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ABSTRACT

This study analyzed teacher assessment of several factors related to selected filmstrips provided to teachers by the American Iron and Steel Institute. Main concerns of the study related to applicability of the filmstrip to instructional programs, assessment of accuracy of information contained, effectiveness of content, effectiveness of explanation of difficult concepts, assessment of value of content of pictures, comparison with commercially produced filmstrips, and comments concerning materials. A normative survey was conducted using a questionnaire instrument sent to 1200 randomly selected teachers who had previously received one of three filmstrips from the institute. Findings show that of the total responses received, consisting of a seventy-four per cent return of the questionnaires, over two-thirds of the respondents rated the materials as good or outstanding in regard to curricular acceptability; determined the information to be accurate; evaluated classroom use effectiveness of filmstrips as good or outstanding; determined that the films presented difficult concepts effectively; rated the visual content highly; evaluated industry's attitude as unobtrusive; and considered the filmstrips comparable to commercial materials. The study concludes that since the overall attitude toward the filmstrips were highly favorable, industry should continue to sponsor such educational materials. (SJM)

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A STUDY OF TEACHER OPINIONS CONCERNING SELECTED  
FREE FILMSTRIPS PROVIDED BY THE AMERICAN  
IRON AND STEEL INSTITUTE TO SCHOOLS  
THROUGHOUT THE UNITED STATES

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C. R. D.

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## CHAPTER I

## STATEMENT OF THE PROBLEM AND DESIGN OF THE STUDY

For the past two or more decades there has been a great quantity of free and inexpensive materials available to teachers for use with their classes. This was emphasized in a speech delivered by Cora A. Mowry, Director of the Division of Organization Relations of the National Education Association, on March 1, 1966. In it she called attention to the greatly accelerated production of these materials in recent years. (Mowry: unpublished paper)\*

Evidence of the amount and kinds of free materials available was obtained by examining several supplementary materials directories, some of which are revised annually. Examples of these directories were Educators Guide to Free Materials (a series of guides listing free pamphlets, bulletins, film strips, movies and tape recordings) (Suttles: series); Free and Inexpensive Learning Materials (Peabody College: series); and Educational Media Index (McGraw-Hill: series).

Further, articles and monthly columns appear in trade papers and magazines informing teachers of the availability of the most recent free and inexpensive materials. In addition to these columns there are selected series of pamphlets which inform teachers of materials that could be used.

\*Names and citations in parentheses refer to the bibliography; numbers after the colon are page numbers.

Finally, the producers of these free materials are interested in their utilization by teachers. This study, sponsored by The American Iron and Steel Institute, Washington, D. C. is evidence of the producer's interest in determining the strengths and weaknesses of the materials being sent into classrooms throughout the United States and utilized in the instructional program.

#### THE PROBLEM

Underlying assumptions. For the purposes of this study it was assumed that the following assumptions were true:

1. That teachers did use free filmstrips as a means of supplementing the textbook as an instructional tool.
2. That these teachers, when they received these materials from the producer and used them with their classes made a subjective judgment of the content of the filmstrips.
3. That these users would communicate their assessments of these materials to the producer, and that a mailed questionnaire was the most expeditious manner in which these data could be collected.

Specific problems. The specific problems of this study were to study teacher assessment of the following factors relating to selected filmstrips provided them by The American Iron and Steel Institute:

1. How these filmstrips fit into their instructional program.

2. Teacher assessment of the accuracy of the information contained in the selected filmstrips.

3. The effectiveness of the filmstrips' content in the instructional program.

4. The teachers' assessment of the degree to which the filmstrips effectively explained difficult concepts.

5. The teachers' assessments of the pictures used in the filmstrips relative to clarity, pertinence and recency.

6. The effect upon students of the fact that the filmstrips were industry sponsored might have, in the opinion of the respondents.

7. A comparison of the industry sponsored filmstrips with comparable commercially produced materials, based upon user assessment.

