perhaps meeting for 1 three hour session every two weeks during a semester) with 50% of course content delivered via telecommunicated delivery: videotapes, audioconferencing, electronic mail, discussion / activity sessions and a "programmed" activities manual. In the case of the Western Slope locations, it will be highly advantageous to deliver courses using the same 50 - 50 arrangement of instructor-led and media facilitated course delivery as was proposed for Pueblo. However, in these locations, the instructor -led instruction may need to be arranged on two complete days, two weeks apart, with the mediated delivery arranged to meet a student's schedule. Scheduling needs to be undertaken with audience preferences in mind.

Importance of Instructional Development and Design: State Access offers a unique opportunity for Colorado educators to develop courses and programs making use of instructional developmental principles. Currently, much of the instruction in higher education has not necessarily been developed by first assessing need, then carefully sequencing instruction based upon demonstrated need of specific audiences. Instead, instruction is offered in modes of delivery such as lecture and recitation, not because it is the best way to teach, but because of the paradigmatic stature obtained by lecture and recitation (Waggoner, 1984). In other words, it is done that way because it is the way that it has always been done. Waggoner suggested that:

> Since its adoption from German tradition in the mid-nineteenth century, the lecture as been the principal and venerated means of transmitting knowledge from scholar to student. The student became the next generation's scholar and perpetuated both the knowledge and its mode of transmission. The lecture came to represent tradition in general (and perhaps recalled a particular role model specifically), it symbolized the prestige of scholarship, and aside from augmenting it with recitation, it was all the scholar knew how to. (1984, p.7)

It is important to keep in mind that if the courses developed for off-campus delivery are developed via the methodologies of instructional design and development, they may not be equivalent to on-campus instruction. *Instead, they may very well be superior to on-campus instruction.* Consequently, on-campus instruction will need to be revised in conjunction with the off-campus development, to be sure that the means of on-campus instructional delivery are appropriate for its

particular population. Off-campus course and program design will require that an equivalent amount of time and attention be paid to on-campus course and program design.

Distribution centers: Just as Greeley is situated as the distributive center of the network represented by the legislatively identified State Access sites, each designated Access Site may need to serve as the central point of regional distribution networks, especially if one looks outside of either Denver or Greeley. Audio and video materials prepared to supplement the instructor led component of a course need to be readily available for all members of a class, regardless of their proximity to a particular Access Site. Of course, telecommunicated courses do not preclude the need for library resources; it is important that graduate level courses be supported by research based literature. Print and well as non-print media of delivery need an efficient circulation /distribution schema.

Appropriateness of Using Multimodal Design and Delivery for Educational Media / Technology Programs: Media Specialists will be highly represented among the group functioning as change agents within schools and school districts when telecommunication is more fully utilized as an instructional delivery system in Colorado schools. It is appropriate that UNC's Educational Media / Technology program be involved in modeling instructional design and delivery endeavors which make use of telecommunication technologies. It is also appropriate that the UNC Educational Media / Technology program be principally involved in the preliminary development of telecommunicated instruction from UNC. In doing so, we model the competencies that we are to engender in our students, who will in turn be the ones responsible for modeling these behaviors with other educators. Provision of a more cohesive framework to describe the relationship among endorsement specific competencies will help media practitioners see the "big picture", and this provision amy be accomdated through "practicing what we preach". Practitioners should have the importance of the courses relating to media / library service which do not directly improve applied knowledge and skills made clear. This is particularly true in areas relating to instructional design, research and learning.

Promotion of Programs: Promotional efforts for Media / Technology programs will be best served by making use of existing media / library information networks. However, it is also important to try to reach the teacher aide / library aide / support staff populations who also indicated high interest in these programs. It is also important to consider that the methodologies of Educational Media / Technology are applicable in a variety of content areas. Consequently, promotion of courses may involve a broader audience than might normally be anticipated.

Gender Issues: The high precentage of female survey repondents suggests that gender may need to be an arena of continued investigation in the State Access Project. It may be that families are more willing to relocate to a university/college community if the male head of a household wishes to pursue a career change, while female heads of households looking toward a career change may not have relocation as a viable family option. If the highest percentage of the Access project is female, there may be some interest in incorporating this variable within the instructional design configuration for course development.

Reasons for pursuing courses can be used as a developmental rationale for updating curriculum on an ongoing basis: Programs and courses have traditionallly been expected to be revised to accomodate certification and endorsement criteria. At the same time, it is essential to incorporate "cutting edge" perspectives in instruction designed for educational practitioners if only to deal with continually changing instructional technologies. Academic programs have a responsibility to self-assess efficacy; they must continually evolve (either philosophically, conceptually or both) to model the behaviors as well as to disseminate information representative of the discipline at large.

Conclusion

This paper has presented preliminary data reflecting interest in and need for UNC courses and programs in Educational Media / Technology. As a consequence of this assessment effort it has been possible to identify a number of issues which should be addessed in order to maximize the probabilities of success for the Media / Technology programs specifically and the Access Project in general. This list of issues is far from complete; nevertheless, it provides a baseline from which further Access Project development by UNC departments and divisions may take place. It may also serve as an indicator of issues to be considered by other institutions as they consider their own State Access strategies.

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APPENDIX A

UNC Media / Technology Interest Survey

UNIVERSITY OF NORTHERN COLORADO
DIVISION OF STATEWIDE PROGRAMS
EDUCATIONAL MEDIA/TECHNOLOGY INTEREST SURVEY

We are requesting your participation in this data collection effort to better assess the need for and interest in courses and programs in Educational Media/Technology. Thank you for taking the time to respond to the questions and statements noted herein. Your responses will enable the development and design of programs and courses to better meet the needs of Colorado educators.

Please return your completed survey in the postage-paid envelope which has been enclosed for your convenience. Be sure to return your survey no later than September 25, 1987, so that your responses may be included in the data compilation.

A complete summary of this survey data will be available after December 1, 1987. Copies of this summary will be available upon request by contacting:

Ellen D. Wagner, Ph.D.
Division of Research, Evaluation & Development
University of Northern Colorado
Greeley, Colorado 80639

PLEASE ANSWER THE FOLLOWING QUESTIONS BY CIRCLING THE APPROPRIATE RESPONSE.

