AN EXPLORATORY STUDY ON TEACHERS' ATTITUDES TOWARD INSTRUCTIONAL TELEVISION

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Abstract

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The purpose of the thesis was to assess the extent of instructional television use in elementary schools, and to determine whether teachers' decisions to accept or reject instructional television was related to: (1) availability and accessibility of television sets, (2) use of other instructional media and methods, (3) sex of the teacher, (4) teaching experience, (5) age of the teacher, (6) relevance of programme series, and (7) teachers' perceived effects of instructional television on the normal teacher-student relationship created by face-to-face instruction. An 18-item questionnaire developed by the investigator was used to collect data on teachers' attitudes to the use of instructional television.

The findings revealed a significant relationship between accessibility of television sets and the use of instructional television. Strong relationships were also found between the use of instructional television and the use of four other instructional media.

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CHAPTER 1

BACKGROUND TO THE STUDY

The complex sets of contingencies necessary to make instructional television a viable part of the curriculum design of a school system is often easy to state in general terms. More complex, however is the task of identifying factors which lead some teachers to say "no" and others to say "yes" when faced with the question of integrating instructional media such as instructional television in the school curriculum.

Not much is known about the attitudes of elementary school teachers toward instructional television in the Greater Montreal area. Instructional television is available to this area through the CBOT, CBMT and CKMI signals throughout the school year. These stations telecast varied daytime programmes designed for use in both elementary and secondary schools. However, a curious observer might wonder whether there was a consistent use being made of instructional television in the elementary schools in this area.

Those of us who are inquisitive about the role of some aspects of educational technology such as instructional television wonder if there were reasons for teachers' decisions to use or not to use instructional television in the elementary schools. There can be little resistance in accepting the notion that students learn at least as well from television as from non-televised instruction.

Schramm (1962) reviewed several research studies on learning from television and concluded that (a) under some conditions and used in some ways, instructional television can be highly effective and (b) that the pertinent question is no longer whether a teacher can teach effectively on television, but rather how, when, for what subjects, and with what articulation into classroom activities instructional television can most effectively be used. Nothing is mentioned here of the attitudes of those who influence the use of instructional television.

The potential of television has widely been under discussion. Coldevin (1972a, 1972b), for example, found that television was a major source of political socialization among American high school students. He reported that the mass media in general and television in particular is a primary source of American adolescent's national and international orientations. Similar results were reported among French and English Canadian adolescents (Coldevin, 1973). It should be observed here that Coldevin (1973) refers to the information content channeled through television, and not to television as an object per se.

Televised instruction in schools is a scheme proposed by those who make decisions about the introduction of educational innovations in the curriculum and instruction in the school system. Teachers are expected to implement such decisions. But as can be expected, the attitudes of teachers to any educational innovation are of vital importance, and as such, they call for a systematic study.

In a study on teachers' attitudes to radio and television

broadcasting conducted in Quebec by the Research Committee for Radio and Television (1966), the researchers measured the attitudes of a sample of 482 teachers. It was concluded that female teachers held favourable attitudes to instructional television in a greater proportion that male teachers, whose preparation for television lessons was greater in proportion than female teachers. Less favourable attitudes were observed among teachers from metropolitan areas. Such results, however, leave unanswered important questions concerning the factors that lead other teachers to accept or reject instructional television as an integral part of their curricula.

One of the most elaborate studies on teachers' attitudes to instructional television was conducted by Westley and Jacobson (1962) who concluded that teachers' attitudes to instructional television were based on: (a) challenge or threat which endangers the classroom teacher's advancement and threaten his eventual unemployment; (b) economy- whether ITV would help with the rising student enrollments; (c) instructional side benefits related to whether adults can learn from ITV—and whether ITV could help in acquainting teachers with new developments in education like new mathematics; (d) partnership (may the studio teacher not "back up" and strengthen the classroom teacher, and improve student achievement?); (e) responsiveness (will ITV dull the pupils' interest or contribute to positive attitudes toward the subject matter taught?); (f) parental influence (how will the parents react to the broadcast lessons they see on the air?); (g) security (could television teaching ever replace the classroom teacher?); (h) invidious comparisons (will the "master teacher" on TV make the

classroom teacher seem inept at times?); (i) experimental attitudes (even if the value of ITV is not yet determined, shouldn't we give it a try?); (j) in-service training (will it be useful in bringing teachers new content and new methods in their fields?).

Ayers (1972), used a 32-item instrument similar to the attitude scale developed by Westley and Jacobson (1962) for use with mathematics teachers, to measure the attitudes of 142 elementary school teachers. He concluded that teachers rejected the idea that television destroyed the normal teacher-pupil relationship created by face-to-face instruction. The findings also reported that teachers did not perceive television as a threat to their employment and advancement. They saw the studio teacher as a possible source of help in improving the attitudes and level of achievement of children.

These findings, however, do not bring to light the influence of superiors on teachers' attitudes toward instructional television. A study conducted by Bessent, Harris and Thomas (1968) revealed that prominent among the reasons given by teachers for using instructional television were that they were following orders or expectations of superiors. The researchers noted that "Forty seven out of eighty-five adopting teachers expressed one or more of the reasons indicating conformance to organisational expectations. Almost one teacher in four gave these kinds of reasons and no others".

Newton (1971), however, demonstrated that considerations pertaining to the influence of others such as the reaction of supervisors, evaluators and the influence of central staff, were perceived by teachers as the least influential factors in their decisions to use

or not to use instructional television.

Chu and Schramm (1967), however, concluded that among the factors that determine teachers' attitudes to instructional television were: (a) how they perceived the degree of threat to the classroom autonomy; (b) how they estimate the likelihood of mechanized instruction replacing direct contact with students; (c) how they estimate the effectiveness of instructional television; (d) the difficulties they see in the way of using modern techniques; (e) how conservative they are, and whether they trust or distrust educational experimentation.

Studies by Tobias (1963, 1966) seem to support some of the above conclusions. In studying the dimensions of teachers' attitudes to various instructional media, Tobias (1963, 1966) attempted to determine the degree to which fear of mechanization, and other variables affected teachers' attitudes toward instructional media. The results showed that the least favourable attitudes were exposed concerning the terms connoting automation. The traditional terms such as flash-cards, received the most favourable responses. Lack of knowledge and fear of automation were, therefore, linked by Tobias (1963, 1966) with teacher attitudes to instruction media.

In this thesis, some of the pertinent research relative to teachers' attitudes toward one instructional medium (instructional television) is examined, and a number of general hypotheses which are related to teachers' attitudes are tested. This area of research is viewed as particularly useful within the Montreal area, given the dearth of research of this nature within the Canadian context.

PURPOSE OF THE STUDY

The main purpose was to identify those teachers who used instructional television and those who did not and possible reasons for the respective decisions.

Specifically, the object was to look for answers to the following questions:

I. Extent of ITV use among elementary school teachers:

Is the use and non-use of instructional television related to any one of the following?

(i) Availability and accessibility of TV sets within the elementary schools.

(ii) Age of the teacher.

(iii) Personality and the teaching methods of the studio teacher.

(iv) Sex of the teacher.

(v) Teachers' use of other media and methods.

(vi) Teaching experience.

(vii) Teachers' background in Educational Technology.

II. Teachers' Professional Attitudes:

To what extent are the following factors related to teachers' use or non-use of instructional television.

(i) Teachers' perceived influence of ITV upon the normal teacher-pupil relationship created by face-to-face instruction.

(ii) Teachers perceived instructional value of instructional television.

(iii) Relevance of programme series.

