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A Determination of Attitudes Toward Instructional Media at Eastern Illinois University

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A DETERMINATION OF ATTITUDES TOWARD INSTRUCTIONAL MEDIA AT EASTERN ILLINOIS UNIVERSITY

(TITLE)

BY

WILLIS O. WALTMAN

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
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W.O.W.

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CHAPTER I

INTRODUCTION

Eastern Illinois University may be, once again, in the throes of transition. The State of Illinois Board of Higher Education[8] in its publication of "A Master Plan-Phase III," seems to be advocating some degree of "change" for Eastern. Dr. Ben Morton,[12] Executive Director of the Board of Governors, in a December report to the Board of Governors, stated that "Eastern Illinois University has traditionally had a higher cost lower division program because of a policy of virtually all small classes. This (tentative) budget means that to some extent EIU will have to modify that policy." The President, Dr. Fite, appears to anticipate some changes by his appointment of a Program Review Committee.[11] His charge to this committee was:

> To establish the purpose and objectives of the university, including directions, goals, and priorities.
>
> By measuring programs against objectives, to examine and evaluate all programs (cost-centers) of the university.
>
> To make recommendations concerning revision (addition, reduction, elimination) or no change in programs.

In the April, 1972 meeting of the Board of Governors, it was determined that EIU is not to expand any programs at the master's level, 21 programs are to stay essentially the same, and 16 are to be suspended or eliminated. At the bachelor's level, five programs are to be expanded, 32 are to stay

essentially the same, one is to be phased down, and 48 are to be eliminated or suspended. At the specialist level, the program is to stay essentially the same.

Considering the recommendations, decisions, and dictates of these boards and committees, with their emphasis being directed toward reorganization, the saving of university funds, and the evaluation of various programs, it seems only logical that a study, such as this, would be relevant in justifying any instructional media programs. Identification of the existing media program's strong and weak areas was accomplished through the use of a dependable testing instrument. It is assumed that the data gathered may be useful to the new Director of the Audio-Visual Center and Head of the Department of Instructional Media who is to be named prior to the start of the 1972 fall quarter. Evaluation of the collected data may affect decisions for reorganization and reassignment of the priorities and/or personnel. There is no record of a study of this type having been attempted on this campus and such a study could be used as a basis for any further studies concerning the media program.

This study will establish the data necessary to initiate action toward meeting the needs and goals as identified above. The study focused on the attitudes of the faculty and administration toward media utilization. The technique em-

ployed in evaluating the individual attitudes included administering the Ramsey New Media Attitude Scale, making analyses of the data, summarizing the data, and reporting the results.

Purpose of the Study

The purpose of this study was to determine the attitudes toward media, as expressed on the Ramsey New Media Attitude Scale, by members of the instructional faculty and administration of Eastern Illinois University and to compare the attitudes of members of selected sub-groups.

The Questions Posed

1. What are the attitudes toward media as expressed by the various members of the faculty and administration?

2. What is the collective attitude toward media as expressed by each of the selected sub-groups?

3. What are the strong and weak areas as identified by each of the selected sub-groups?

4. What are the similarities in attitudes among the selected sub-groups?

5. Are there any identifiable similarities found between those sub-groups with Instructional Materials Centers and those without?

The Data Gathering Instrument

The New Media Attitude Scale (NMAS) was developed and tested by Ramsey[9] in 1961. The instrument is a questionnaire

using the Likert-type arrangement which allowed for response to items indicating either hostility toward or sympathy with educational media. A test group of 1100 members of the Department of Audiovisual Instruction (now known as the Association for Educational Communications and Technology) and the Association for Supervision and Curriculum Development was used in the study. Item analysis and analysis of variance procedures allowed Ramsey to identify 39 items at the .01 level of confidence which discriminated between hostility toward or sympathy with new educational media and a five-point rating scale that signified varying degrees of favorableness or unfavorableness for each factor. The relevant factors were: 1) availability of audiovisual equipment; 2) availability of audiovisual materials; 3) accessibility of audiovisual equipment; and 4) accessibility of audiovisual materials. A combined factor rating scale and the NMAS data allowed for the development of a series of two-by-two matrices for determining factor-attitude relationships. Matricies were organized on the basis of positive-negative attitude change as compared with the favorable-unfavorable ratings for the four factors tested. A phi coefficient statistic was used to learn the extent of relationships, and chi square derived from phi indicated the significance of those relationships.

Methodology

1. Copies of the questionnaire were prepared and color-coding utilized to differentiate between instructional faculty and administration. Each questionnaire was numbered, by code, to identify each participant.

2. Determination of the various sub-groups was made and catagorized as: 1) administration; 2) faculty of education other than laboratory school personnel; 3) laboratory school faculty; and 4) all other teaching faculty.

3. Address labels for envelopes were prepared by the computer center as well as a master print-out of all the instructional staff and administration.

4. Returned questionnaires were checked for their assigned coded number and an indication that they had been returned made on the printout. A cover letter had been attached to the questionnaire asking for promptness in the completion and return of the instrument.

5. Raw data from the instrument was recorded on computer punch cards and a factor analysis made to determine the attitudes of individuals and the various sub-groups of the total test population.

6. The data was analyzed to determine the strong and weak areas for each sub-group.

7. The similarities in attitudes were identified among

the various sub-groups.

8. Similarities found between sub-groups with the established Instructional Materials Centers and those without were identified.

9. After the data had been analyzed and compiled it was reported in both tabular and narrative form.

10. Conclusions were drawn and recommendations were made.

CHAPTER II

REVIEW OF RELATED LITERATURE

The term "new media" was in vogue in the 1950's due to the development of the teaching machines, programmed instruction, and educational television. However, various forms of methods, materials, and equipment for audio-visual use have been present, especially in the early beginnings, in the larger metropolitan school districts. There really was no pronounced growth of media till the onset of World War II when new methods were necessary to train vast numbers of men in short periods of time. Due to the importance that the Armed Forces attached to teaching with media and the eventual pouring in of vast sums of monies by various governmental and private organizations, public education was somewhat forced into a new and different role. This role of utilizing media was not the panacea that many administrators and teachers anticipated simply because much of the original thinking about media pivoted around the "hardware" aspect. Soon, it was very apparent that the "hardware" did nothing but occupy space unless "software" could be provided either from some of the more enterprising book companies or through the inventive efforts of a few dedicated and innovative teachers within the school. It was with the "in house" preparation of certain media that initiated the eventual designation of the "A-V Aids Man" and

his assuming a necessary position in the school. From this humble beginning of ordering films, the ordering and repair of equipment, and preparing some materials, the media specialist has gained more and more stature till he is now, in the more progressive school systems, an active participant in overall curriculum design.