1. Please circle the description which most closely identifies your current position.

   a. classroom teacher
   b. aide/paraprofessional
   c. member of media staff
   d. member of administration
   e. member of school/district support staff

2. Gender: (please circle) MALE FEMALE

3. Total years you have been a professional educator: _____

4. Are you a resident of Colorado for university/college tuition purposes? Please circle one:

   YES NO UNKNOWN

5. Do you anticipate a career change within the next 5 years? Please circle one:

   YES NO

   If YES: (check one)
   _____ within education? Position: _____
   _____ outside education? What Field: _____
   _____ Retirement

6. Are you interested in pursuing graduate coursework in Educational Media/Technology? (circle one)

   YES NO

-over-

6a. I am interested in pursuing additional courses or degree program(s). (check the one which is most appropriate):

a. To obtain my media endorsement
b. To recertify
c. To increase my salary
d. To stay on top of developments in technology/media
e. To satisfy my own curiosity/interest

7. If you are not interested in Media Technology coursework, are you interested in pursuing coursework in other disciplines?

YES NO

If yes, please check the areas of interest noted below.

7a.
___ MA Special Education: Teaching the Gifted & Talented
___ MA Physical Education
___ MA Reading: Elementary
___ MA Special Education: Emotionally Distrubed/Learning Disabled
___ MS Interdisciplinary Studies in Secondary Science Teaching
___ MA Elementary Education: Emphasis in Middle School Education
___ Certificate: Type D (Educational Administration)
___ Other: _____

8. Please identify the site which is closest to your place of residence.

a. Denver
b. Grand Junction
c. Greeley
d. Gunnison
e. Pueblo

9. Please indicate the approximate distance you live from the site identified in question #8.

a. 0 - 10 miles
b. 11 - 25 miles
c. 26 - 50 miles
d. 51 - 100 miles
e. More than 100 miles

AT WHICH OF THE SITES NOTED BELOW WOULD YOU BE LIKELY TO ENROLL IN COURSES OR PROGRAMS DEALING WITH EDUCATIONAL MEDIA/TECHNOLOGY?

	MOST LIKELY				LEAST LIKELY
10. Denver	5	4	3	2	1
11. Grand Junction	5	4	3	2	1
12. Greeley	5	4	3	2	1
13. Gunnison	5	4	3	2	1
14. Pueblo	5	4	3	2	1

PLEASE INDICATE YOUR LIKELIHOOD OF ENROLLING IN UNC CLASSES AT THE SITES NOTED BELOW.

		MOST LIKELY				LEAST LIKELY
15.	Alamosa	5	4	3	2	1
16.	Colorado Springs	5	4	3	2	1
17.	Sterling	5	4	3	2	1
18.	Durango	5	4	3	2	1
19.	Craig	5	4	3	2	1

INDICATE YOUR INTEREST IN THE PROGRAMS OR COMBINATION OF COURSES NOTED BELOW. PLEASE MARK THE PROGRAMS IN WHICH YOU HAVE THE MOST INTEREST WITH THE #5, THE LEAST INTEREST WITH THE #1.

		MOST INTEREST				LEAST INTEREST
21.	Elementary School Media Endorsement	5	4	3	2	1
22.	Educational Media Specialist, Elementary(K-6)	5	4	3	2	1
23.	Educational Media Specialist, Secondary(7-12)	5	4	3	2	1
24.	Educational Media Specialist, K-12	5	4	3	2	1
25.	M.A. degree in Educational Media, with the Educational Media Specialist Endorsement	5	4	3	2	1
26.	Recertification courses in Educational Media/ Technology	5	4	3	2	1
27.	Occasional courses in Educational Media/ Technology	5	4	3	2	1

28. If you were to enroll in a UNC degree or certification program, how many courses would you plan to complete each term?

less than one 1 2 3 4 5

PLEASE INDICATE YOUR INTEREST IN THE COURSES NOTED BELOW. MARK THE COURSES IN WHICH YOU HAVE THE MOST INTEREST WITH THE #5, THE LEAST INTEREST WITH THE #1.

			MOST INTEREST				LEAST INTEREST
29.	ET 500	Systems Approach Toward Education (3)	5	4	3	2	1
30.	ET 502	Instructional Development (3)	5	4	3	2	1
31.	ET 503	Computer Applications in Education (3)	5	4	3	2	1
32.	ET 504	Instructional Materials Design (3)	5	4	3	2	1
33.	ET 530	Cataloging and Classification (3)	5	4	3	2	1
34.	ET 533	Reference and Information Management (3)	5	4	3	2	1
35.	ET 535	Media Administration (3)	5	4	3	2	1
36.	ET 536	Evaluation, Selection & Utilization of Educational Resources (3)	5	4	3	2	1
37.	EPRE 600	Introduction to Graduate Study & Research (3)	5	4	3	2	1
38.	EPRE 540	Principles of Learning (3)	5	4	3	2	1
39.	EDRD 614	Literature for Children and Adolescents (3)	5	4	3	2	1
40.	EDFE 610	Field Experience, K-6 (3)	5	4	3	2	1
	AND/OR						
41.	EDFE 610	Field Epxerience, 7-12 (3)	5	4	3	2	1

-over-

PLEASE INDICATE YOUR INSTRUCTIONAL DELIVERY PREFERENCES NOTED BELOW. MARK THE COUCE YOU MOST PREFER WITH THE #5 AND THE CHOICE YOU LEAST PREFER WITH THE #1.