(iv) Teachers' relative influence of superiors on the conduct of classroom practices, i.e., official policy on the use of instructional television.

Specifically, it was intended to test the following hypotheses to investigate the relationship between variables:

Hypothesis 1

Teachers who had ready access to TV sets would tend to use programmes more than those who did not.

Hypothesis 2

Teachers who made use of instructional television would be more likely to use other instructional media than those who did not.

Hypothesis 3

The type of subject(s) a teacher taught would more likely influence the use of ITV than the teachers' subject specialization.

Hypothesis 4

Female teachers tend to make more use of ITV than male teachers.

Hypothesis 5

Teachers with more than 5 years of teaching experience would tend to use ITV more than those with less than 5 years.

Hypothesis 6

Teachers with a background in Educational Technology would use ITV more than those without such background.

Hypothesis 7

Teachers in the age bracket 20-39 would more likely be heavy users of ITV than those above that age range.

Hypothesis 8

Personality and teaching methods of the studio teacher were related to the classroom teachers' use of ITV.

Hypothesis 9

Teachers' decisions to use ITV would more likely be a function of the official policy.

Hypothesis 10

Relevance of ITV programmes to classroom teaching programme would be related to teachers' use of ITV.

Hypothesis 11

Teachers' who felt that ITV destroys the normal teacher-pupil relationship created by face-to-face teaching would tend to use ITV less than those who did not.

As has been discussed earlier (c.f. p. 4), availability and accessibility of TV sets has been shown by Bessent, Harris and Thomas (1968), to affect teachers' utilization of instructional television. They reported that most teachers made full use of ITV programmes frequently when sets were numerous and close at hand. Aquino (1970), has also shown that the availability and accessibility of educational media within the school environment had some effects on teachers' attitudes toward media. His study revealed further that teachers were not concerned about the amounts of audiovisual equipment their schools owned, as long as the equipment was accessible when it was needed.

Sex and teaching experience were reported in the study of teachers attitudes to radio and television conducted by the Quebec

Research Committee for School Radio and Television (1966) as being influential on the use and non-use of instructional television. Westley and Jacobson (1962), demonstrated that personality and teaching methods of the studio teacher were related to teachers use of ITV. Teachers' background in aspects of Educational Technology as a variable of a major consequence was found by Aquino (1971) as an important factor in teachers' attitudes toward audio-visual instruction in schools. He concluded that the attitude to a field of study is improved during formal study within that field. Normal teachers-pupil relationship was identified by Ayers (1972) as having no effect in teachers' attitudes to ITV. This study will test the hypothesis bearing this variable.

Teachers' perceived value of ITV in education was noted by both Ayers (1972) and Newton (1971). In the study by Ayers (1972), teachers reported that their major problem appeared to be associated with the lack of sufficient materials to use in conjunction with ITV. Thus, it could be concluded that they perceived ITV as a real asset in the learning and teaching situations. Newton, however, found that there were six most influential considerations perceived by teachers when it came to using ITV: the effect of programmes on children; programme content in relation to other classroom activities; the meaning programme content had for pupils and the learning situation created compared to what could be provided otherwise. These factors, it must be noted, are based on the results of evaluation of six specific classroom telecasts for grades 1, 2, 5 and 6.

The expectation that official policy would be a significant

variable was based on the studies by Bessent, Harris and Thomas (1968), who have shown that a great number of teachers used ITV as a result of pressure from their superiors.

While age, sex and years of teaching experience are not the same variable, they are comparatively related, with age being perhaps the more conceptually meaningful in the study of attitudes of teachers to current aspects of Educational Technology such as instructional television.

In the review of research by Schramm (1962) it was noted that art, science, physical education, music and social studies telecasts were the most-wanted resources in schools. In this study, one variable concerning teachers college level specialization was included to determine whether attitudes to ITV would be related to their academic specialization. Since Schramm (1962) reported that the least favoured were subjects built around drill (reading, writing, and arithmetic), it seemed relevant in this study to see how teachers' college concentration would affect their attitudes to ITV. Would, for example, mathematics teachers show the least favourable attitudes to ITV? This variable was examined through the inclusion of college level concentration item in the questionnaire (see Appendix A).

Definition of variables

The term accessibility of TV sets refers to a simple physical proximity of TV sets in relation to the teaching and learning environment, while the physical presence of TV sets in the school environment is referred to as availability of TV sets. By age of the teacher is

meant the chronological age in years counted from the time of birth, while official policy is meant to be the organisational procedures governing the practice of teaching in the school system. Personality and teaching methods of the studio teacher is defined to mean the ability of the television teacher in the presentation of televised lessons, personal appearance and articulation. Teaching experience refers to the number of years a teacher has spent in classroom teaching since a formal or informal training and education in the teaching profession.

Significance of the study.

According to Teather (1972), teachers attitudes to aspects of educational technology are important because: "(a) the teacher may, possibly quite unintentionally, influence pupils' learning from new media - even if the information to be learnt is in as highly structured a form as teaching programme; (b) whatever equipment is made available to the school, the teacher controls the extent of its use in the classroom". There is very little to disagree with what Teather (1972) says, unless of course, one takes teachers' use of instructional media for granted.

Ellams (1969) concluded that teachers' attitudes to programmed instruction had a marked effect on students' attitudes. He also held the view that such effects suggest that when students become teachers they would transmit their inherited negative attitudes to their pupils. The same may be said of teachers' attitudes to instructional television.

Golob (1971) summarized the importance of teachers' attitudes in the educational setting by suggesting in these terms:

> The attitudes, values and beliefs of teachers in a given setting must be critically considered if we are attempting realistic educational change. Some commonality of educational purpose and perspective among the numbers of a teaching staff is essential in their visualization of some common goals. Knowing the nature of these commonalities and differences is a necessary step in prescribing an approach to educational change.[1]

Golob shows awareness here of how essential teachers' values and attitudes are in initiating educational changes. Such awareness is also relevant to the classroom teaching and learning practices. Too often educational materials developers, curriculum planners and educational administrators tend to overlook the role played by teachers' attitudes to various educational resources that are designed to promote learning. As a result, there is often no dialogue between teachers and those who make decisions about curriculum innovations. This does not imply that school administrators, producers of instructional television programmes and teachers do not speak to one another. It does, however, suggest that the interaction between teachers and educational resources such as instructional television is very little known to non-teaching personnel, except perhaps, when it comes to the evaluation of programmes. It is the aim of this study to expose this interaction to educational administrators, curriculum planners and instructional television programme producers.

[1]Louis Anthony Golob, "An examination of the Attitudes of a Secondary School Staff concerning certain Educational Problems." Dissertation Abstract International: Vol. 31, No. 11, May 1971.

Instructional television as an educational practice in which selected information is broadcast to the learner to enable him to engage in specified behaviours under specified conditions, has been practiced in Canada for more than a decade now. It is part and parcel of the growing field of Educational Technology. It is not incongruous, therefore, to say as Mitchell (1970) does:

> Implicit in all definitions of educational technology is the intent to control or influence what people think, feel or do. This is achieved through the manipulation of the physical, social or symbolic (e.g. verbal or visual) environment of the person. . . The educational technologist can promote human welfare if he will.[2]

Mitchell does not, of course, mention research directly as one of the tools of manipulation of the educational environment which can reveal what people think, feel or do in the teaching and learning situations. At any rate, this study is a prolonged mediation of Mitchell's concept of social manipulation intended to find out what teachers feel, think or do when faced with the question of curricular integration of instructional television.