The foregoing background is given to show the relative newness of media utilization in the classroom and the unwillingness to change which appears to be inherent to education. Brown and Thornton[5] presented some very succinct questions concerning this subject when they wrote:

> The communicative process known as higher education has had a long history of gradual and placid evolution, but it is faced with a series of challenges that appear to call for swift and energetic adaptation. Important questions--questions which undeniably involve the new media--are continuously being raised. Can the valid, traditional purposes of higher education, as well as its new and emerging purposes, continue to be attained economically and effectively by its traditional media of communication? Considering the increasing complexity of interrelationships and abstractions of conceptualization in the several disciplines, will certain forms of nonverbal presentation prove more effective than oral or printed words in transmitting some kinds of ideas? What functional contributions to the learning of certain skills (including the verbal skills of language) can be expected to be derived from use of automated or technological instruction devices and techniques? What changing conditions emphasize the need to speed the process of evolution in higher education, and how do these changes relate to uses of new media? (pp. 1-2)

There are, no doubt, countless reasons, excuses, or rationalizations why a teacher does not use media in the class-

room. A few typical examples of the above should point out the complexity of the problems confronting the media specialist. The greatest faults of most college teachers are, according to most college students, the placing of too much emphasis on the lecture method and the failure to use either adequate or varied communication techniques as cited by Brown and Norberg.[4] In partial defense of these instructors, it must be pointed out that many have indicated, in past studies, that they did not receive adequate training in the use of audio-visual equipment or materials while obtaining their professional training. Aquino[1] found that the amount of equipment owned was not as important as its accessibility (attainable during times of need). Great emphasis was placed, by the participants in his study, on the amount of materials owned and its accessibility. The major outcomes of his study indicated that equipment was important only to the extent that it fit the participant's needs. Furthermore, the most important items noted were having sufficient quantities of materials available both for preview and planning. Hubbard[7] found that a fear of mechanization and the reduction of self-importance were two major reasons given for the lack of utilizing instructional television. Battram[3] found that teachers tended to learn more about the effective use of audio-visual materials if these tools were readily available.

It would appear then that accessibility, availability, and some good in-service training should help dispel some of the more obvious obstacles to utilization.

To point up the fact that a media specialist is an integral part of any curricular undertaking, Reisberg and Bynum[10] set forth some interesting, but hopefully obvious, points that should be known to the media specialist.

> In our view, media should be incorporated into the style of the professor--not replace him. However, it is unrealistic to expect the teacher to develop and integrate media materials on his own. In most cases he has no training in media at all, and the whole business is quite foreign to him. Thus, it is necessary to provide some bridge to effective use of media, other than the usual technicians who are knowledgeable about the care and use of hardware. The necessary link consists of first-rate communicators who are at home in academic subject matter and able to help convert media technology into instructional art forms. To locate and attract such talents is not easy, but we found it very important to the success of the program. (p.203)

Further evidence of the importance of the role of the media specialist can be found in the "Standards for School Media Programs"[2] when they emphasize the point that the media specialist must remain in close contact with the teachers so that a working team of student, teacher, and media specialist guides the student's activities. The media center and its trained personnel should support, complement, and expand the work of the classroom. The media center should offer the student an opportunity to create materials which, at least in some instances, could very possibly give the student his first feelings of ac-

complishment. Brown and Norberg[4] amplify the role of the media person by specifying the training that is necessary for the "media generalist."

> The educational media field needs to emphasize the competence of the rigorous generalist who is capable of grasping the meaning of communication planning and strategy. Media training must emphasize theory and research of the communication process. A competent professional in educational media must be a competent student of human behavior, and must be able, as a minimum, to interpret social theory and research as it applies to instructional communication. And he must be competent to conduct such research and motivated to discover knowledge as well as to apply it. (p. 32)

The authors further state criteria for the media generalist as:

> It is obvious that the educational media generalist must be qualified by education, experience, interests, and personality characteristics. A requirement is that he be generally and broadly familiar through education and experience with the innumerable complexities of the agency in which he works, no matter what his eventual assignment will be. If he is to carry out his responsibilities in a single school, a school system, a college or university, or a county or state department of education, prior certification as a teacher and at least a few years of experience in classroom teaching will be helpful. (p. 18)
>
> . . . . . .
>
> But perhaps above all else the educational media generalist should be a person whose makeup permits him to work easily with and through others to reach the legitimate goals of his office. (p. 19)

How is the media specialist, or generalist, viewed by those with whom he works? Dawson[6] found some interesting data concerning this question when he conducted a study of teacher militancy and how instructional media was now being brought into negotiations with school boards. Dawson's test group

consisted of 190 NEA and AFT officials in 47 states, 105 randomly chosen school principals in Oregon, 135 prospective teachers enrolled in a teacher education program at Oregon College of Education, and 58 participants in a media training program at State College, Buffalo, New York. Some of the findings and conclusions drawn from the data are as follows.

There seems to be an indication that AFT leaders are much less favorable in their overall attitudes toward instructional media than are those leaders in the NEA. AFT leaders are found to be most similar to the prospective teachers, the NEA leaders most like the media program trainees. The Oregon principals are generally less favorable in attitudes toward media than NEA representatives but more favorable than the AFT members. The AFT leaders seems to be less favorable than other groups in attitudes toward media personnel. Findings seems to imply that media specialists should concern themselves with creating a more positive professional image. AFT leaders and the prospective teacher group seem to hold with the idea that media is potentially more threatening than any other group. Most leaders believe that teachers are relatively uninformed in the area of instructional media. The greatest need seen is for information on most recent forms of media in education. Newer forms are less familiar to the teacher. Instructional media is not regarded by the majority of AFT

and NEA leaders as being threatening to teachers. Of much more concern was the possible loss of classroom autonomy if media were to be used extensively in the schools.

There seems little room for doubt, in the light of the foregoing studies, that the media specialist, media generalist, or what other title you give him, is of importance. The properly trained individual is essential in a totally functional educational system. This system should include the elements of availability and accessibility of media, materials, and properly functioning equipment being at the appointed place at the appointed time. Hopefully, if the media person has fulfilled his obligations, the teachers will utilize his tools, materials, and skills in a functionally designed and constructed environment, in a technological sense, and have no obstacles to the modern techniques of instruction.

CHAPTER III

RESULTS AND FINDINGS

The identification of personnel and their respective departments was made possible through the auspices of the Office of the Vice-President for Development and Staffing. This office furnished a complete set of gummed labels for the envelopes and a master computer print-out of names by utilizing their set of punch cards and having Computer Services do the work. Determination of administrative status was on the basis of who received administrative contracts, all other personnel were classified as instructional faculty. The designation of four sub-groups was made for comparative purposes. These groups were: Administration (Group I); Members of the Faculty of Education less those assigned to the Laboratory School (Group II); Members of the Laboratory School faculty (Group III); and All Other Instructional Faculty assigned to other departments (Group IV).

Preparation and Coding

Typing, collating of the instrument, stapling, and placing into envelopes was accomplished with help from Audio-Visual personnel. Yellow paper was used to designate those in administration and white paper used to identify those in the instructional faculty. Numbers were assigned to each person on the computer print-out and this number coded to the back of the questionnaire by using a dot system. Every effort was made

to purge the master list of all duplications due to joint appointments and those not on campus due to sick leaves, leaves of absence, sabbatical leaves, etc.

It was pointed out, in the cover letter, that we solicited the voluntary participation of the entire staff and would appreciate it if all questionnaires would be returned by April 17. The questionnaires and cover letters were sent, by campus mail, to the entire test population on April 11. Although there was a specified due date of April 17, it was agreed to have a final cut-off date of April 28. Due to a few individuals objecting to the coding of the questionnaire it was decided to not attempt a second or third mailing of reminders. An attempt was made to increase the return by placing an item in the April 19 "Laboratory School Daily Bulletin" and in the April 24 "Faculty of Education News." Furthermore, a reply to an inquiry from the Faculty Senate resulted in our letter being printed in the April 24 "Minutes of the Faculty Senate." The letter concluded with a request for people to return their questionnaires by April 28.

Disposition of the Returned Questionnaires

Returned questionnaires were decoded, their numbers and the sub-groups to which they had been assigned placed on the front page of the questionnaire and their names checked off the master print-out sheet.

As a result of the foregoing strategy, there was a total return of 353 questionnaires which represented a 53.03% return of the 666 in the test population. Table 1 shows the totals and percentages for each sub-group.