		MOST PREFERRED				LEAST PREFERRED
42.	All or most hours spent in the classroom, in face-to-face interaction with an instructor and other students.	5	4	3	2	1
43.	A multimodal combination of face-to-face, instructor-led instruction, teleconferenced instruction, computer assisted instruction, videotaped instruction, and/or other media appropriate for the content of the course being offered.	5	4	3	2	1
44.	A workshop course, where students spend most of the class time in a "laboratory" performing tasks which relate to the course content.	5	4	3	2	1
45.	Directed independent study, where a student "contracts" with a specific UNC faculty member to complete requirements for the course. Instruction takes place in a conference-like, "one-to-one" situation.	5	4	3	2	1
46.	Totally packaged course, for completion at the student's own rate, independent of other students taking the same course.	5	4	3	2	1

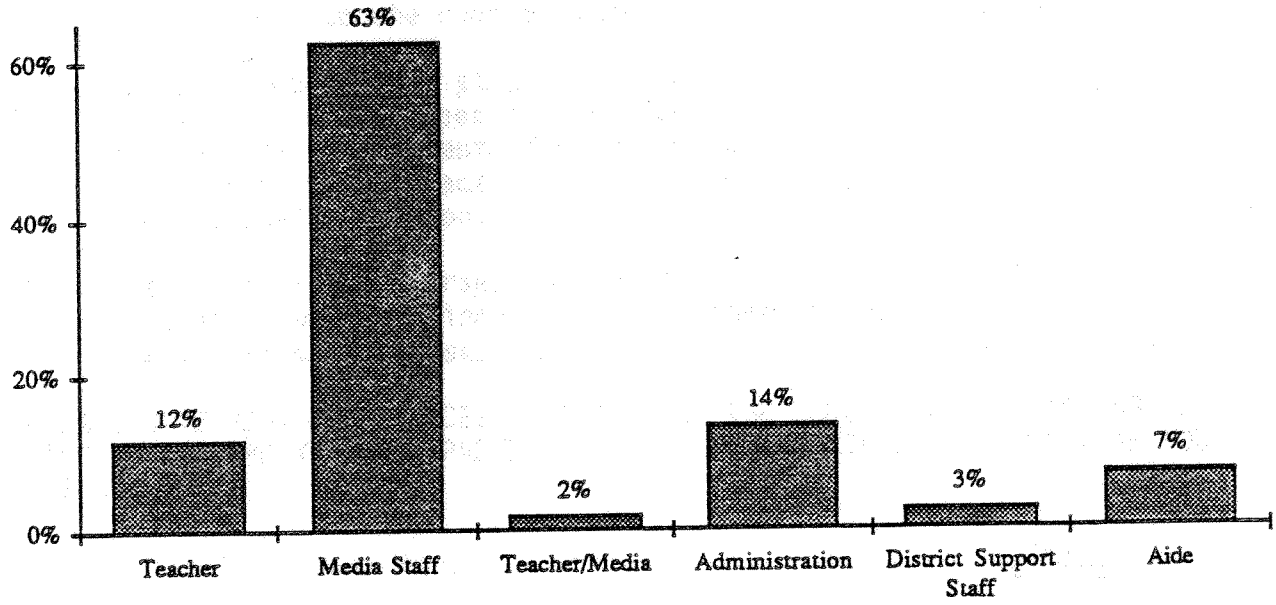
PLEASE NOTE YOUR PREFERENCES REGARDING COURSE SCHEDULING BY MARKING "5" TO DENOTE THE TIME YOU MOST PREFER, AND MARKING "1" TO DENOTE THE TIME YOU LEAST PREFER.

		MOST PREFER				LEAST PREFER
47.	Weekend class: Th/Fri 6-10, Sat 8-4 three times per semester.	5	4	3	2	1
48.	Weekend class: Fri 4-10, and Sat 8-6, three times per semester.	5	4	3	2	1
49.	Weekend class: Sat and Sun 8-4:30, three times per semester.	5	4	3	2	1
50.	One late afternoon (4-7) per week for 16 weeks.	5	4	3	2	1
51.	One evening (6-9 or 7-10) for 16 weeks	5	4	3	2	1
52.	A multimodal schedule with some group contact hours, some self-directed study and some instructor contact hours.	5	4	3	2	1

APPENDIX B

Graphic and Tabular Data Reports:
Frequency Distributions,
ANOVA Source Tables,
t - Tests

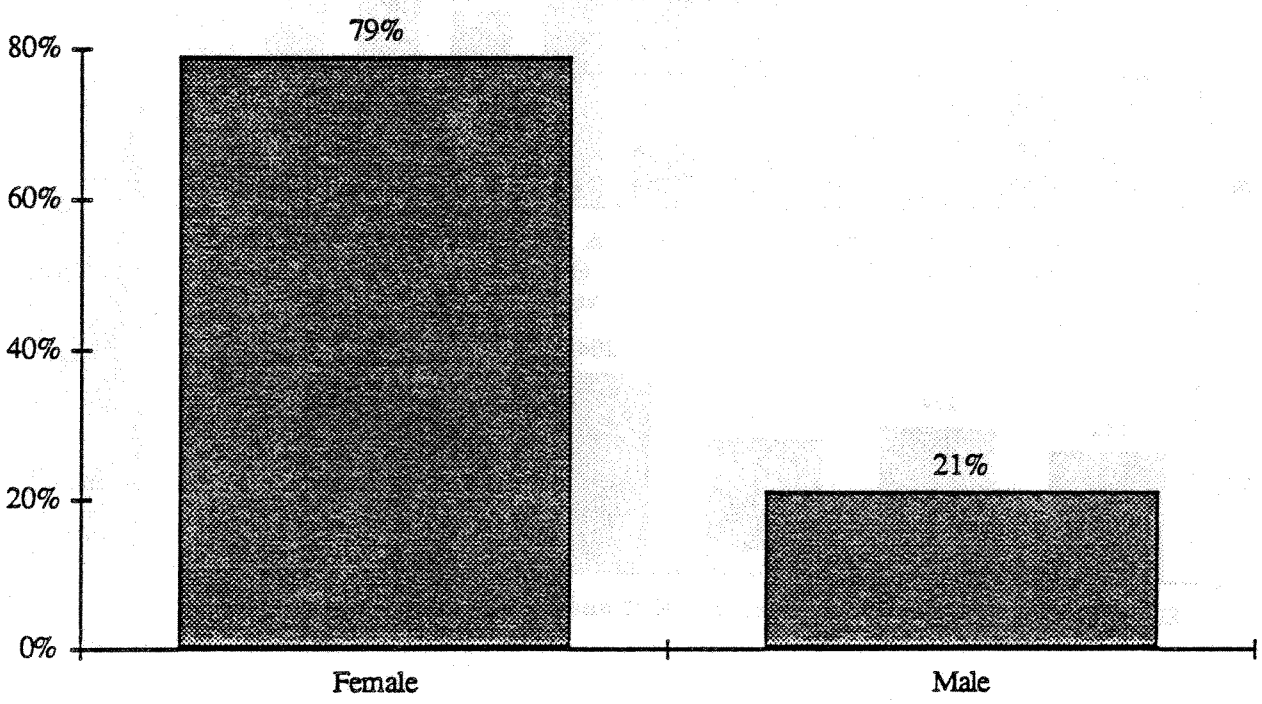
Current Position Occupied by Media Survey Respondents