Finally the relevance of the study to the educational setting lies in the assumption that the present generation of educational technologists is anxious to foster learning using a sophisticated systems approach. Perhaps no one has been more conscious of the new role of educational technologists than Thompson (1969). He observes:

> Perhaps his most important discovery was the wholeness existing among educational events, and

[2] P. David Mitchell., "Educational Technology: Panacea or Placebo" in Bajpai, A.C. and Leedham, J. F., (eds) Aspects of Educational Technology. Vol. IV, London; Pitman. 1970.

> the resultant fallacy of feeding aids and materials piecemeal into a vague and ill-defined methodology. He discovered also that sometimes the aids did the teaching and the teacher was the aid.[3]

While Thompson (1969) does not illustrate this "wholeness", it is common knowledge that if there is no dialogue among those who produce educational resources such as television programmes for instructional purposes, curriculum planners, school administrators, and teachers, instructional television will be hard to manage in the absence of a meaningful working relationship between those who are expected to implement decisions and those who make the decisions.

Teachers are part and parcel of the entire educational system anywhere in the world, and their attitudes to educational resources are instrumental in determining the success or failure of any educational practice.

Lastly, the investigator hopes that the experience gained in conducting this study will equip him with relevant background for future projects of similar nature in his home country where very little educational research related to the use of educational resources has been conducted.

[3]James J. Thompson., Instructional Communication, New York: Van Nostrand Reinhold, 1969. p. 225.

CHAPTER II

METHODOLOGY

This chapter is concerned with the (1) administration of the instrument, and (2) the sampling procedure.

Administration of the Questionnaire

The initial pretesting of the questionnaire was conducted through distribution of thirty-five questionnaires to two evening classes at Sir George Williams University. These classes were chosen on the basis of their having the largest enrollment of elementary school teachers.

Having revised the initial questionnaire, permission was asked from the Protestant School Board of Greater Montreal to conduct research in twenty randomly selected elementary schools. Permission was granted through official correspondence, and steps were taken to post the questionnaire to the selected schools.

In order to overcome the anticipated resistance of school principles, the investigator felt that he would have to make personal contact with most of them. The contact would allow the purpose and rationale of the study to be thoroughly explained to reduce suspicions of the respondents.

Two practical ways of making such contact were by telephone and by meeting with some of the school heads. For the most part, the telephone contact worked remarkably well. All questionnaires, except

in one school, were mailed to the principals in the second week of February 1973. Enclosed with the questionnaires were self-addressed envelopes to make it convenient for return postage.

The data on return rates is shown in Table 1 (page17). The similarity of the return percentage over different schools suggest strongly that there was no systematic bias introduced by the respondents. The investigator's impression was that those not replying tended to be teachers who were extremely busy at the time of the administration of the questionnaire, since perhaps they missed the verbal explanation from their principals.

In the Quebec study conducted by the Research Committee for Radio and Television (1966), the return rate was composed of 482 (77.5%) respondents out of 621 teachers.

In this study two schools declined and they were withdrawn from the sample. They, however, gave reasons for not participating. One reported to the investigator that instructional television was confined to only one grade, that is, the fifth grade. The other indicated that the teachers were too busy to adequately have time to answer the questionnaire.

Sample

The population was made up of elementary school teachers of the Protestant School Board of Greater Montreal. The sample consisted of 104 elementary school teachers from a random sample of elementary schools. Eighteen schools were randomly selected from the master list of 79 elementary schools. The list was supplied by the School Board.

The population of the schools from which the sample was drawn was within the receiving area of school television broadcasts. The schools were selected by listing them in alphabetical order by name and a number was assigned to each of them in serial order. A table of random numbers was then used to select individual schools.

It was decided to confine the sample to 4th, 5th and 6th grades since heavy use of ITV was made in such grades (see Appendix C page 61). A caution is in order here to note that the table does not include those instructional television programmes which were not specific to any grade level. In the official Department of Education, School Broadcasts (1972-73) manual, such programmes appeared as "general".

Table 1

Return Rates for Schools

Schools	Number Administered	Number Returned	Percent Returned
Ahuntsic	5	4	80
Barclay	5	3	60
Cecil Newman	5	3	60
Devonshire	8	6	75
Glencoe	6	6	100
Guy Drummond	6	4	67
Herbert Symonds	6	5	83
Kensington	6	4	67

Table 1--continued

Schools	Number Administered	Number Returned	Percent Returned
Marple Hill	5	4	80
Morison	6	5	83
Parkdale	6	5	83
Rosedale	5	4	80
Sinclair Laird	6	5	83
Sir Arthur Currie	5	4	80
Summarlea	6	5	83
Surrey Gardens	6	5	83
Victoria	4	3	75
Westminster	8	7	88
Total	104	82	79

CHAPTER III

DATA ANALYSIS

The purpose of this chapter is to present and enlarge upon the data collected. In performing the analyses, the use of Instructional Television is the dependent variable, while independent variables are: accessibility of television sets, use of other media and methods, sex, teaching experience, age, relevance of ITV programmes, and teachers' perceived ITV effects on the normal teacher-student relationship created by face-to-face instruction.

For purposes of analysis all relevant hypotheses were tested statistically by use of Chi-square tests of independence. In addition, Yates's correction for continuity[1] was used in the appropriate tables.

Three hypotheses; hypothesis number 6, 8 and 9 were not tested due to insufficient data that could allow a meaningful interpretation of the analysis.

RESULTS

Hypothesis 1

Table 2 shows the analysis for this hypothesis. The results strongly supported the hypothesis that teachers who had ready access

[1]This correction is used where any of the expected frequencies are less than 5. See George A. Ferguson., Statistical Analysis in Psychology & Education, New York: McGraw Hill, 1971, Chapter 13, p. 188.

to TV sets would tend to use ITV programmes more than those who did not.[2] This suggests that there was a significant relationship between the variables of ITV use and access to TV sets.

Table 2

Relationship of ITV use and Accessibility of TV sets

		Instructional TV		Total
		Users	Non-users	
TV Sets	Easily accessible	31(86.1)	5(13.9)	36(67.9)
	Not easily accessible	9(52.9)	8(47.1)	17(32.7)
Total		40(75.4)	13(24.6)	53(100.0)

Chi-square = 6.905, df=1; $p < .01$

Hypothesis 2

The analysis for this hypothesis involved finding the relationship of ITV use and the use of six other instructional media[3] and methods. Table 3 shows the findings on the relationship of ITV use and the use of charts, posters and graphs in teaching. From the analysis in Table 3, there was enough evidence to suggest that the use of ITV was strongly associated with the use of charts, graphs

[2]Television users in Table 2 refer to those teachers who use television one or more times per week.

[3]The six media and methods were selected from 18 media and methods included in the instrument. The choice was based on the rate of teachers responses per media and methods used in teaching.

and posters.[4] The two classroom teaching practices were significantly related in this analysis.

Of the instructional media and methods selected to test this hypothesis, only two (programmed materials and simulation and gaming) revealed that their classroom use was not related to the use of instructional television. This suggests that the two variables examined were independent of each other.

Table 3

Relationship of ITV use and the use of Charts, posters and graphs in teaching

		Instructional TV		Total
		Users	Non-users	
Charts, Posters and Graphs.	Users	31(96.8)	1(3.2)	32(76.3)
	Non Users	3(25.0)	9(75.0)	12(23.7)
Total		34(76.3)	10(22.7)	44(100.0)

Chi-square = 22.968, df=1, $p < .001$

The findings for the relationship of ITV use and the use of the overhead projector appear in Table 4. The association of the two variables was found to be significant. This suggests that teachers who made use of the overhead projector also made use of instructional television.