TABLE 1

DISTRIBUTION OF QUESTIONNAIRES SENT AND RETURNED

	Number of Quest. Sent	Number of Quest. Returned	Percent of Quest. Returned
Administrators (Group I)	79	40	50.63%
Faculty of Education less Lab School (Group II)	40	31	77.50
Laboratory School (Group III)	36	36	100.00
All Other Faculty (Group IV)	511	247	48.34
Totals	666	353	53.03% (average)

Arrangements were made with Computer Services to record the questionnaire responses on punch cards, to identify the individual by his assigned number and sub-group, and to make a factor analysis to determine the attitudes toward media.

Interpretation of the Data

The data gathering instrument, as developed and tested

by Ramsey in 1961, is a questionnaire which allows the respondents to indicate either sympathy with or hostility toward educational media. The original test population, 1100 members of the Department of Audiovisual Instruction, provided Ramsey with sufficient data for him to develop the instrument at the .01 level of confidence through the use of item analysis and analysis or variance procedures.

A key factor analysis was effected with each of the four sub-groups making up the test population at Eastern Illinois University. Items which correlated at the level of .50 or higher were grouped together and analyzed in terms of the positiveness of the statements as factored.

Each item in the scale was evaluated in terms of its reflecting a positive or negative attitude toward educational media as evidenced by the respondent expressing very strong agreement, moderate agreement, very strong disagreement, moderate disagreement, or neutral feelings toward the statement.

Each item of the test instrument was evaluated in terms of being a positive response, recorded with a plus (+), a minus (-), indicating a negative response, or a slash (/), to indicate a response that could be interpreted as being either positive or negative, depending upon the cluster to which it had been factored. (see Appendix A)

Group I, the personnel receiving administrative con-

tracts, made up a test group of 40 respondents. A review of the computer print-out indicates a total of 27 clusters or groups of items which correlated at the .50 level or higher. Of these 27 clusters of items, 25 (92.6%) factored positively, one (3.7%) factored negatively, and one (3.7%) factored as neither positive or negative. (Table 2) An example of the latter might be the two items which factored into a cluster, one of which included item 17, "The creative student is apt to be stifled by the extensive use of A-V instructional media," and item 11, "Public relations are a primary responsibility of A-V people." A typically negatively factored cluster might be exemplified by items 33, 27, and 30: "The personal relationship between teacher and student is essential in most

TABLE 2

NEW MEDIA ATTITUDE SCALE, KEY FACTOR ANALYSIS CLUSTER DISTRIBUTION BY GROUP

Group	Clusters Factored	Positive Clusters	Negative Clusters	Neither Positive or Negative
I	27	92.6%	3.7%	3.7%
II	27	96.3	0.00	3.7
III	11	81.8	9.1	9.1
IV	10	100.0	0.00	0.00

learning situations; The expense of most A-V media is out of all proportion to their educational value; Most A-V persons do not use the mass communications media enough in developing a favorable public attitude toward A-V."

Group II, the instructional staff of the Faculty of Education less those personnel assigned to the Laboratory School, had a total of 31 respondents and an indication of 27 clusters of items that correlated at the .50 level or higher. Of these, 26 clusters (96.3%) were factored positively, no clusters (00.00%) factored negatively, and one (3.7%) factored as being neither positive or negative. The latter case is exemplified by items 31 and 30: "The percentage of teachers using newer educational media has increased greatly in recent years; Most A-V persons do not use the mass communications media enough in developing a favorable public attitude toward A-V."

Group III, those personnel assigned to the Laboratory School, were represented in the study by a total of 36 respondents. Of these, 9 clusters (81.8%) were factored positively, one cluster (9.1%) factored negatively, and one cluster (9.1%) clustered neither positively or negatively. An example of the latter is found in items 13 and 36: "Recent technological trends in education demand a changing teacher role; A-V materials are so specific as to have little

adaptability to different teaching requirements or situations." The example of a negatively factored cluster is found in items 28 and 12: "New teachers would be more inclined to use A-V aids if there were wider usage of these aids in teacher-training programs; The development of new A-V aids is a waste of time and resources."

Group IV, those instructional faculty in all other departments, was composed of 247 respondents, had a total of 10 clusters of items. All clusters (100.00%) were positively factored.

Analysis of the four-group composite print-out indicated there was a total of eight clusters. All eight clusters (100.00%) were positively factored. These positively factored clusters were identified as:

Items 8 and 6

"Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children."
"Wider acceptance of currently known A-V aids is needed."

Items 13 and 8

"Recent technological trends in education demand a changing teacher role."
"Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children."

Items 20, 8, 13, and 10

"One of the most satisfactory ways to provide adequate educational opportunities for the increasing mass of students

is through wider usage of A-V aids."

"Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children."

"Recent technological trends in education demand a changing teacher role."

"There are no educational frontiers in newer educational media--just new gadgets."

Items 21, 6, 8, and 20

"Provision for the purchase of A-V equipment should be included in every school's instructional budget."

"Wider acceptance of currently known A-V aids is needed."

"Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children."

"One of the most satisfactory ways to provide adequate educational opportunities for the increasing mass of students is through wider usage of A-V aids."

Items 23, 6, 8, 20, and 21

"The development of A-V centers in every school unit should be encouraged and facilitated."

"Wider acceptance of currently known A-V aids is needed."

"Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children."

"One of the most satisfactory ways to provide adequate educational opportunities for the increasing mass of students is through wider usage of A-V aids."

"Provision for the purchase of A-V equipment should be included in every school's instructional budget.

Items 28, 3, 6, 8, 19, 21, and 23

"New teachers would be more inclined to use A-V aids if there were wider usage of these aids in teacher-training programs."

"All teachers in training should take a course in the use of A-V aids."

"Wider acceptance of currently known A-V aids is needed."

"Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

"A basic problem of A-V education is to change the atti-

tude of many teachers who look upon A-V aids simply as frills tacked on to their regular teaching."

"Provision for the purchase of A-V equipment should be included in every school's instructional budget."

"The development of A-V centers in every school unit should be encouraged and facilitated."

Items 32, 3, 6, 8, 13, 20, 21, 23, and 28

"Wider usage of currently accepted A-V aids is needed."

"All teachers in training should take a course in the use of A-V aids."

"Wider acceptance of currently known A-V aids is needed."

"Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children."

"Recent technological trends in education demand a changing teacher role."

"One of the most satisfactory ways to provide adequate educational opportunities for the increasing mass of students is through wider usage of A-V aids."

"Provision for the purchase of A-V equipment should be included in every school's instructional budget."

"The development of A-V centers in every school unit should be encouraged and facilitated."

"New teachers would be more inclined to use A-V aids if there were wider usage of these aids in teacher-training programs."

Items 38, 17, and 37

"The passivity characteristic of learning by A-V aids is not conducive to the most effective learning."

"The creative student is apt to be stifled by the extensive use of A-V instructional media."

"These newer educational media tend to subordinate the teacher's relationship with students."

CHAPTER IV

SUMMARY, CONCLUSIONS, RECOMMENDATIONS

Summary

Prior to the issuance of the questionnaires this writer expected there should be some definite differences in the expressed attitudes toward media among the four sub-groups. It appeared only logical that those personnel who had easy access to an instructional materials center and its availability of equipment, materials, and services, would respond most positively on the attitude scale. Conversely, it was assumed that those personnel, namely the administrators, would show the least positive attitude due to an assumed lack of direct experiences with media. The data collected and analyzed seemed to indicate that only portions of the assumptions were correct.

Originally, it was anticipated that the groups would be aligned as: first, Laboratory School staff; second, Faculty of Education staff; third, All Other Departmental Teaching staff; and fourth, the Administrators. Ranking, on the basis of the total number of clusters factored, indicated: first and second, a tie with the Administrators and the Faculty of Education; third, Laboratory School staff; fourth, All Other Departmental Teaching staff. Rank order, on the basis of the positively factored clusters, shows a considerable shifting: first, All Other Departmental Teaching staff; second, Faculty

of Education less those assigned to Laboratory School; third, the Administrative group; fourth, Laboratory School staff.