Current Position

Position	%	N	
Teacher	12%	95	
Media Staff	63%	503	
Teacher/Media	2%	15	
Administration	14%	109	
District Support Staff	3%	22	
Aide	7%	59	
	100%	803	total

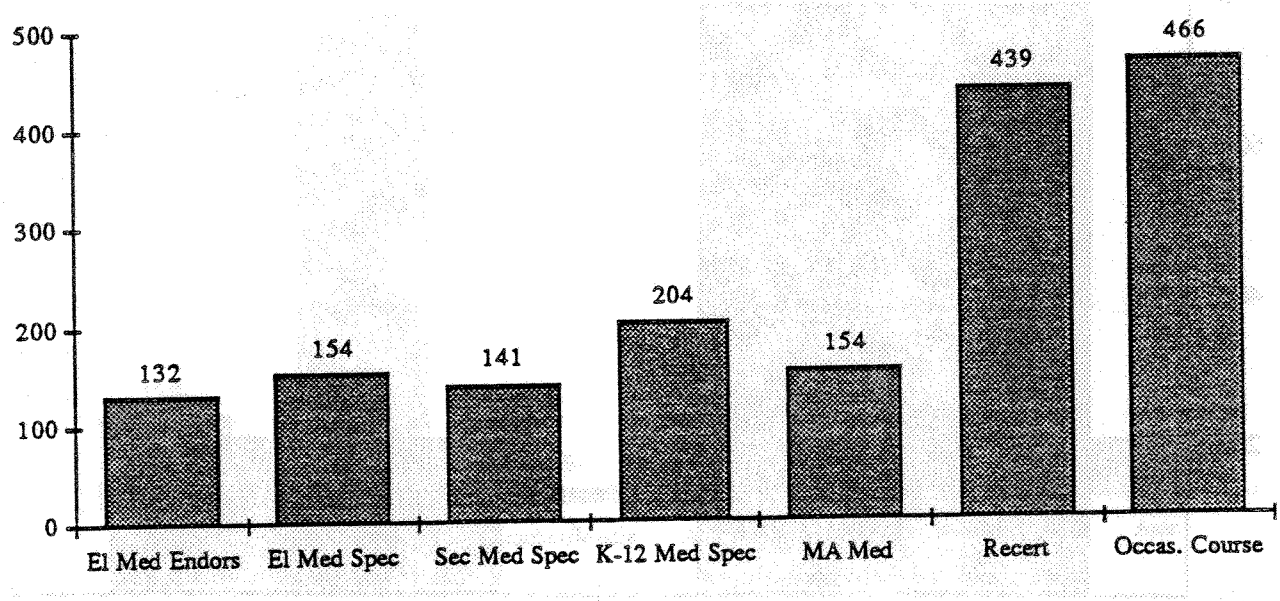
Gender
Colorado Media Survey Respondents



Gender

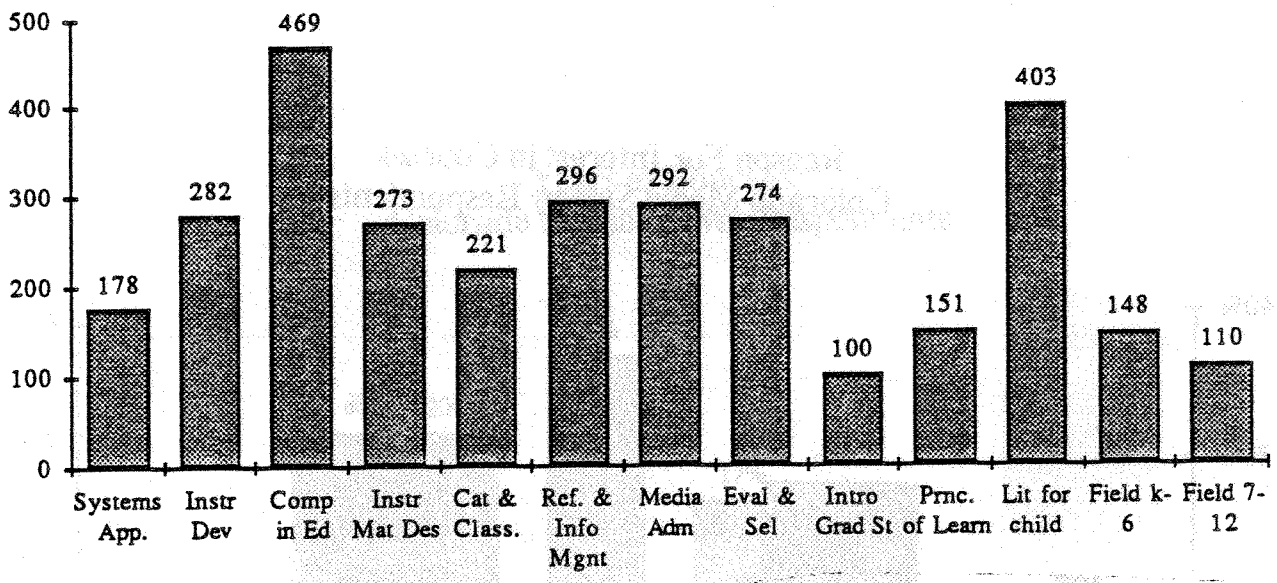
Gender	%	N	
Female	79%	649	
Male	21%	173	
	100%	822	Total