[4]Instructional media users in Table 3 and those which follow are those who use instructional media occassionally to a great deal.

Table 4

Relationship of ITV use and the use of the Overhead projector

		Instructional TV		Total
		Users	Non-users	
Overhead Projector	Users	28(96.5)	1(3.5)	29(65.5)
	Non-users	7(46.7)	8(53.3)	15(35.0)
Total		35(79.5)	9(20.5)	44(100.0)

Chi-square = 10.989, df=1, $p < .001$

In Table 5 the relationship of ITV use and the use of programmed materials in teaching was examined. The analysis did not reveal any significant relationship between the variables.

Table 5

Relationship of ITV use and the use of Programmed materials

		Instructional TV		Total
		Users	Non-users	
Programmed Materials	Users	14(82.3)	3(17.7)	17(60.7)
	Non -users	6(54.6)	5(45.4)	11(39.3)
		20(71.4)	8(28.6)	28(100.0)

Chi-square = 2.421, df=1; N.S.D

The use of filmstrips/slides and its relationship to ITV use was also examined. Table 6 shows the significance of the relationship.

This suggests that the two teaching practices were not independent of one another; those teachers who used ITV also tended to use filmstrips/slides in their teaching.

Table 6

Relationship of ITV use and the use of Filmstrips/slides in teaching

		Instructional TV		Total
		Users	Non-users	
Filmstrips & Slides in Teaching	Users	32(96.6)	1(3.4)	33(71.7)
	Non-users	3(33.1)	10(66.9)	13(28.3)
Total		35(76.0)	11(24.0)	46(100.0)

Chi-square = 26.969, df=1; $p < .001$

The relationship of 16mm film use and ITV use is shown in Table 7. The analysis revealed a highly significant relationship between the two classroom practices.

Table 7

Relationship of ITV use and the use of 16mm films

		Instructional TV		Total
		Users	Non-users	
16mm Film in Teaching	Users	33(97.0)	1(3.0)	34(77.3)

Table 7--continued

		Instructional TV		Total
		Users	Non-users	
16mm Film in Teaching	Non-users	2(20.0)	8(80.0)	10(22.7)
Total		35(79.5	9(20.5)	44(100.0)

Chi-square = 23.831, df=1 $p < .001$

The application of Simulation and Gaming to classroom teaching was the last item to be compared with ITV use. Table 8 shows the results of the analysis. There was no evidence for any significant relationship between the use of ITV and the use of Simulation and Gaming in teaching. This suggests that the two teaching practices are independent of each other.

Table 8

Relationship of ITV use and the use of Simulation and Gaming in teaching

		Instructional TV		Total
		Users	Non-users	
Simulation & Gaming in Teaching	Users	14(93.6)	2(6.4)	16(51.6)
	Non-users	8(51.1)	7(48.9)	15(48.4)
Total		22(71.0)	9(29.0)	31(100,0)

Chi-square = 1.333, df=1 N.S.D

Of the instructional media and methods selected to test hypothesis no.2, only two (programmed materials and Simulation and Gaming) revealed that their use in the classroom was not associated with ITV use. The six instructional media and method items were selected for analysis on the basis of the frequency of responses.

Hypothesis 3

Data from teachers' responses illustrated that, (i) teachers taught a variety of school subjects regardless of their college level concentration, and (ii) the majority of teachers belonged to the Social Sciences specialization group and the Languages group, including foreign languages (see Appendix B page 54). It was therefore decided not to test this hypothesis.

Hypothesis 4

The findings for this hypothesis did not support the hypothesis that female teachers would tend to use ITV more than male teachers. In this finding, it was evident that ITV use was independent of the sex of the user. Table 9 shows the finding.

Table 9.

Relationship of ITV use and Sex of the teacher

	Instructional TV		Total
	Users	Non-users	
Female teachers	31(81.6)	7(18.4)	38(71.7)

Table 9--continued

	Instructional TV		Total
	Users	Non-users	
Sex			
Male teachers	9(60.0)	6(40.0)	15(28.3)
Total	40(74.9)	13(25.1)	53(100.0)

Chi-square = 2.695, df=1 N.S.D

Hypothesis 5

The results of the analysis showed that more than five years of teaching had virtually no relationship to the use of ITV in teaching. The hypothesis was rejected as false. Table 10 below shows the results.

Table 10

Relationship of Teaching Experience and ITV use

		Instructional TV		Total
		Users	Non-users	
Teaching Experience	Less than 5 years	13(65.0)	7(35.0)	20(37.7)
	More than 5 years	27(88.7)	6(11.3)	33(66.3)
Total		40(85.5)	13(24.5)	53(100.0)

Chi-square = 1.903, df=1; N.S.D

Hypothesis 6

Due to lack of sufficient data, this hypothesis was not tested.

Hypothesis 7

Analysis for this hypothesis revealed that there was no relationship between ITV use and age of the teacher. The hypothesis that teachers in the age bracket 20-29 years would tend to use ITV more than those over that age was rejected. Table 11 shows the findings.

Table 11

Relationship of ITV use and Age

		Instructional TV		Total
		Users	Non-users	
Age Group	20-29 Years	25(75.5)	9(24.5)	34(64.1)
	Over 29 Years	15(79.0)	4(21.0)	19(35.9)
Total		40(75.0)	13(24.5)	53(100.0)

Chi-square = 1.111, df=1 N.S.D

Hypothesis 8

Data collected was not amenable to any meaningful analysis. This made it impossible to test this hypothesis.

Hypothesis 9

Here again, cell frequencies were not large enough to allow for a meaningful interpretation of the analysis.

Hypothesis 10

Table 12 shows the findings for this hypothesis. The findings justified the rejection of the stated hypothesis that ITV use would be related to the relevance of ITV programme series. This suggests that the variables had no association.

Table 12

Relationship of ITV use and the relevance of ITV programmes

		Instructional TV		Total
		Users	Non-users	
ITV Programme Series	Relevant	26(96.3)	1(3.7)	27(77.5)
	Irrelevant	10(77.0)	3(23.0)	13(22.5)
Total		36(90.0)	4(10.0)	40(100.0)

Chi-square = 1.682, df=1 N.S.D.

Hypothesis 11

The relationship of teachers responses to perceived ITV effects on the normal teacher-pupil relationship created by face-to-face teaching appears in Table 13. There was no evidence which suggested that ITV use was in any way related to the response indicating ITV effect on the relationship mentioned. The hypothesis that teachers who perceived ITV as having effect on the normal teacher-student relationship would tend to use ITV less than those who did not was rejected.

Table 13

Relationship of ITV use and Teachers' responses on the ITV effects on teachers-student relations

	Instructional TV		Total
	Users	Non-users	
ITV Has effects	7(77.8)	2(22.2	9(22.2)
Has no effects	29(87.8)	3(9.3)	32(78.0)
Total	36(87.8)	5(12.2)	41(100.0)

Chi-square = .2101, df=1, N.S.D

As indicated at the outset, the purpose of this study was to examine the relationship of ITV use and the variables mentioned. However, the limitation has been lack of meaningful data that were needed to test all the hypotheses cited in the study. With this limitation in mind, further work on determining the relationship between the use of instructional television and the variables which could not be measured here has to be considered. This suggests that a larger sample and perhaps a different way of structuring questions should be given foremost consideration in studies of this nature.

However, the significant relationships found in the relevant hypotheses (hypotheses 1 and 2), strongly support earlier findings by Bessent, Harris and Thomas (1968), and by Aquino (1970), concerning the relationship between teachers' use of ITV and accessibility and

and availability of instructional television and other media (with the exception of the two methods: programmed materials and simulation and gaming).