Of the two groups that had instructional materials centers in their buildings, only the Faculty of Education group responded in an anticipated manner with 96.3% of the factored clusters expressing positive attitudes and 3.7% expressing neither positive or negative attitudes toward media. The Laboratory School faculty, who was anticipated to show the most positive responses of all sub-groups, showed the lowest percentage of positively factored clusters with an 81.8% response, a 9.1% negatively oriented clustering, and a 9.1% response showing neither positive or negative attitudes toward media.

The responses indicated by the Administrative group was most unexpected with 92.6% of all clusters being positively factored, 3.7% of the clusters factoring negatively, and 3.7% of all clusters showing neutral indications toward media. It would appear that this group is much more knowledgeable about media, media needs, and has had an apparently good working relationship with those in the media field.

The last group, those instructional faculty in All Other Departments, indicated a 100.0% positively oriented response toward media. Although they had fewer clusters factored, they had more positive clusters than the Laboratory

School faculty. Again, it would appear that many of these respondents had experienced some good relations with those in the instructional media field. One must be cognizant of the fact that this excellent response was indicated by a 48.34% total return of the 511 questionnaires mailed. There is the possibility that a greater response may have changed the overall attitude of this group due to its size and diversity.

It was interesting to note the agreement by the various sub-groups as indicated by the number of times an item, not clusters of items, were repeatedly used to express their attitudes toward media. Representative of this agreement may be found in the following statements.

1. There is a need for wider acceptance of currently known A-V aids.

2. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of students.

3. All teachers should take a course in the use of A-V materials and equipment.

4. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

5. Recent technological trends in education demand a changing teacher role.

6. A basic problem of A-V education is to change the attitude of many teachers who look upon A-V aids as frills tacked on to their regular teaching.

7. One of the most satisfactory ways to provide adequate educational opportunities for the increasing mass of students is through wider usage of A-V aids.

8. New teachers would be more inclined to use A-V aids if there were wider usage of these aids in teacher-training programs.

9. Provision for the purchase of A-V equipment should be included in every school's instructional budget.

10. The development of A-V centers in every school unit should be encouraged and facilitated.

11. Most professional educators have viewed newer educational media in the specific context of machines and operations rather than in the more general point of view of a medium for communication.

12. All teachers should have a central training A-V room where the equipment is permanently installed and available for use there.

13. The widespread use of teaching machines will revolutionize the process of instruction as we know it now.

14. More colleges should adopt the plan of giving 10% of the instructional budget to A-V.

15. The development of new A-V aids is not a waste of time and resources.

16. Exerting influence for administrative decisions favorable to A-V should be a key activity of A-V personnel.

17. Most A-V persons do not use the mass communications media enough in developing a favorable public attitude toward A-V.

18. The teaching of foreign languages in the elementary school lends itself particularly well to the use of A-V aids.

19. The creative student is not apt to be stifled by the extensive use of media.

20. Most innovations in newer educational media have been well validated in research studies to substantiate their activity.

21. Disagreement that there are no educational frontiers but just new gadgets.

Conclusions

Group I, the Administrators, were positive in their attitude toward media as evidenced by the number of positively factored clusters of statements. This group, however, was represented by only 40 respondents (50.63%) out of a total of 79 possible respondents. As was the case with the Group IV personnel, it is quite possible that a greater return may have altered the overall attitude toward media.

Group II, the instructional staff of the Faculty of Education, were also very positive in their attitudes toward media. It would appear that this group of instructors generally are in favor of media utilization and are receptive to the media program as it now is in effect on this campus. Since this group represents a high percentage of the teacher-training personnel it is only logical to assume that they offer few objections to media. In fact, with their positive views, it would appear that they could be most instrumental in improving instruction for prospective teachers.

Group III, the instructional staff of the Laboratory School, did not react to the attitudinal scale in as positive a fashion as had been anticipated. For some unexplained reason they indicated a negative response to the statement: "New teachers would be more inclined to use A-V aids if there were wider usage of these aids in teacher-training programs."

This positive statement was clustered with the negatively oriented statement: "The development of new A-V aids is a waste of time and resources." Utilization of media in the classroom has always been an important portion of the training given to freshman and junior block participants as well as with student teachers. Reasons that could possibly be given for this lack of positiveness toward media, in this specific instance, might include: 1) this entire year has been devoted to changing the mission of the Laboratory School from being traditionally oriented to the open classroom concept, with all its ramifications; and 2) the Higher Board of Education has made it quite clear that it does not see a felt need for any laboratory schools and as a result the Laboratory School faculty have had many feelings of insecurity. It has been noticeable that there has not been the utilization of materials or equipment, especially for the first portion of the school year, as had previously been the case.

Group IV, the instructional faculty of All Other Departments, reacted much more favorably to the attitudinal scale than was anticipated. Undoubtedly, there has been a rapport established, at least in some departments, by the various media personnel. Whatever services have been given, these media personnel have left enough of a mark to show that even without having a building instructional materials center,

they are still favorably impressed with media. Again, remember that this group only had a 48.34% return of the scale. It is quite possible that, had the remainder responded, there could have been a lowering of the percentage of favorableness in attitudes toward media.

The overall attitude toward media, as evidenced by the composite print-out, seems to indicate that the general feeling towards media, on this campus, is positive.

Recommendations

The media profession needs to make more of an effort to sell itself. One major shortcoming that was pointed out in this study was the need for wider acceptance of media. Many of our colleagues still view us as being overly concerned with the "hardware" associated with our field as evidenced by their agreement with item nine on the scale. We should make every effort to change our image by operating at a higher professional level and working more closely with curricular problems. If emphasis were placed upon working, in depth, with a few instructors each term, there could possibly be a noticeable change in their thinking. Media should be removed from the supposed frill catagory and placed at a level where the message is communicated more efficiently and with better long-term learning being the ultimate goal.

Our colleagues are in agreement with the fact that all prospective teachers should take a media course where they can learn the proper utilization of media to meet the individual needs of children. It would seem then that our two introductory A-V courses should be made available more times during the year, and especially during the day, to allow the undergraduate students the opportunity to learn the skills they need to compete in today's technological society.

Greater effort should be made to exert considerably

more influence on the administration for increased budgets for equipment, materials, and qualified staff.

Since there is an increasing emphasis for Eastern to modify its mission from being a predominantly teacher-training institution, and with the increasing pressure to have a higher ratio of students to staff, it would seem logical that our media staff can assist in making the required changes. Such areas as developing instruction for large group presentations and upgrading existing courses to meet the impending conversion to the semester system could be typical examples. Through improved public relations and working more i ntently with fewer staff each term, it is possible for the media program to become more viable. There is no reason why classes cannot be converted from the traditionally lecture-oriented method to a more meaningful method utilizing the proper communication device at the proper time.

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APPENDIX A

NEW MEDIA ATTITUDE SCALE

NEW MEDIA ATTITUDE SCALE

The following statements represent varying points of view about which there is some controversy in American education today. Please assume no pose, but respond rapidly according to the degree of agreement with the statements listed below. This is an attitudinal study so there are no right or wrong answers. Please mark your answers in the blank space on the answer sheet according to the code indicated below.