Program Interest
for Colorado Media Survey Respondents



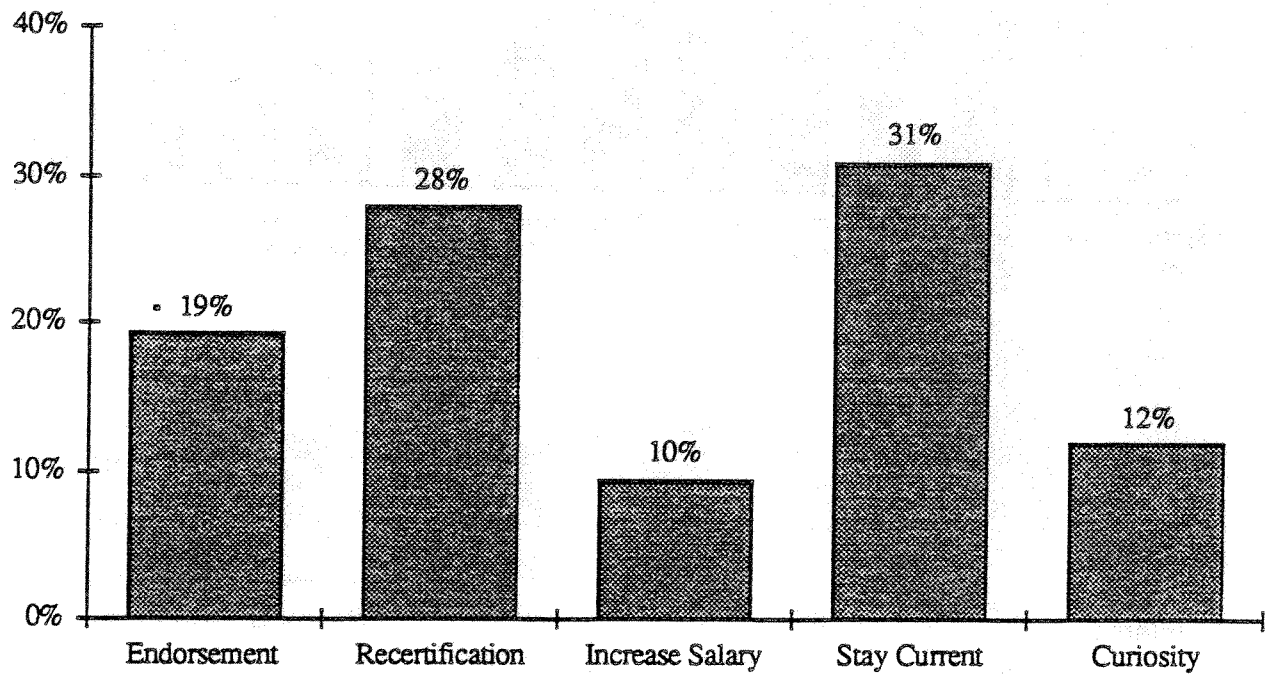
Program Interest	%	#5 N	#4 N	#4+#5 N
El Med Endors	9%	116	16	132
El Med Spec	8%	104	50	154
Sec Med Spec	7%	86	55	141
K-12 Med Spec	11%	133	71	204
MA Med	9%	106	48	154
Recert	29%	355	84	439
Occas. Course	27%	339	127	466
Total	100%	1239	451	1690

Course Interest
for Colorado Media Survey Respondents



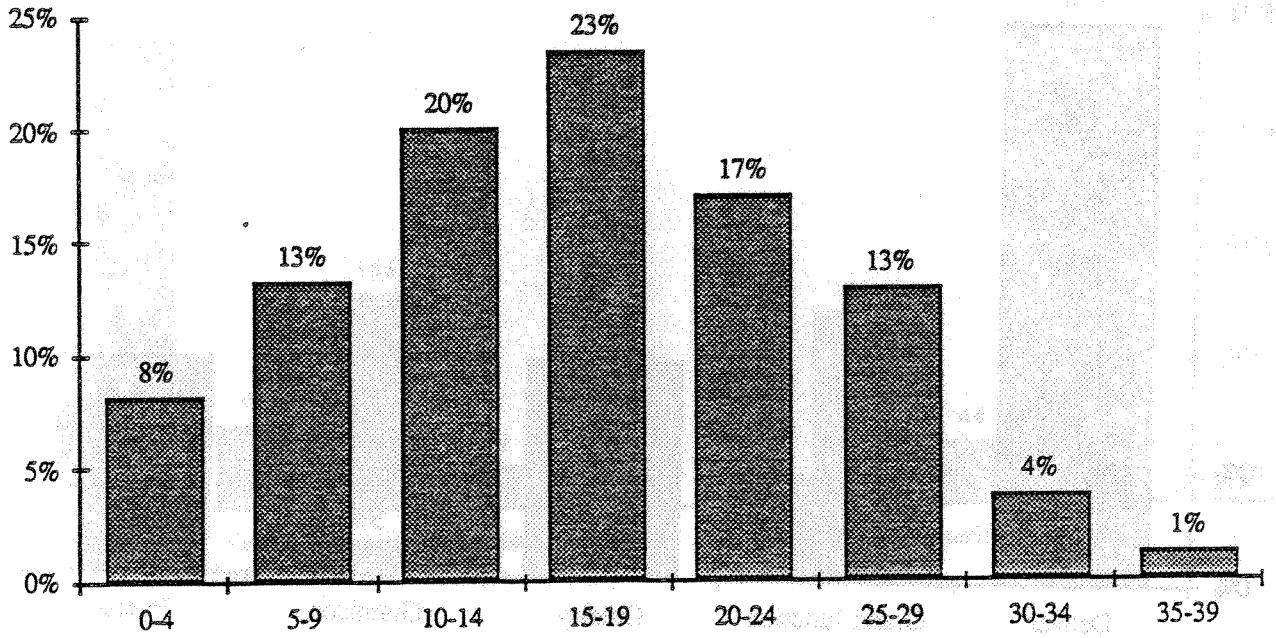
Courses Interest	%	#5 N	#4 N	#4+#5	
Systems App.	4%	81	97	178	
Instr Dev	8%	153	129	282	
Comp in Ed	15%	296	173	469	
Instr Mat Des	7%	134	139	273	
Cat & Class.	7%	137	84	221	
Ref. & Info Mg	10%	184	112	296	
Media Adm	10%	185	107	292	
Eval & Sel	8%	160	114	274	
Intro Grad St	3%	63	37	100	
Prnc. of Learn	4%	79	72	151	
Lit for child	16%	304	99	403	
Field k-6	5%	99	49	148	
Field 7-12	3%	59	51	110	
	100%	1934	1263	3197	Total