It also seems reasonable to indicate that among the insignificant relationships revealed in the analysis, the rejection of the hypothesis that teachers who perceived ITV effects on teacher-pupil relationship would tend to use ITV less than those who did not, strongly support earlier findings by Ayers (1972) who reported that teachers rejected such a notion as having a relationship to their use of television in the classroom.

Sex was found to be a variable of major consequence upon ITV use in the study conducted by the Quebec Department of Education (1966). It was reported that female teachers made use of ITV to a greater proportion that male teachers. There was no evidence in this study to suggest that sex was associated with ITV use. The association was found to be insignificant.

According to Newton (1971), relevance of ITV programme series was regarded as one of the major factors for teachers' use of ITV. There was no relationship between teachers' use of ITV and programme relevance in this study. The findings of this study did not support such an association.

Teaching experience was also found in the Quebec Education Department (1966) study as having a relationship to the use of instructional television in the schools surveyed. As has been shown in this investigation, as a variable, teaching experience had no significant relationship to ITV use.

Finally, although there has been a paucity of research on the relationship of age and the use of media, this limited study revealed that ITV use and age of the teacher were independent of each other.

The foregoing resume of the findings, it should be emphasized, should be considered within the limitations of the study.

CHAPTER IV

GENERAL CONCLUSIONS, SUGGESTIONS FOR FURTHER RESEARCH AND SUMMARY

The purpose of this chapter is to present the general conclusions deriving from the study as those set forth in previous investigation. Suggestions for further research are also provided in addition to a resume of the primary findings in this study.

GENERAL CONCLUSIONS

The study began as a pilot investigation on the use of instructional television in elementary schools of the metropolitan area of Montreal. The conclusions set forth in this section are thus limited to the time the study was conducted and the population sampled.

The methodology employed in this study was based on the assumptions that teachers' attitudes in form of written verbal responses to largely open-end questions would elicit reasons for using and not using instructional television in the classroom.

It was further assumed that the demographic data provided by the teachers, would be vital in comparing such data with other variables related to ITV use.

Support for the former assumption was rendered through the post-coding of teachers' responses inherent in this study. Their responses to relevance of ITV programme series, teachers' perceived

effects of ITV on the normal teacher-pupil relations, to mention only a few, were used to test the formulated hypotheses. Through this process both the significant and insignificant findings came to light.

Support for the latter assumption was derived from the findings on the relationships of such variables as age, sex, and years of teaching experience.

However, this study was confined to specific grade levels of the elementary schools. With these observations in mind, the following general conclusions are advanced:

1. In an absolute sense, accessibility of television sets in the teaching environments greatly influenced teachers' use of instructional television. This has been shown to be true in the findings regardless of whether the programmes series were relevant to the teaching topic at hand.

2. Since the association, or relationship between the use of instructional television and the use of other media such as charts, posters and graphs, filmstrips and slides, 16mm instructional films, and the overhead projector stood out markedly well, there was every likelihood to assume that such media were an integral part of the elementary schools curricula. However, the limitation of the study should not be overlooked.

Instructional television emerges in this study as a popular medium whose use is without regard to sex, age or teaching experience of the teachers.

SUGGESTIONS FOR FURTHER RESEARCH

Limited as this study has been, there is room for debate about what was being measured. However, the most obvious implication emanating from this study is the need for further evidence which relates teachers' use of instructional television and their attitudes. This poses the question: Is the use of instructional television a function of teachers' attitudes to instructional television? Further studies are needed to determine whether facets of teachers' attitudes to instructional television are a function of their teacher education and training programmes, their early contacts with television, respect for their students or pressure from authorities. The relationship of the latter variable to the use of instructional television was not examined due to lack of meaningful data. The fact that 40 teachers (48.5%) out of 82 are regular users of instructional television suggests that there may be other subtle reasons which this study was not able to uncover.

There are, however, a number of observations that with the wisdom of hindsight can be made here. Researchers using open-end questions to collect data as was the case in this study, are cautioned to include a fair number of scaled and structured response mode of questions, especially if the questionnaire is open to pressures of social desirability.

Further, a larger sample should be obtained to enable the investigator to make valid generalizations of the findings. A major concern of an attitude survey research is to elicit as much information as possible within the time and resources available. This

study was confined only to one School Board. Similar studies should in the future be extended to other School Boards.

Although the methodology of this study was carefully developed, it undoubtedly can be improved upon in the future. One way would be to determine and analyze the exact programme series used by teachers and how the programmes fit in their lesson plans. Another way would be to devise a method to compare teachers' attitudes and students' attitudes to programme series used in the classroom.

Finally, the method of submission of the questionnaire needs careful consideration. Whether the questionnaires should be sent to teachers directly or through the school heads is a decision that will always face the researcher.

Whatever design future researchers adopt in their studies, efforts should be concentrated on finding out the most critical factors that hinder the full integration of instructional television in the school curriculum in North America. Dumolin (1971) has noted that in the United States instructional television forms less than 3% of the instruction in American schools, and it is still regarded as a novelty rather than an integral part of the curriculum design. It is still not widely known as to what percentage of classroom instruction television takes in the Canadian schools. It is hoped that the findings presented in this study will help to stimulate further research on the integration of ITV in the school curriculum.

SUMMARY

The purpose of the study was: (1) to assess the extent of instructional television use in the elementary schools, (2) to determine factors that were related to teachers' use and non-use of instructional television.

A review of research in the background section to the present study pointed out the paucity of studies in this area of educational technology, particularly in the Montreal area. One study conducted in Quebec, and published in 1966, compared sex and teaching experience of teachers to the use of instructional television. Such efforts were noted as being very relevant to the present study. Findings from this study indicate that both sex and teaching experience were associated with the use of instructional television. In this study, sex, teaching experience, age, availability and accessibility of television sets, relevance of programme series, use of instructional media and methods other than instructional television, and teachers' responses to perceived effects of instructional television upon the normal teacher-student relationship, were treated as independent variables. The dependent variable was the use of instructional television.

In accordance with the design of the instrument, analysis of data was conducted in the following manner. Instructional television use response item frequencies were collapsed into groups of users and non-users. The frequency of use was noted but for the purposes of analysis, it was decided to use 2 X 2 contingency tables for data

analysis. All other relevant response items were reduced to 2 X 2 tables, that is, those items which had more than two frequencies of response.

Generally, the response items which received the greatest frequency of response were selected for data analysis. They were all compared with the use of instructional television to test the hypotheses. This process led to the testing of some hypotheses and not others.

Established relationships found in data analyses include the following:

1. Availability and accessibility of television sets in the instructional environment was generally associated with teachers' use of instructional television.

2. Use of other instructional media other than television was found to be highly related to instructional television use by teachers.

No significant relationship was found between the use of instructional methods such as programmed materials, and simulation and gaming, and the use of television in the classroom. There was also no evidence of significant relationships between instructional television use and such variables as age, teaching experience, sex of the teacher, relevance of programme series, and teachers' perceptions that television affects the normal teacher-pupil relationship created by face-to-face-teaching. Such factors were found to be independent of the use of instructional television in this study.

The most obvious recommendations to be drawn from the findings is that school administrators and instructional media personnel

should attend more carefully to acquiring and making accessible television sets and other instructional media and materials. There is little reason to resist the conclusion that teachers integrate television and other forms of media in their day-to-day teaching activities when such media are easily accessible in the teaching environments. However, the striking relationship between measures of accessibility of television sets and the use of instructional television calls for a systematic study. This raises the question: Is there a real relationship between physical-situational variables? To what extent does the accessibility of sets influence teachers' use of instructional television?