VSD: Very Strong Disagreement
MD: Moderate Disagreement
N: Neutral - neither agree nor disagree
MA: Moderate Agreement
VSA: Very Strong Agreement

		VSD	MD	N	MA	VSA
1. +	The widespread use of teaching machines will revolutionize the process of instruction as we know it now.....	○	○	○	○	○
2. +	All teachers should have a central training A-V room where the equipment is permanently installed and available for use there.....	○	○	○	○	○
3. +	All teachers in training should take a course in the use of A-V aids.....	○	○	○	○	○
4. -	Learning through A-V educational media is a passive experience.....	○	○	○	○	○
5. +	The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.....	○	○	○	○	○
6. +	Wider acceptance of currently known A-V aids is needed.....	○	○	○	○	○
7. /	Programs for teaching machines should be developed by A-V specialists.....	○	○	○	○	○
8. +	Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.....	○	○	○	○	○

2

		VSD	MD	N	MA	VSA
9. /	Most professional educators have viewed newer educational media in the specific context of machines and operations rather than in the more general point of view of a medium for communication.....	○	○	○	○	○
10. -	There are no educational frontiers in newer educational media - just new gadgets.....	○	○	○	○	○
11. /	Public relations are a primary responsibility of A-V people.....	○	○	○	○	○
12. -	The development of new A-V aids is a waste of time and resources.....	○	○	○	○	○
13. /	Recent technological trends in education demand a changing teacher role.....	○	○	○	○	○
14. +	Only through A-V media can vicarious learning experiences be provided in the classroom.....	○	○	○	○	○
15. +	The teaching of foreign languages in the elementary school lends itself particularly well to the use of A-V aids.....	○	○	○	○	○
16. +	A-V materials and educational media usage should be the province of A-V specialists...	○	○	○	○	○
17. -	The creative student is apt to be stifled by the extensive use of A-V instructional media....	○	○	○	○	○
18. -	The vicariousness of learning by A-V aids is not conducive to the most effective learning.....	○	○	○	○	○
19. +	A basic problem of A-V education is to change the attitude of many teachers who look upon A-V aids simply as frills tacked on to their regular teaching.....	○	○	○	○	○
20. +	One of the most satisfactory ways to provide adequate educational opportunities for the increasing mass of students is through wider usage of A-V aids.....	○	○	○	○	○

3

		VSD	MD	N	MA	VSA
21. +	Provision for the purchase of A-V equipment should be included in every school's instructional budget.....	○	○	○	○	○
22. /	The educational value of broadcast (commercial) television is practically nil.....	○	○	○	○	○
23. +	The development of A-V centers in every school unit should be encouraged and facilitated....	○	○	○	○	○
24. +	In one teacher's college, 10 per cent of the instructional budget is given to the A-V department. More colleges should adopt this plan.....	○	○	○	○	○
25. /	Exerting influence for administrative decisions favorable to A-V should be a key activity of A-V personnel.....	○	○	○	○	○
26. +	The use of such aids as the bioscope, electric microscope, and science films can revolutionize the teaching of science.....	○	○	○	○	○
27. -	The expense of most A-V media is out of all proportion to their educational value.....	○	○	○	○	○
28. +	New teachers would be more inclined to use A-V aids if there were wider usage of these aids in teacher-training programs.....	○	○	○	○	○
29. +	Most innovations in newer educational media have been well validated in research studies to substantiate their utility.....	○	○	○	○	○
30. /	Most A-V persons do not use the mass communications media enough in developing a favorable public attitude toward A-V.....	○	○	○	○	○
31. +	The percentage of teachers using newer educational media has increased greatly in recent years.....	○	○	○	○	○
32. +	Wider usage of currently accepted A-V aids is needed.....	○	○	○	○	○

		VSD	MD	N	MA	VSA
33. /	The personal relationship between teacher and student is essential in most learning situations...	○	○	○	○	○
34. +	If surplus funds exist, which could be spent only for supplementary books or for more A-V equipment, the A-V equipment should be chosen.....	○	○	○	○	○
35. /	Teaching machines utility cannot be evaluated solely on the basis of standardized scholastic achievement of students using them.....	○	○	○	○	○
36. -	A-V materials are so specific as to have little adaptability to different teaching requirements or situations.....	○	○	○	○	○
37. -	These newer educational media tend to subordinate the teacher's relationship with students.....	○	○	○	○	○
38. -	The passivity characteristic of learning by A-V aids is not conducive to the most effective learning.....	○	○	○	○	○
39. +	Wider use of newer educational media will ultimately mean that instructional costs can be reduced.....	○	○	○	○	○

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KEY FACTOR ANALYSIS, NEW MEDIA ATTITUDE SCALE

Group I, Administrators

Cluster Number 1

Items 3 and 1

3. All teachers in training should take a course in the use of A-V aids.

1. The widespread use of teaching machines will revolutionize the process of instruction as we know it now.

Cluster Number 2

Items 6 and 5

6. Wider acceptance of currently known A-V aids is needed.

5. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

Cluster Number 3

Items 7 and 3

7. Programs for teaching machines should be developed by A-V specialists.

3. All teachers in training should take a course in the use of A-V aids.

Cluster Number 4

Items 8 and 6

8. Proper use of A-V materials can go a long way woward providing for individual differences in the learning needs of children.

6. Wider acceptance of currently known A-V aids is needed.

Cluster Number 5

Items 13, 3, and 8

13. Recent technological trends in education demand a changing teacher role.

3. All teachers should have a central training A-V room where the equipment is permanently installed and available for use there.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

Cluster Number 6

Items 15 and 3

15. The teaching of foreign languages in the elementary school lends itself particularly well to the use of A-V aids.

3. All teachers in training should take a course in the use of A-V aids.

Cluster Number 7

Items 16 and 5

16. A-V materials and educational media usage should be the province of A-V specialists.

5. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

Cluster Number 8

Items 17 and 11

17. The creative student is apt to be stifled by the extensive use of A-V instructional media.

11. Public relations are a primary responsibility of A-V people.

Cluster Number 9

Items 18, 4, 10, and 17

18. The vicariousness of learning by A-V aids is not conducive to the most effective learning.

4. Learning through A-V educational media is a passive experience.

10. There are no educational frontiers in newer educational media - just new gadgets.

17. The creative student is apt to be stifled by the extensive use of A-V instructional media.

Cluster Number 10

Items 19, 5, 6, and 9

19. A basic problem of A-V education is to change the attitude of many teachers who look upon A-V aids simply as frills tacked on to their regular teaching.

5. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

6. Wider acceptance of currently known A-V aids is needed.

9. Most professional educators have viewed newer educational media in the specific context of machines and operations rather than in the more general point of view of a medium for communication.

Cluster Number 11

Items 20, 6, and 8

20. One of the most satisfactory ways to provide adequate educational opportunities for the increasing mass of students is through wider usage of A-V aids.

6. Wider acceptance of currently known A-V aids is needed.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

Cluster Number 12

Items 21, 5, 6, 8, 13, 19, and 20

21. Provision for the purchase of A-V equipment should be included in every school's instructional budget.

5. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

6. Wider acceptance of currently known A-V aids is needed.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

13. Recent technological trends in education demand a changing teacher role.

19. A basic problem of A-V education is to change the attitude of many teachers who look upon A-V aids simply as frills tacked on to their regular teaching.

20. One of the most satisfactory ways to provide adequate educational opportunities for the increasing mass of students is through wider usage of A-V aids.

Cluster Number 13

Items 23, 3, 5, 6, 8, and 13

23. The development of A-V centers in every school unit should be encouraged and facilitated.

3. All teachers in training should take a course in the use of A-V aids.

5. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

6. Wider acceptance of currently known A-V aids is needed.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

13. Recent technological trends in education demand a changing teacher role.

Cluster Number 14

Items 24, 5, 9, and 19

24. In one teacher's college, 10 percent of the instructional budget is given to the A-V department. More colleges should adopt this plan.

5. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

9. Most professional educators have viewed newer educational media in the specific context of machines and operations rather than in the more general point of view of a medium for communication.