Reason For Interest in Courses
Colorado Media Survey Respondents



Reason for interest	%	N	
Endorsement	19%	164	
Recertification	28%	237	
Increase Salary	10%	81	
Stay Current	31%	263	
Curiosity	12%	102	
	100%	847	Total

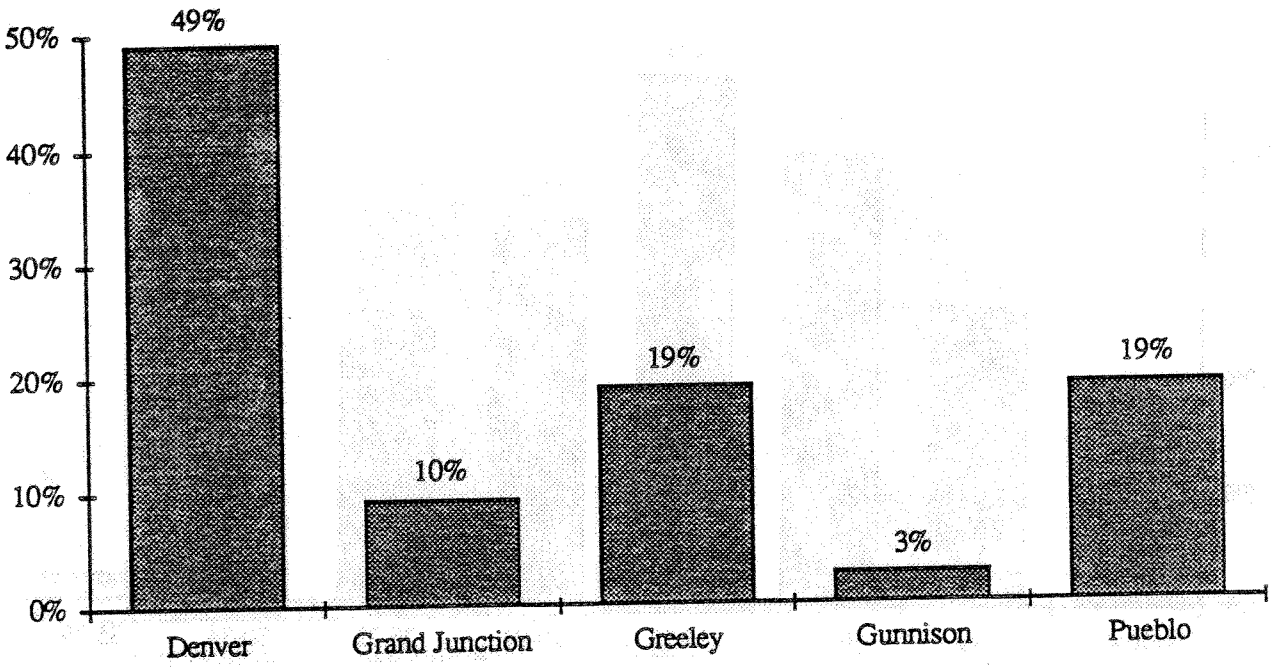
Years as Educator
Colorado Media Survey Respondents



Years as Educator

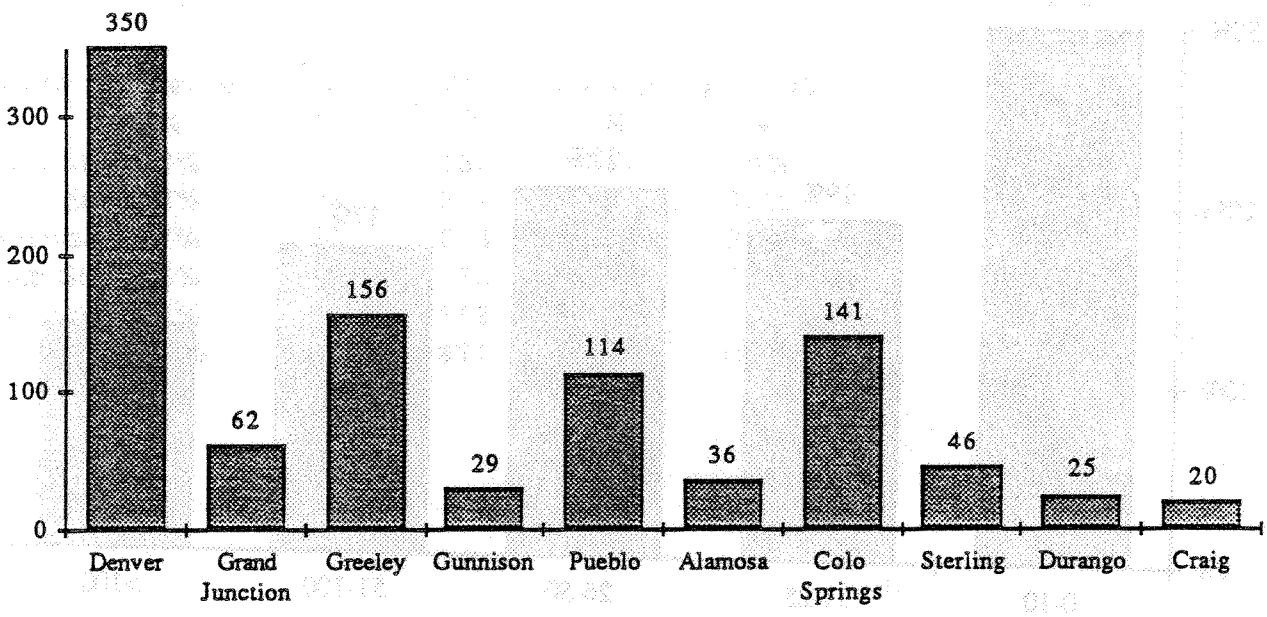
	%	N	
0-4	8%	66	
5-9	13%	107	
10-14	20%	161	
15-19	23%	188	
20-24	17%	137	
25-29	13%	104	
30-34	4%	30	
35-39	1%	10	
40-44	0%	0	
45-49	0%	1	
	100%	804	Total