The answers to such questions would yield useful information to educators, producers of programmes and to many others concerned with the improvement of education in general, and learning resources in particular.

Appendix A

LETTER ACCOMPANYING QUESTIONNAIRE.

Dear Teacher,

I would very much appreciate your co-operation. I am a graduate student in the Educational Technology programme at Sir George Williams University in Montreal and a Tanzanian citizen on a Canadian Government scholarship,(Canadian International Development Agency). This survey is part of my programme requirements. Your answers will be a great help for the people of Tanzania where educational television will soon be part of the school curriculum.

Thank you in advance for your assistance.

Yours sincerely,

Elias Jengo.

3686 Rue Durocher,
Montreal 130
844-5088

N.B. This questionnaire has been approved by The Protestant School Board of Greater Montreal.

THE QUESTIONNAIRE.

Please answer each of the questions included in this questionnaire. Respond as accurately as you can, expressing your knowledge/or professional opinions. These responses will remain completely confidential.

---

1. Female____ Male____

2. Which of the age groups are you in?

____20-29 ____30-39 ____40-59 ____60 and over.

3. Your educational/professional level.

____Diploma in Education.
____Bachelor's degree(s).
____Graduate work beyond Bachelor's degree.
____Master's degree.
____Graduate work beyond Master's degree.
____Doctor's degree.

4. Please take a minute to read this list and then place a mark (X) against those which were part of your teacher education/training curriculum. Place another mark (X) on the appropriate scale that best indicates your use of that item in your teaching.

	Not At All	Occasionally	Quite Often	A great deal
____1. Bulletin boards	____	____	____	____
____2. Flannel boards	____	____	____	____
____3. Filmstrips & Slides	____	____	____	____
____4. 16mm Film	____	____	____	____
____5. Charts, posters and graphs	____	____	____	____
____6. Opaque projector	____	____	____	____
____7. Overhead projector	____	____	____	____
____8. Recordings (Tape/Disc).	____	____	____	____
____9. Programmed Material	____	____	____	____
____10. Video Tape Recorders	____	____	____	____
____11. Teaching with Television	____	____	____	____

___12. Production of Educational Films	___	___	___	___
___13. Production of Educational TV Programmes	___	___	___	___
___14. Production of Educational Radio materials	___	___	___	___
___15. Computer Assist. Instruction	___	___	___	___
___16. Theories of Mass Communications	___	___	___	___
___17. Psychological Foundations of Audiovisual Materials (e.g. Visual Perception)	___	___	___	___
___18. Simulation & Gaming	___	___	___	___

5. In which of the following subject areas do you have college level concentrations?

Business____ Fine Arts____ English____ Mathematics____
Foreign Languages____ Social Sciences____ Special Educ.____
Elementary Educ.____ Secondary Educ.____
Others (specify)_____

_____

6. What grade level do you teach? (circle one or more).

1 2 3 4 5 6 7

7. What subjects do you teach?
Art and Crafts____ French____ Home Economics____
Geography____ History____ Mathematics____
Science____ Physical Education____ Music____
Industrial Arts (Woodwork etc.)____ Language Arts____
Others (specify)_____

_____

_____

8. How many years of teaching experience do you have?

Less than 5____ From 6-10____ More than 10____

9. Do you have ready access to a television set in your classroom?

YES_____ NO_____

Would you prefer to have a television set in your classroom?_____
How often per week do you use television programmes in the classroom?_____

10. In what form do you use school television programmes?

LIVE_____ VIDEO TAPE PLAYBACK

Which of the two above do you mostly use?_____

11. What contributions does school television make in your lesson planning?_____

12. Do you feel that teaching by television impairs normal teacher-student relationship created by face teaching in the classroom?

13. Do you feel that the television programme series in your teaching subject area(s) is relevant to your total teaching programme?

YES_____ NO_____ NOT APPLICABLE_____

13a. Please list brief reasons for your answer to the above question;

14. Would you please mark each scale below in terms of how you would rate the television teaching in your subject area(s).

HU = Highly unfavourable, UF = Unfavourable, N = Neutral

F = Favourable HF = Highly Favourable

	HU	UF	N	F	HF
i. Personality of Studio teacher.	___	___	___	___	___
ii. Teaching ability of programmes.	___	___	___	___	___
iii. Teaching methods.	___	___	___	___	___
iv. Choice of subject matter	___	___	___	___	___

15. Do these factors influence your decision to use or not to use school television programmes in your classroom?

YES____ NO____

16. How much influence do the following persons/establishment have on the use of television in the classroom?

	None	Some	Quite a Bit	A Great Deal
Board of Education	___	___	___	___
Superintendent	___	___	___	___
Principal	___	___	___	___
Subject Head	___	___	___	___
Others (specify)	___	___	___	___

17. How much influence do the following persons/establishment have on your decision to use or not to use classroom television in your day-to-day activities?

	None	Some	Quite a Bit	A Great Deal
Board of Education	___	___	___	___
Superintendent	___	___	___	___
Principal	___	___	___	___
Subject Head	___	___	___	___
Others (specify)	___	___	___	___

18. Please list other factors which influence your decision to use instructional television programmes in your classroom.

I WANT TO THANK YOU VERY MUCH FOR TAKING TIME TO ANSWER THESE QUESTIONS. I KNOW IT HAS BEEN AN IMPOSITION ON YOU AND YOUR CLASS. I VERY MUCH APPRECIATE YOUR HELP. SHOULD YOU COME TO TANZANIA, PLEASE CONTACT ME AT: INSTITUTE OF EDUCATION, UNIVERSITY OF DAR ES SALAAM, P.O. BOX 35094, DAR ES SALAAM, TANZANIA. (After April 1973).

Appendix B

CODE BOOK

Cols.	1-3 Subject Number (001-100)		
Col.	4 Sex of subject		%
	0= No response	0	0
	1= Female	61	74.4
	2= Male	21	25.6
Col.	5 Age of subject		
	0= No response	0	1.2
	1=20-29	54	65.4
	2=30-39	17	20.0
	3=40-49	11	13.4
	4=60-Over	0	0
Col.	6 Background		
	0= No response/Not Applicable	2	2.4
	1= Diploma in Educ	40	48.8
	2= Bachelor's degree	30	36.6
	3= Beyond Bachelor's degree	6	7.3
	4= Masters degree	4	4.9
	5= Beyond Master's degree	0	0
	6= Doctor's degree	0	0
Col.	7-24 Teacher Training curriculum items.- Bulletin Boards		
	0= No response	49	59.8

			%
	1= Not part of training.....	1	1.2
	2= Part of training.....	32	39.0
Col.	8 Flannel boards.		
	0= No response.....	48	58.5
	1= Not part of training.....	0	0.0
	2= Part of training.....	34	41.5
Col.	9 Filmstrips/Slides		
	0= No response.....	38	45.2
	1= Not part of training.....	0	0
	2= Part of training.....	45	54.8
Col.	10 16mm Films		
	0= No response.....	44	53.7
	1= Not part of training.....	1	1.2
	2= Part of training.....	37	45.1
Col.	11 Charts, posters and graphs		
	0= No response.....	33	40.2
	1= Not part of training.....	0	0.0
	2= Part of training.....	49	59.8
Col.	12 Opaque projector		
	0= No response.....	45	54.9
	1= Not part of training.....	0	0.0
	2= Part of training.....	37	45.1
Col.	13 Overhead projector		
	0= No response.....	48	58.5
	1= Not part of training.....	0	0.0
	2= Part of training.....	34	41.5