19. A basic problem of A-V education is to change the attitude of many teachers who look upon A-V aids simply as frill tacked on to their regular teaching.

Cluster Number 15

Items 25, 5, and 6

25. Exerting influence for administrative decisions favorable to A-V should be a key activity of A-V personnel.

5. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

6. Wider acceptance of currently known A-V aids is needed.

Cluster Number 16

Items 26, 1, 3, 6, and 7

26. The use of such aids as the bioscope, electron microscope, and science films can revolutionize the teaching of science.

1. The widespread use of teaching machines will revolutionize the process of instruction as we know it now.

3. All teachers in training should take a course in the use of A-V aids.

6. Wider acceptance of currently known A-V aids is needed.

7. Programs for teaching machines should be developed by A-V specialists.

Cluster Number 17

Items 28, 5, 6, 8, 23, 24, and 25

28. New teachers would be more inclined to use A-V aids if there were wider usage of these aids in teacher-training programs.

5. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

6. Wider acceptance of currently known A-V aids is needed.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

23. The development of A-V centers in every school unit should be encouraged and facilitated.

24. In one teacher's college, 10 percent of the instructional budget is given to the A-V department. More colleges should adopt this plan.

25. Exerting influence for administrative decisions favorable to A-V should be a key activity of A-V personnel.

Cluster Number 18

Items 29, 6, 8, 9, 21, 23, 24, and 28

29. Most innovations in newer educational media have been well validated in research studies to substantiate their utility.

6. Wider acceptance of currently known A-V aids is needed.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

9. Most professional educators have viewed newer educational media in the specific context of machines and operations rather than in the more general point of view of a medium for communication.

21. Provision for the purchase of A-V equipment should be included in every school's instructional budget.

23. The development of A-V centers in every school unit should be encouraged and facilitated.

24. In one teacher's college, 10 percent of the instructional budget is given to the A-V department. More colleges should adopt this plan.

28. New teachers would be more inclined to use A-V aids if there were wider usage of these aids in teacher-training programs.

Cluster Number 19

Items 30 and 28

30. Most A-V persons do not use the mass communications

media enough in developing a favorable public attitude toward A-V.

28. New teachers would be more inclined to use A-V aids if there were wider usage of these aids in teacher-training programs.

Cluster Number 20

Items 31, 6, 8, 21, 23, 28, and 29

31. The percentage of teachers using newer educational media has increased greatly in recent years.

6. Wider acceptance of currently known A-V aids is needed.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

21. Provision for the purchase of A-V equipment should be included in every school's instructional budget.

23. The development of A-V centers in every school unit should be encouraged and facilitated.

28. New teachers would be more inclined to use A-V aids if there were wider usage of these aids in teacher-training programs.

29. Most innovations in newer educational media have been well validated in research studies to substantiate their utility.

Cluster Number 21

Items 32, 5, 6, 8, 21, 23, 24, 25, 28, 29, and 31

32. Wider usage of currently accepted A-V aids is needed.

5. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

6. Wider acceptance of currently known A-V aids is needed.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

21. Provision for the purchase of A-V equipment should be included in every school's instructional budget.

23. The development of A-V centers in every school unit should be encouraged and facilitated.

24. In one teacher's college, 10 percent of the instructional budget is given to the A-V department. More colleges should adopt this plan.

25. Exerting influence for administrative decisions favorable to A-V should be a key activity of A-V personnel.

28. New teachers would be more inclined to use A-V aids if there were wider usage of these aids in teacher-training programs.

29. Most innovations in newer educational media have been well validated in research studies to substantiate their utility.

31. The percentage of teachers using newer educational media has increased greatly in recent years.

Cluster Number 22

Items 33, 27, and 30

33. The personal relationship between teacher and student is essential in most learning situations.

27. The expense of most A-V media is out of all proportion to their educational value.

30. Most A-V persons do not use the mass communications media enough in developing a favorable public attitude toward A-V.

Cluster Number 23

Items 34, 1, 5, 6, 24, 28, 29, and 32

34. If surplus funds exist, which could be spent only for supplementary books or for more A-V equipment, the A-V equipment should be chosen.

1. The widespread use of teaching machines will revolutionize the process of instruction as we know it now.

5. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

6. Wider acceptance of currently known A-V aids is needed.

24. In one teacher's college, 10 percent of the instructional budget is given to the A-V department. More colleges should adopt this plan.

28. New teachers would be more inclined to use A-V aids if there were wider usage of these aids in teacher-training programs.

29. Most innovations in newer educational media have been well validated in research studies to substantiate their utility.

32. Wider usage of currently accepted A-V aids is needed.

Cluster Number 24

Items 36 and 10

36. A-V materials are so specific as to have little adaptability to different teaching requirements or situations.

10. There are no educational frontiers in newer educational media - just new gadgets.

Cluster Number 25

Items 38, 4, 35, and 37

38. The passivity characteristic of learning by A-V

aids is not conducive to the most effective learning.

4. Learning through A-V educational media is a passive experience.

35. Teaching machines utility cannot be evaluated solely on the basis of standardized scholastic achievement of students using them.

37. These newer educational media tend to subordinate the teacher's relationship with students.

Cluster Number 26

Items 39, 1, and 3

39. Wider use of newer educational media will ultimately mean that instructional costs can be reduced.

1. The widespread use of teaching machines will revolutionize the process of instruction as we know it now.

3. All teachers in training should take a course in the use of A-V aids.

Cluster Number 27

Items 23, 3, 5, 6, 8, and 13

23. The development of A-V centers in every school unit should be encouraged and facilitated.

3. All teachers in training should take a course in the use of A-V aids.

5. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

6. Wider acceptance of currently known A-V aids is needed.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the

learning needs of children.

13. Recent technological trends in education demand a changing teacher role.

Group II, Faculty of Education

Less Laboratory School Instructional Staff

Cluster Number 1

Items 2 and 1

2. All teachers should have a central training A-V room where the equipment is permanently installed and available for use there.

1. The widespread use of teaching machines will revolutionize the process of instruction as we know it now.

Cluster Number 2

Items 5 and 1

5. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

1. The widespread use of teaching machines will revolutionize the process of instruction as we know it now.

Cluster Number 3

Items 6, 2, and 3

6. Wider acceptance of currently known A-V aids is needed.

2. All teachers should have a central training A-V room where the equipment is permanently installed and available for use there.

3. All teachers in training should take a course in the use of A-V aids.

Cluster Number 4

Items 8, 3, 5, and 6

8. Proper use of A-V materials can go a long way to-

ward providing for individual differences in the learning needs of children.

3. All teachers in training should take a course in the use of A-V aids.

5. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

6. Wider acceptance of currently known A-V aids is needed.

Cluster Number 5

Items 9 and 5

9. Most professional educators have viewed newer educational media in the specific context of machines and operations rather than in the more general point of view of a medium for communication.

5. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

Cluster Number 6

Items 12 and 4

12. The development of new A-V aids is a waste of time and resources.

4. Learning through A-V educational media is a passive experience.

Cluster Number 7

Items 13, 2, and 8

13. Recent technological trends in education demand a changing teacher role.

2. All teachers should have a central training A-V room where the equipment is permanently installed and available for use there.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

Cluster Number 8

Items 15, 8, and 13

15. The teaching of foreign languages in the elementary school lends itself particularly well to the use of A-V aids.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

13. Recent technological trends in education demand a changing teacher role.

Cluster Number 9

Items 19, 2, 5, 6, 8, and 9

19. A basic problem of A-V education is to change the attitude of many teachers who look upon A-V aids simply as frills tacked on to their regular teaching.

2. All teachers should have a central training A-V room where the equipment is permanently installed and available for use there.

5. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

6. Wider acceptance of currently known A-V aids is needed.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

9. Most professional educators have viewed newer educational media in the specific context of machines and operations rather than in the more general point of view of a medium for communication.

Cluster Number 10

Items 20, 1, 2, 5, 6, 9, 13, 15, and 19

20. One of the most satisfactory ways to provide adequate educational opportunities for the increasing mass of students is through wider usage of A-V aids.

1. The widespread use of teaching machines will revolutionize the process of instruction as we know it now.

2. All teachers should have a central training A-V room where the equipment is permanently installed and available for use there.

5. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

6. Wider acceptance of currently known A-V aids is needed.

9. Most professional educators have viewed newer educational media in the specific context of machines and operations rather than in the more general point of view of a medium for communication.

13. Recent technological trends in education demand a changing teacher role.

15. The teacher of foreign languages in the elementary school lends itself particularly well to the use of A-V aids.

19. A basic problem of A-V education is to change the attitude of many teachers who look upon A-V aids simply as frills tacked on to their regular teaching.

Cluster Number 11

Items 21, 6, 8, and 23

21. Provision for the purchase of A-V equipment should be included in every school's instructional budget.

6. Wider acceptance of currently known A-V aids is needed.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning of children.

23. The development of A-V centers in every school unit should be encouraged and facilitated.

Cluster Number 12

Items 23, 2, 3, 6, 8, 9, 13, 15, 19, and 20

23. The development of A-V centers in every school unit should be encouraged and facilitated.

2. All teachers should have a central training A-V room where the equipment is permanently installed and available for use there.

3. All teachers in training should take a course in the use of A-V aids.

6. Wider acceptance of currently known A-V aids is needed.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

9. Most professional educators have viewed newer educational media in the specific context of machines and operations rather than in the more general point of view of a medium for communication.

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19. A basic problem of A-V education is to change the attitude of many teachers who look upon A-V aids as simply frills tacked on to their regular teaching.

20. One of the most satisfactory ways to provide adequate educational opportunities for the increasing mass of students is through wider usage of A-V aids.

Cluster Number 13

Items 24, 3, 5, 6, and 9

24. In one teacher's college, 10 percent of the instructional budget is given to the A-V department. More colleges should adopt this plan.

3. All teachers in training should take a course in the use of A-V aids.

5. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

6. Wider acceptance of currently known A-V aids is needed.

9. Most professional educators have viewed newer educational media in the specific context of machines and operations rather than in the more general point of view of a medium for communication.

Cluster Number 14

Items 25 and 20

25. Exerting influence for administrative decisions favorable to A-V should be a key activity of A-V personnel.

20. One of the most satisfactory ways to provide adequate educational opportunities for the increasing mass of students is through wider usage of A-V aids.

Cluster Number 15

Items 26, 5, 9, 13, and 20

26. The use of such aids as the bioscope, electron microscope, and science films can revolutionize

the teaching of science.

5. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

9. Most professional educators have viewed newer educational media in the specific context of machines and operations rather than in the more general point of view of a medium for communication.

13. Recent technological trends in education demand a changing teacher role.

20. One of the most satisfactory ways to provide adequate educational opportunities for the increasing mass of students is through wider usage of A-V aids.

Cluster Number 16

Items 27 and 17

27. The expense of most A-V media is out of all proportion to their educational value.

17. The creative student is apt to be stifled by the extensive use of A-V instructional media.

Cluster Number 17

Items 28, 2, 3, 6, 8, 13, 15, 19, 20, 21, and 23

28. New teachers would be more inclined to use A-V aids if there were wider usage of these aids in teacher-training programs.

2. All teachers should have a central training A-V room where the equipment is permanently installed and available for use there.

3. All teachers in training should take a course in the use of A-V aids.

6. Wider acceptance of currently known A-V aids is needed.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

13. Recent technological trends in education demand a changing teacher role.

15. The teaching of foreign languages in the elementary school lends itself particularly well to the use of A-V aids.

19. A basic problem of A-V education is to change the attitude of many teachers who look upon A-V aids simply as frills tacked on to their regular teaching.

20. One of the most satisfactory ways to provide adequate educational opportunities for the increasing mass of students is through wider usage of A-V aids.

21. Provision for the purchase of A-V equipment should be included in every school's instructional budget.

23. The development of A-V centers in every school unit should be encouraged and facilitated.

Cluster Number 18

Items 29 and 5

29. Most innovations in newer educational media have been well validated in research studies to substantiate their utility.

5. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

Cluster Number 19

Items 30, 2, 3, 5, 6, 9, 13, 19, 23, 24, 25, 26, and 28

30. Most A-V persons do not use the mass communications media enough in developing a favorable public attitude toward A-V.

2. All teachers should have a central training A-V room where the equipment is permanently installed and available for use there.

3. All teachers in training should take a course in the use of A-V aids.

5. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

6. Wider acceptance of currently known A-V aids is needed.

9. Most professional educators have viewed newer educational media in the specific context of machines and operations rather than in the more general point of view of a medium for communication.

13. Recent technological trends in education demand a changing teacher role.

19. A basic problem of A-V education is to change the attitude of many teachers who look upon A-V aids simply as frills tacked on to their regular teaching.

23. The development of A-V centers in every school unit should be encouraged and facilitated.

24. In one teacher's college, 10 percent of the instructional budget is given to the A-V department. More colleges should adopt this plan.

25. Exerting influence for administrative decisions favorable to A-V should be a key activity of A-V personnel.

26. The use of such aids as the bioscope, electron microscope, and science films can revolutionize the teaching of science.

28. New teachers would be more inclined to use A-V aids if there were wider usage of these aids in teacher-training programs.

Cluster Number 20

Items 31 and 30

31. The percentage of teachers using newer educational media has increased greatly in recent years.

30. Most A-V persons do not use the mass communications media enough in developing a favorable public attitude toward A-V.

Cluster Number 21

Items 32, 3, 6, 8, 19, 20, 21, 23, 28, and 30

32. Wider usage of currently accepted A-V aids is needed.

3. All teachers in training should take a course in the use of A-V aids.

6. Wider acceptance of currently known A-V aids is needed.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

19. A basic problem of A-V education is to change the attitude of many teachers who look upon A-V aids simply as frills tacked on to their regular teaching.

20. One of the most satisfactory ways to provide adequate educational opportunities for the increasing mass of students is through wider usage of A-V aids.

21. Provision for the purchase of A-V equipment should be included in every school's instructional budget.

23. The development of A-V centers in every school unit should be encouraged and facilitated.

28. New teachers would be more inclined to use A-V aids if there were wider usage of these aids in teacher-training programs.

30. Most A-V persons do not use the mass communications media enough in developing a favorable public attitude toward A-V.

Cluster Number 22

Items 33, 21, and 28

33. The personal relationship between teacher and student is essential in most learning situations.

21. Provision for the purchase of A-V equipment should be included in every school's instructional budget.

28. New teachers would be more inclined to use A-V aids if there were wider usage of these aids in teacher-training programs.

Cluster Number 23

Items 34, 13, 15, 20, 25, and 30

34. If surplus funds exist, which could be spent only for supplementary books or for more A-V equipment, the A-V equipment should be chosen.

13. Recent technological trends in education demand a changing teacher role.

15. The teaching of foreign languages in the elementary school lends itself particulary well to the use of A-V aids.

20. One of the most satisfactory ways to provide adequate educational opportunities for the increasing mass of students is through wider usage of A-V aids.

25. Exerting influence for administrative decisions favorable to A-V should be a key activity of A-V personnel.

30. Most A-V persons do not use the mass communications media enough in developing a favorable public attitude toward A-V.