Closest Site
Colorado Media Survey Respondents



Closest Site	%	N	
Denver	49%	395	
Grand Junctior	10%	77	
Greeley	19%	154	
Gunnison	3%	22	
Pueblo	19%	154	
	100%	802	Total

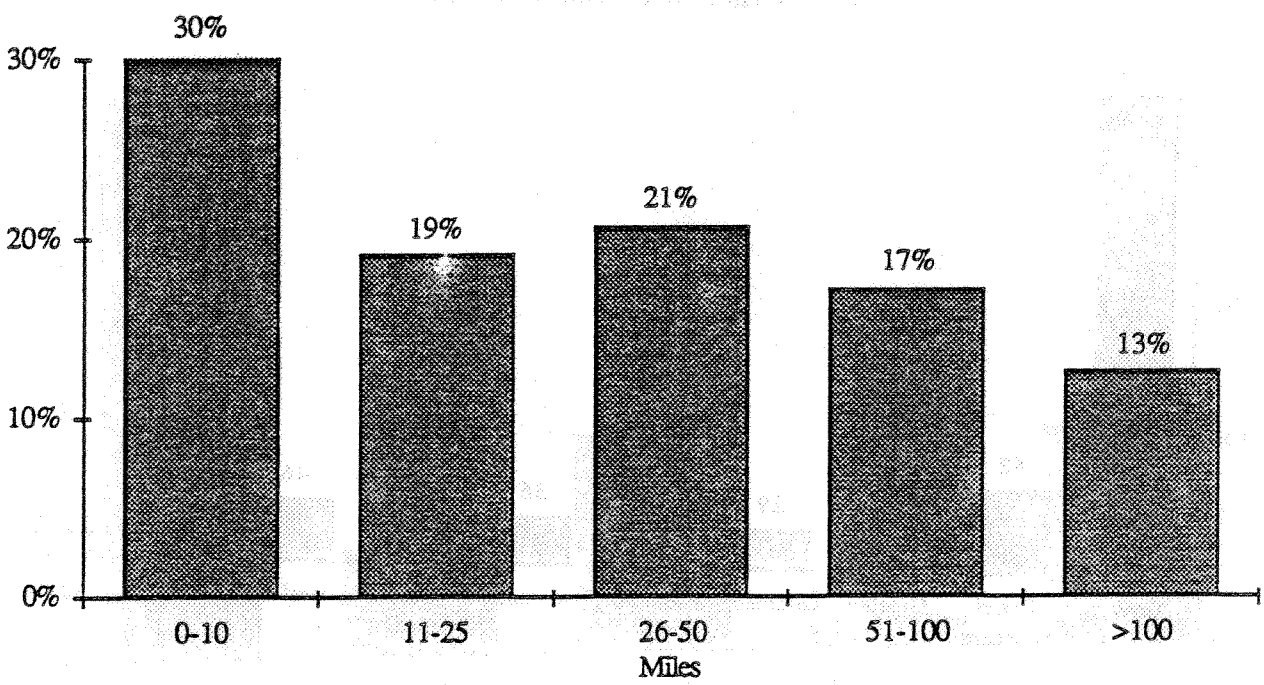
Likely Enrollment Sites for Colorado Media Survey Respondents



Likely enrollment site

	%	N	
Denver	36%	350	
Grand Junction	6%	62	
Greeley	16%	156	
Gunnison	3%	29	
Pueblo	12%	114	
Alamosa	4%	36	
Colo Springs	14%	141	
Sterling	5%	46	
Durango	3%	25	
Craig	2%	20	
	100%	979	Total

Distance From Site
Colorado Media Survey Respondents



Distance from site

	%	N	
0-10	30%	246	
11-25	19%	155	
26-50	21%	168	
51-100	17%	140	
>100	13%	102	
	100%	811	Total

Other course areas that interest respondent

	%	N	
MA G&T	12%	38	
MA Physical Ed	3%	9	
MA El Reading	12%	38	
MA ED/LD	2%	5	
MS Sec Science	2%	5	
MA El Ed Middle School	6%	18	
Type D cert.	21%	66	
Other	42%	130	
	100%	309	Total

Delivery Preference	#5	#4	#4 + #5	#4 + #5	
	%	N	N	%	
Traditiona	19%	195	162	357	19%	
Multimoda	23%	234	212	446	23%	
Lab/Wrksh	27%	270	218	488	25%	
Dir Inp Stc	16%	158	173	331	17%	
Total Pack	15%	150	149	299	16%	
	100%	1007	914	1921	100%	Total

Schedule Preference		#5
	%	N
Th-Fr-Sat	10%	108
Fri-Sat	18%	195
Sat-Sun	21%	225
4-7PM	12%	130
7-10PM	14%	153
Multimodal	24%	260
	100%	1071

One Factor ANOVA-Repeated Measures for X_1 X_5

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
trad class vs. multimode	-.304	.131 *	5.166 *	4.546
trad class vs. lab & work	-.461	.131 *	11.841 *	6.832
trad class vs. dir ind study	.172	.131 *	1.653	2.572
trad class vs. totallypac	.39	.131 *	8.502 *	5.832
multimode vs. lab & work	-.156	.131 *	1.365	2.336