Col. 14	Recordings (Tape, Disc).		%
	0= No response	49	59.8
	1= Not part of training	0	0.0
	2= Part of training	33	40.2
Col. 15	Programmed material		
	0= No response	61	74.4
	1= Not part of training	0	0.0
	2= Part of training	21	25.6
Col. 16	Video-Tape Recorders.		
	0= No response	70	85.4
	1= Not part of training	1	1.2
	2= Part of training	11	13.4
Col. 17	Teaching with TV		
	0= No response	68	82.0
	1= Not part of training	2	3.0
	2= Part of training	12	15.0
Col. 18	Production of Educational films.		
	0= No response	76	92.7
	1= Not part of training	1	1.2
	2= Part of training	5	6.1
Col. 19	Production of Instructional TV programmes		
	0= No response	76	92.7
	1= Not part of training	2	2.4
	2= Part of training	4	4.9
Col. 20	Production of Educational Radio materials.		
	0= No response	77	93.9

			%
	1= Not part of training.....	2	2.4
	2= Part of training.....	3	3.7
Col.	21 Computer Assisted Instruction		
	0= No response.....	78	95.1
	1= Not part of training.....	2	2.4
	2= Part of training.....	2	2.4
Col.	22 Theories of Mass Communications.		
	0= No response.....	77	93.9
	1= Not part of training.....	2	2.4
	2= Part of training.....	3	3.7
Col.	23 Psychological foundations of AV materials.		
	0= No response.....	66	80.5
	1= Not part of training.....	2	2.4
	2= Part of training.....	14	17.1
Col.	24 Simulation and Gaming		
	0= No response.....	60	73.2
	1= Not part of training.....	2	2.4
	2= Part of training.....	20	24.4
Col.	25 Use of the items in Teaching - Bulletin Boards		
	0= No response.....	16	19.5
	1= Not at all.....	6	7.3
	2= Occasionally.....	22	26.8
	3= Quite often.....	21	25.6
	4= A Great Deal.....	17	20.7

Col. 26	Flannel boards		%
	0= No response	15	18.3
	1= Not at all	32	39.0
	2= Occasionally	18	22.0
	3= Quite often	11	13.4
	4= A Great Deal	6	7.3
Col. 27	Filmstrips/Slides		
	0= No response	10	12.2
	1= Not at all	4	4.9
	2= Occasionally	28	34.1
	3= Quite often	31	37.8
	4= A Great Deal	9	11.0
Col. 28	16mm Films		
	0= No response	11	13.4
	1= Not at all	6	7.3
	2= Occasionally	28	34.2
	3= Quite often	30	36.6
	4= A Great Deal	7	8.5
Col. 29	Charts, posters and graphs.		
	0= No response	13	15.9
	1= Not at all	7	8.5
	2= Occasionally	20	24.4
	3= Quite often	26	31.7
	4= A Great Deal	16	19.5
Col. 30	Opaque projector.		
	0= No response	19	23.2

			%
	1= Not at all	15	18.3
	2= Occasionally	28	34.1
	3= Quite often	12	14.6
	4= A Great Deal	8	9.8
Col.	31 Overhead projector		
	0= No response	12	14.6
	1= Not at all	11	13.4
	2= Occasionally	30	36.6
	3= Quite often	15	18.3
	4= A Great Deal	14	17.1
Col.	32 Recordings (Tape, Disc).		
	0= No response	18	22.0
	1= Not at all	11	13.4
	2= Occasionally	28	34.1
	3= Quite often	19	23.2
	4= A Great Deal	6	7.3
Col.	33 Programmed Material		
	0= No response	36	43.9
	1= Not at all	14	17.1
	2= Occasionally	18	22.0
	3= Quite often	8	9.8
	4= A Great Deal	6	7.2
Col.	34 Video-Tape Recorders		
	0= No response	29	35.3
	1= Not at all	24	29.3
	2= Occasionally	22	26.8

			%
3= Quite often		4	4.9
4= A Great Deal		3	3.7
Col. 35	Teaching with TV		
0= No response		33	40.2
1= Not at all		18	22.0
2= Occasionally		20	24.4
3= Quite often		8	9.8
4= A Great Deal		3	3.6
Col. 36	Production of Educational Films.		
0= No response		39	47.5
1= Not at all		29	35.5
2= Occasionally		10	12.2
3= Quite often		2	2.4
4= A Great Deal		2	2.4
Col. 37	Production of ITV materials.		
0= No response		41	50.0
1= Not at all		34	41.5
2= Occasionally		4	4.9
3= Quite often		2	2.4
4= A Great Deal		1	1.2
Col. 38	Production of Educational Radio materials.		
0= No response		41	50.0
1= Not at all		37	45.1
2= Occasionally		3	3.7
3= Quite often		1	1.2

			%
	4= A Great Deal.....	0	0.0
Col.	39 Computer Assisted Instruction.		
	0= No response.....	40	48.8
	1= Not at all.....	40	48.8
	2= Occasionally.....	1	1.2
	3= Quite often.....	1	1.2
	4= A Great Deal.....	0	0.0
Col.	40 Theories of Mass Communications.		
	0= No response.....	38	46.4
	1= Not at all.....	36	43.9
	2= Occasionally.....	6	7.3
	3= Quite often.....	2	2.4
	4= A Great Deal.....	0	0.0
Col.	41 Psychological foundations of AV Materials.		
	0= No response.....	37	45.1
	1= Not at all.....	36	43.9
	2= Occasionally.....	4	4.9
	3= Quite often.....	5	6.1
	4= A Great Deal.....	0	0.0
Col.	42 Simulation and Gaming.		
	0= No response.....	31	37.8
	1= Not at all.....	18	22.0
	2= Occasionally.....	18	22.0
	3= Quite often.....	8	9.8
	4= A Great Deal.....	7	8.4

Col. 43	College level concentration		%
	0= No response	29	35.4
	1= Business	0	0.0
	2= Fine Arts	3	3.7
	3= English	15	18.3
	4= Mathematics	3	3.7
	5= Foreign languages	6	7.2
	6= Social Sciences	24	29.3
	7= Others (Religion, Sociology)	2	2.4
Col. 44	College concentration		
	0= No response	27	32.9
	1= Elementary Education	47	57.3
	2= Special Education	3	3.7
	3= Secondary Education	5	6.1
Col. 45	Teaching Assignment		
	0= No response/Not Applicable	4	4.9
	1= Grade 4	13	15.9
	2= Grade 5	13	15.9
	3= Grade 6	26	31.7
	4= Grade 4 and 5	12	14.5
	5= Grade 5 and 6	8	9.8
	6= Grade 4 and 6	1	1.2
	7= Grades 4, 5 and 6	5	6.1
Col. 46	Subjects taught		
	0= No response/Not applicable	7	8.5

			%
	1= Social Sciences.....	3	3.7
	2= Sciences (Science, Mathematics).....	5	6.1
	3= Languages (Language arts, French).....	4	4.9
	4= Vocational (Art and Crafts, Ind. Arts Music, Physical Education, Home Economics).....	6	7.3
	5= Social Sciences and Science.....	22	26.8
	6= Social Sciences and Languages.....	9	11.0
	7= Social Sciences and Vocational.....	5	6.1
	8= All of above (1,2,3 and 4).....	21	25.6
Col. 47	Subjects taught		
	0= No response/Not applicable.....	31	37.8
	1= Sciences and Languages.....	27	32.9
	2= Sciences and Vocational.....	11	13.4
	3= Languages and Vocational.....	13	15.9
Col. 48	Teaching Experience		
	0= No response/Not applicable.....	0	0.0
	1= Less than 5 years.....	35	42.8
	2= From 6-10 years.....	24	29.4
	3= More than 10 years.....	23	27.8
Col. 49	Access to TV set		
	0= No response/Not applicable.....	0	0.0
	1= Easy access.....	59	72.0
	2= Not Easy Access.....	23	28.0