Cluster Number 24

Items 35, 8, 21, and 28

35. Teaching machines utility cannot be evaluated solely on the basis of standardized scholastic achievement of students using them.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

21. Provision for the purchase of A-V equipment should be included in every school's instructional budget.

28. New teachers would be more inclined to use A-V aids if there were wider usage of these aids in teacher-training programs.

Cluster Number 25

Items 37 and 12

37. These newer educational media tend to subordinate the teacher's relationship with students.

12. The development of new A-V aids is a waste of time and resources.

Cluster Number 26

Items 39, 2, 5, and 20

39. Most innovations in newer educational media have been well validated in research studies to substantiate their utility.

2. All teachers should have a central training A-V room where the equipment is permanently installed and available for use there.

5. The possible uses of A-V equipment are limited only by the imagination of the person directing the usage.

20. One of the most satisfactory ways to provide adequate educational opportunities for the increasing mass of students is through wider usage of A-V aids.

Cluster Number 27

Items 38 and 36

38. The passivity characteristic of learning by A-V aids is not conducive to the most effective learning.

36. A-V materials are so specific as to have little adaptability to different teaching requirements or situations.

Group III, Laboratory School Staff

Cluster Number 1

Items 18 and 15

18. The vicariousness of learning by A-V aids is not conducive to the most effective learning.

15. The teaching of foreign languages in the elementary school lends itself particularly well to the use of A-V aids.

Cluster Number 2

Items 21 and 3

21. Provision for the purchase of A-V equipment should be included in every school's instructional budget.

3. All teachers in training should take a course in the use of A-V aids.

Cluster Number 3

Items 22 and 10

22. The educational value of broadcast (commercial) television is practically nil.

10. There are no educational frontiers in newer educational media - just new gadgets.

Cluster Number 4

Items 25, 15, and 19

25. Exerting influence for administrative decisions favorable to A-V should be a key activity of A-V personnel.

15. The teaching of foreign languages in the elementary school lends itself particularly well to the use of A-V aids.

19. A basic problem of A-V education is to change the attitude of many teachers who look upon A-V aids simply as frills tacked on to their regular teaching.

Cluster Number 5

Items 26, 19, 24, and 25

26. The use of such aids as the bioscope, electron microscope, and science films can revolutionize the teaching of science.

24. In one teacher's college, 10 percent of the instructional budget is given to the A-V department. More colleges should adopt this plan.

25. Exerting influence for administrative decisions favorable to A-V should be a key activity of A-V personnel.

Cluster Number 6

Items 28 and 12

28. New teachers would be more inclined to use A-V aids if there were wider usage of these aids in teacher-training programs.

12. The development of new A-V aids is a waste of time and resources.

Cluster Number 7

Items 32 and 28

32. Wider usage of currently accepted A-V aids is needed.

28. New teachers would be more inclined to use A-V aids if there were wider usage of these aids in teacher-training programs.

Cluster Number 8

Items 34, 19, 26, and 29

34. If surplus funds exist, which could be spent only for supplementary books or for more A-V equipment, the A-V equipment should be chosen.

19. A basic problem of A-V education is to change the attitude of many teachers who look upon A-V aids simply as frills tacked on to their regular teaching.

26. The use of such aids as the bioscope, electron microscope, the science films can revolutionize the teaching of science.

29. Most innovations in newer educational media have been well validated in research studies to substantiate their utility.

Cluster Number 9

Items 36 and 13

36. A-V materials are so specific as to have little adaptability to different teaching requirements or situations.

13. Recent technological trends in education demand a changing teacher role.

Cluster Number 10

Items 37 and 10

37. These newer educational media tend to subordinate the teacher's relationship with students.

10. There are no educational frontiers in newer educational media - just new gadgets.

Cluster Number 11

Items 38, 8, 13, 17, and 17

38. The passivity characteristic of learning by A-V aids is not conducive to the most effective learning.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

13. Recent technological trends in education demand a changing teacher role.

17. The creative student is apt to be stifled by the extensive use of A-V instructional media.

37. These newer educational media tend to subordinate the teacher's relationship with students.

Group IV, Faculty from all other Departments

Cluster Number 1

Items 8, 3, and 6

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

3. All teachers in training should take a course in the use of A-V aids.

6. Wider acceptance of currently known A-V aids is needed.

Cluster Number 2

Items 12 and 10

12. The development of new A-V aids is a waste of time and resources.

10. There are no educational frontiers in newer educational media - just new gadgets.

Cluster Number 3

Items 13 and 8

13. Recent technological trends in education demand a changing teacher role.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

Cluster Number 4

Items 18 and 17

18. The vicariousness of learning by A-V aids is not conducive to the most effective learning.

17. The creative student is apt to be stifled by the extensive use of A-V instructional media.

Cluster Number 5

Items 20, 6, 8, and 13

20. One of the most satisfactory ways to provide adequate educational opportunities for the increasing mass of students is through wider usage of A-V aids.

6. Wider acceptance of currently known A-V aids is needed.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

13. Recent technological trends in education demand a changing teacher role.

Cluster Number 6

Items 21, 3, 6, 8, 12, and 20

21. Provision for the purchase of A-V equipment should be included in every school's instructional budget.

3. All teachers in training should take a course in the use of A-V aids.

6. Wider acceptance of currently known A-V aids is needed.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

12. The development of new A-V aids is a waste of time and resources.

20. One of the most satisfactory ways to provide adequate educational opportunities for the increasing mass of students is through wider usage of A-V aids.

Cluster Number 7

Items 23, 3, 6, 8, 12, 20 and 21

23. The development of A-V centers in every school unit should be encouraged and facilitated.

3. All teachers in training should take a course in the use of A-V aids.

6. Wider acceptance of currently known A-V aids is needed.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

12. The development of new A-V aids is a waste of time and resources.

20. One of the most satisfactory ways to provide adequate educational opportunities for the increasing mass of students is through wider usage of A-V aids.

21. Provision for the purchase of A-V equipment should be included in every school's instructional budget.

Cluster Number 8

Items 28, 3, 8, 19, 21, and 23

28. New teachers would be more inclined to use A-V aids if there were wider usage of these aids in teacher-training programs.

3. All teachers in training should take a course in the use of A-V aids.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

19. A basic problem of A-V education is to change the attitude of many teachers who look upon A-V aids

simply as frills tacked on to their regular teaching.

21. Provision for the purchase of A-V equipment should be included in every school's instructional budget.

23. The development of A-V centers in every school unit should be encouraged and facilitated.

Cluster Number 9

Items 23, 3, 6, 8, 10, 12, 13, 20, 21, 23, and 28

32. Wider usage of currently accepted A-V aids is needed.

3. All teachers in training should take a course in the use of A-V aids.

6. Wider acceptance of currently known A-V aids is needed.

8. Proper use of A-V materials can go a long way toward providing for individual differences in the learning needs of children.

10. There are no educational frontiers in newer educational media - just new gadgets.

12. The development of new A-V aids is a waste of time and resources.

13. Recent technological trends in education demand a changing teacher role.

20. One of the most satisfactory ways to provide adequate educational opportunities for the increasing mass of students is through wider usage of A-V aids.

21. Provision for the purchase of A-V equipment should be included in every school's instructional budget.

23. The development of A-V centers in every school unit should be encouraged and facilitated.

28. New teachers would be more inclined to use A-V aids if there were wider usage of these aids in teacher-training programs.

Cluster Number 10

Items 38, 18, and 37

38. The passivity characteristic of learning by A-V aids is not conducive to the most effective learning.

18. The vicariousness of learning by A-V aids is not conducive to the most effective learning.

37. These newer educational media tend to subordinate the teacher's relationship with students.