* Significantat 95%

One Factor ANOVA-Repeated Measures for X_1 X_5

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:	Dunnett t:
multimode vs. dir ind study	.476	.131 *	12.685 *	7.118
multimode vs. totallypac	.695	.131 *	26.924 *	10.378
lab & work vs. dir ind s	.633	.131 *	22.344 *	9.454
lab & work vs. totallyp	.851	.131 *	40.411 *	12.714
dir ind study vs. totallyp	.218	.131 *	2.657 *	3.26

* Significantat 95%

One Factor ANOVA-Repeated Measures for X_1 X_6

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:
Friday-sat vs. Sat & Sun	.088	.152	.262
Friday-sat vs. 4-7pm	.382	.152 *	4.875 *
Friday-sat vs. 7-10 pm	.224	.152 *	1.682
Friday-sat vs. multimoda	-.448	.152 *	6.726 *
Sat & Sun vs. 4-7pm	.293	.152 *	2.877 *

* Significantat 95%

One Factor ANOVA-Repeated Measures for X_1 X_6

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:
thurs-sat vs. Friday-sat	-.526	.152 *	9.254 *
thurs-sat vs. Sat & Sun	-.438	.152 *	6.403 *
thurs-sat vs. 4-7pm	-.144	.152	.696
thurs-sat vs. 7-10 pm	-.302	.152 *	3.046 *
thurs-sat vs. multimodal	-.975	.152 *	31.76 *

* Significantat 95%

One Factor ANOVA-Repeated Measures for X_1 X_6

Comparison:	Mean Diff.:	Fisher PLSD:	Scheffe F-test:
Sat & Sun vs. 7-10 pm	.136	.152	.616
Sat & Sun vs. multimodal	-.537	.152 *	9.642 *
4-7pm vs. 7-10 pm	-.158	.152 *	.83
4-7pm vs. multimodal sc	-.83	.152 *	23.054 *
7-10 pm vs. multimodal s	-.673	.152 *	15.134 *

* Significantat 95%

Unpaired t-Test X_1

: interest ed tech Y_{13}

: Recode of med spec 7-12

DF:

1341

Unpaired t Value:

2.2

Prob. (2-tail):

.028

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Y	518	1.99	1.5	.066
A	825	1.813	1.393	.049

Unpaired t-Test X_1

: interest ed tech Y_{14}

: Recode of med spec k-12

DF:

1341

Unpaired t Value:

3.276

Prob. (2-tail):

.0011

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Y	518	2.361	1.714	.075
A	825	2.061	1.585	.055

Unpaired t-Test X_1 : interest ed tech Y_{15} : Recode of ma media

DF: 1341

Unpaired t Value: 3.247

Prob. (2-tail): .0012

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Y	518	2.095	1.628	.072
A	825	1.817	1.457	.051

Unpaired t-Test X_1 : interest ed tech Y_{16} : Recode of recert media

DF: 1341

Unpaired t Value: 3.562

Prob. (2-tail): 4.0000E-4

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Y	518	3.778	2.821	.124
A	825	3.246	2.561	.089

Unpaired t-Test X_1

: interest ed tech Y_{17}

: Recode of occ course media

DF:
1341

Unpaired t Value:
2.902

Prob. (2-tail):
.0038

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Y	518	3.573	1.657	.073
A	825	3.296	1.737	.06

Unpaired t-Test X_1

: interest ed tech Y_{21}

: Recode of et 503

DF:

1341

Unpaired t Value:

2.057

Prob. (2-tail):

.0399

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Y	518	3.566	1.563	.069
A	825	3.383	1.597	.056

Unpaired t-Test X_1

: interest ed tech Y_{29}

: Recode of edrd 614

DF:

1341

Unpaired t Value:

3.908

Prob. (2-tail):

1.0000E-4

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Y	518	3.467	1.734	.076
A	825	3.08	1.787	.062

Unpaired t-Test X_1

: interest ed tech Y_{22}

: Recode of et 504

DF:

1341

Unpaired t Value:

2.745

Prob. (2-tail):

.0061

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Y	518	2.79	1.58	.069
A	825	2.549	1.552	.054

Unpaired t-Test X_1

: interest ed tech Y_{23}

: Recode of et 530

DF:

1341

Unpaired t Value:

3.437

Prob. (2-tail):

6.0000E-4

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Y	518	2.573	1.689	.074
A	825	2.258	1.602	.056

Unpaired t-Test X_1

: interest ed tech Y_{24}

: Recode of et 533

DF:
1341

Unpaired t Value:
3.333

Prob. (2-tail):
9.0000E-4

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Y	518	2.959	2.161	.095
A	825	2.576	1.983	.069

Unpaired t-Test X_1

: interest ed tech Y_{25}

: Recode of et 535

DF:
1341

Unpaired t Value:
3.185

Prob. (2-tail):
.0015

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Y	518	2.683	1.924	.085
A	825	2.341	1.917	.067

Unpaired t-Test X_1

: interest ed tech Y_{26}

: Recode of et 536

DF:
1341

Unpaired t Value:
3.085

Prob. (2-tail):
.0021

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Y	518	2.819	1.637	.072
A	825	2.538	1.611	.056

Unpaired t-Test X_1

: interest ed tech Y_{27}

: Recode of epre 600

DF:
1341

Unpaired t Value:
2.105

Prob. (2-tail):
.0355

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Y	518	1.861	1.41	.062
A	825	1.703	1.292	.045

Unpaired t-Test X_1 : interest ed tech Y_{33} : Recode of multimodal

DF:
1341

Unpaired t Value:
2.604

Prob. (2-tail):
.0093

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Y	518	3.575	1.356	.06
A	825	3.37	1.441	.05

Unpaired t-Test X_1 : interest ed tech Y_{34} : Recode of workshop

DF:
1341

Unpaired t Value:
2.293

Prob. (2-tail):
.022

Group:	Count:	Mean:	Std. Dev.:	Std. Error:
Y	518	3.705	1.341	.059
A	825	3.526	1.418	.049