8. A compilation of user comments, based upon the above items, classified by individual filmstrip.

Importance of the study. A thorough search of the literature and reports of research had not revealed that teacher judgment of the filmstrips The Chemistry of Steel, America Grows with Iron and Steel, and Money at Work in the Steel Industry (all provided at no cost by the American Iron and Steel Institute) had been tested or reported in periodical literature, nor had factors which may have affected this judgment been identified. This study was intended, therefore, to add to the body of knowledge

concerned with teacher assessment of free and inexpensive materials, and to identify factors which may have had an effect upon this subjective judgment.

#### DEFINITIONS OF TERMS USED

Several terms employed in the description of this study were defined as follows:

Catharsis. . . .the process of bringing repressed ideas into consciousness and thereby dealing with them; more broadly, an expressive reaction (usually emotional or accompanied by emotion), believed to have some psycho-therapeutic effect. (Good: 77)

Closed Form Questions. Responses are made to a set of provided answers. The information that is desired may be more easily counted, tabulated, and analyzed. (Best:144)

Free and Inexpensive Materials. Materials available at no cost to the teacher, or at a cost that only included postage.

Non-respondent. Any recipient of a questionnaire who does not reply.

Open Form Questions. Used for intensive studies or exploration of novel problems. Each answer is a written description and much room is usually available for free response. (Best:144-45)

Questionnaire. A list of planned, written questions related to a particular topic, with space provided for indicating the response to each question, intended for submission to a number of persons for reply, commonly used in survey studies and in the measure of attitudes and opinions. (Good:435)

Respondent. Any recipient of a questionnaire who actually replies to the questionnaire. (Good:466)

### LIMITATIONS OF THE STUDY

One limiting factor which must be considered in any questionnaire study which utilizes the mailed form is that nonresponse or failure to obtain information from the respondents. According to Kish this nonresponse may fall into a number of categories, any one of which might describe the nonrespondent. Included in these categories are: Temporarily unavailable; Refusals; Incapacity or inability; Not found; and Lost schedules. (Kish:533-34)

Another limitation was the nature of the population, i.e. all persons requesting filmstrips only from the American Iron and Steel Institute within a specified period of time. Because of the nature of the teacher requesting materials (must write and request same) the results could be skewed unless interpreted only in relationship to the population sampled.

### DESIGN AND RATIONALE

To obtain the desired information a questionnaire was developed, as was an accompanying cover letter which included an explanation of the study (See Appendix A). According to established patterns found in research, certain information, details, and form were included in the design of the cover letter. Such included items were as follows: the purpose of the study, the importance of the study to the respondent, the value of the respondent's reply, and the signature and title

of the educator involved in this particular study. (Borg: 214-15) The cover letter did not mention any confidential treatment of the returned information. A summary of the findings was promised. (Young:205) General attractiveness was stressed. Bold pica type printing was used on good quality white bond paper bearing the official letterhead of Indiana University at South Bend. (Young:203)

According to Good and Scates, questionnaires constitute a major, reliable survey instrument for data-gathering in various survey studies. (Good and Scates:606) The mailed questionnaire was used because personal contact was impossible in most instances and unnecessary for this study. Acknowledging that the mailed questionnaire technique possessed several disadvantages such as address problems due to possible widespread mobility (Snelling:127) and the possibility of some replies being incomplete or not returned, this technique was still employed in gathering the data for this study due to its proven general effectiveness and its relative low cost. (Droege:256)

Concerning the beginning statements (questions 1 - 6, sex, and grade level utilization of materials) this information was requested for possible relationships drawn between demographic data and filmstrip utilization and opinions regarding materials.

In the ordering of questions, items were placed in a funnel structure, a psychologically and logically sound

sequence, with simple, interesting, and neutral questions preceding more difficult, crucial, and personal ones.