Col. 50	Preferance of TV set in the classroom		%
	0= No response/Not applicable.....	28	34.2
	1= Yes.....	27	32.9
	2= No.....	27	32.9
Col. 51	Frequency of ITV use		
	0= No response/Not applicable.....	29	35.4
	1= Once per week.....	18	22.0
	2= Twice per week.....	22	26.8
	3= Not used at all.....	13	15.8
Col. 52	ITV form		
	0= No response/Not applicable.....	21	25.6
	1= Live.....	55	67.1
	2= Video-Tape Playback.....	6	7.3
Col. 53	ITV form mostly used		
	0= No response/Not applicable.....	35	42.7
	1= Live TV.....	41	50.0
	2= VTR.....	6	7.3
Col. 54	Contribution of ITV in lesson planning.		
	0= No response/Not applicable.....	22	26.9
	1= Enriches classroom teaching.....	30	36.6
	2= Very little contribution.....	23	28.0
	3= No contribution.....	7	8.5
Col. 55	ITV effect on teacher-student relationship.		
	0= No response/Not applicable.....	19	23.2
	1= Yes - if used frequently.....	18	22.0
	2= No - if used occasionally.....	45	54.8

Col.	56 Relevance of programme series		%
	0= No response/Not applicable.....	27	32.9
	1= Programme relevant.....	35	42.7
	2= Programme irrelevant.....	20	24.4
Col.	57 Reasons for above answer		
	0= No response/Not applicable.....	36	43.8
	1= Irrelevant to curriculum.....	14	17.1
	2= Fits in curriculum.....	24	29.3
	3= Inadequate covering of subject matter.	8	9.8
Col.	58 Personality of the studio teacher		
	0= No response/Not applicable.....	28	34.1
	1= Highly favourable.....	1	1.2
	2= Unfavourable.....	4	4.9
	3= Neutral.....	21	25.7
	4= Favourable.....	22	26.8
	5= Highly favourable.....	6	7.3
Col.	59 Teaching ability of programmes		
	0= No response/Not applicable.....	26	31.6
	1= Highly unfavourable.....	2	2.4
	2= Unfavourable.....	4	4.9
	3= Neutral.....	13	15.9
	4= Favourable.....	29	35.4
	5= Highly favourable.....	8	9.8
Col.	60 Teaching methods		
	0= No response/Not applicable.....	27	32.9
	1= Highly unfavourable.....	0	0.0

			%
	2= Unfavourable.....	5	6.1
	3= Neutral.....	16	19.5
	4= Favourable.....	25	30.5
	5= Highly favourable.....	9	11.0
Col.	61 Choice of subject matter.		
	0= No response/Not applicable.....	25	30.5
	1= Highly unfavourable.....	4	4.9
	2= Unfavourable.....	6	7.3
	3= Neutral.....	16	19.5
	4= Favourable.....	25	30.5
	5= Highly favourable.....	6	7.3
Col.	62 Influence of the above on ITV use		
	0= No response.....	22	26.8
	1= They have influence.....	51	62.2
	2= They do not have influence.....	9	11.0
Col.	63 Influence of Board of Educ. on ITV use		
	0= No response.....	23	28.1
	1= None.....	32	39.0
	2= Some.....	17	20.7
	3= Quite a bit.....	5	6.1
	4= A Great Deal.....	5	6.1
Col.	64 Superintendent		
	0= No response.....	28	34.1
	1= None.....	39	47.6
	2= Some.....	10	12.2

			%
	3= Quite a bit.....	4	4.9
	4= A Great Deal.....	1	1.2
Col.	65 Principal		
	0= No response.....	22	26.8
	1= None.....	27	32.9
	2= Some.....	26	31.8
	3= Quite a bit.....	6	7.3
	4= A Great Deal.....	1	1.2
Col.	66 Subject Head		
	0= No response.....	41	50.0
	1= None.....	28	34.1
	2= Some.....	7	8.6
	3= Quite a bit.....	4	4.9
	4= A Great Deal.....	2	2.4
Col.	67 Others (TV producers, fellow teachers)		
	0= No response.....	58	70.8
	1= None.....	19	23.2
	2= Some.....	2	2.4
	3= Quite a bit.....	2	2.4
	4= A Great Deal.....	1	1.2
Col.	68 Influence of Board of Educ. on ITV use		
	0= No response.....	24	29.2
	1= None.....	43	52.4
	2= Some.....	9	11.0
	3= Quite a bit.....	3	3.7

			%
	4= A Great Deal.....	3	3.7
Col.	69 Superintendent		
	0= No response.....	26	31.8
	1= None.....	47	57.3
	2= Some.....	6	7.3
	3= Quite a bit.....	1	1.2
	4= A Great Deal.....	2	2.4
Col.	70 Principal		
	0= No response.....	25	30.5
	1= None.....	35	42.7
	2= Some.....	14	17.1
	3= Quite a bit.....	7	8.5
	4= A Great Deal.....	1	1.2
Col.	71 Subject Head		
	0= No response.....	37	45.1
	1= None.....	34	41.5
	2= Some.....	6	7.3
	3= Quite a bit.....	4	4.9
	4= A Great Deal.....	1	1.2
Col.	72 Others (TV producers, fellow teachers)		
	0= No response.....	59	72.0
	1= None.....	23	28.0
	2= Some.....	0	0.0
	3= Quite a bit.....	0	0.0
	4= A Great Deal.....	0	0.0

Col. 73 Other factors influencing ITV use		%
0= No response.....	44	53.7
1= Schedule of programmes.....	14	17.1
2= Relevance of programme to current teaching.....	12	14.6
3= Personal inclination.....	12	14.6

Appendix C

A Summary of ITV weekly programme frequency for English Broadcasts in Montreal Schools 1972/1973.[1]

Programme	Grades 1	2	3	4	5	6	7	Time of Day
French	-	-	2	2	2	1	1	9.15
Geography	-	-	-	1	1	1	1	9.15, 10.00
History	-	-	-	1	1	1	1	9.00, 9.30
Lang. Arts.	-	-	-	2	2	2	2	9.15
Music	-	-	-	-	1	1	1	10.00
Nat. Science	-	-	-	1	1	1	1	10.20
communications	-	-	-	1	1	1	1	10.00

[1] Not an official summary of programmes. This one has been compiled by the investigator from an examination of the broadcast manuals for 1972/1973 school year.

Appendix D

DEFINITION OF TERMS.

Educational Technology- At Sir George Williams University, the concept is defined as "the development, application and evaluation of systems, techniques and aids to improve the process of human learning". This view of educational technology has its origin in the behavioural science; the physical science approach (mechanization) is seen purely as a problem of presentation. Other common terms such as Audiovisual Education, Audiovisual Technology, Educational Communications, Instructional Technology, Learning Technology, Visual Education, expand or contract the boundaries of the educational technology field and lay different emphases within it.

Instructional Television- An educational practice in which selected information is broadcast to the learner to enable him to engage in specified behaviours under specified conditions. The term 'educational television' is sometimes used, but 'education' is a very wide concept. In fact, many television programmes can be said to be 'educational' in the sense that they show something worthwhile. But it is debatable whether such programmes are for instructional purposes.

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