(VanDalen:257)

This idea is succinctly presented by Levine and Gordon who stated:

The position of the question in relation to other questions frequently affects the responses. It is best to keep the first few questions simple and easy to answer, though not trivial. Respondents tend to be discouraged when they have to answer difficult or relatively personal questions in the initial part of the questionnaire. . . . (Levine and Gordon:572)

Questions were kept short because brevity was stressed in research. The question length did not usually exceed 20 words, with every word being familiar and concise, thus involving a minimum of the respondents time (Oppenheim: 56)

Both closed and open form questions were employed in the questionnaire. The closed form type question, requiring checked responses, was used to secure categorized data. Open form questions were used, in conjunction with the closed form, in order to provide a more concise picture of how the respondent reacts to various segments of the topic. (VanDalen:256)

The open type question form was employed in some questions even though greater difficulty in tabulation were presented. Open form questions may also produce answers that are impossible to tabulate. For this reason all responses received to the open-form questions are reproduced in Appendixes B, C, and D. The reader is urged to

peruse these in some depth and draw his own conclusions, within the context of the limitations noted. Despite its limitations and difficulties in analyzing replies this type of question tends to avoid superficial replies and allows the respondent to answer in depth. (Sax: 112)

When wording questions the following ideas were taken into account: Using simple words; Making the questions concise; Formulating questions to yield exact information desired; Avoiding ambiguous questions; Avoiding the use of "danger" words connoting emotionalism, stereotyping, etc.; Making allowance for a range of possible responses; and Designing realistic multiple-choice alternatives. (Parten: 200-01)

Some questions were asked, not only for information but also to prepare the respondent for the subject area, because of their general nature, and because these types of questions are expected in any questionnaire. Other questions were included for the purpose of catharsis, or release of tension, and to allow the respondent to state any further comments or ideas. (Good and Scates:619)

Oppenheim observed that:

The classification of questions are a special type of factual question that ask about sex, age, . . . education, . . . and so on. These are of special importance in stratifying the sample and tend to recur from survey to survey; for both these reasons they are worth special attention. (Oppenheim: 57)

## INSTRUMENTATION

Heading the list of numbered questions (1, 2, and 3) were the demographic data questions. The answers elicited from these questions served as tools for the interpretation of answers to the questions which followed. Questions 4 and 5 dealt more directly with those matters directly related to the teaching background of the teachers who utilized the filmstrips. (Sax:218)

Age is a simple term which is often misunderstood because opinions vary as to when and for how long a person is a particular age. This question can be clarified by asking age to nearest birthday, date of birth, or age range. (Best:150) Since there was no need to know the respondents exact age the question was structured to determine only age ranges.

Questions 7 through 14 pertained to the main concerns of the study - applicability to instructional program, assessment of accuracy of information contained, effectiveness of content, effectiveness of explanation of difficult concepts, assessment of value of content of pictures, comparison with commercially produced filmstrips, and comments concerning materials.

Provision was also made for the user to indicate the grade level(s) at which the filmstrip had been used. In addition provision was made to provide a summary of the study if requested by the respondent.

## METHODOLOGY

Identification of the population and materials to be utilized. The Education Director, American Iron and Steel Institute, Washington, D.C. identified the three filmstrips to be included in the study. These were: The Chemistry of Steel; America Grows with Iron and Steel; and Money at Work in the Steel Industry.

The Director provided the research team with the mailing labels utilized by The Institute for the previous 18 months. Separate lists were compiled for each of the three filmstrips. In addition the Director provided several thousand return post cards utilized by recipients to acknowledge receipt of materials.

A random selection was made as follows:

Three hundred names were drawn from each of the subpopulations identified. A total of 1,200 names were drawn. Sampling without replacement was attempted, but not entirely accomplished (three known duplications).

The sub-population of 300 for each of the filmstrips was easily identified. In the case of the postcards these were simply divided into three groups and arbitrarily assigned to one of the three filmstrips. This was done because identification by title was impossible.

Mailing the questionnaire. One thousand two hundred questionnaires (400 per filmstrip; 300 from labels and 100 from postcards) identified by title of filmstrip (rubber

stamp), a cover letter and a self-addressed, postage paid return envelope were mailed to each randomly selected recipient of the materials on January 28, 1972.

Follow-up technique. A follow-up letter was mailed on February 28, 1972. This was done in order to assure a sufficiently high percentage of usable returns.

This mailing procedure was adapted from the techniques employed by Kephart and Bressler. (Kephart and Bressler: 123-32)

#### ORGANIZATION OF THE REMAINDER OF THE STUDY

This study has in Chapter II a brief review of pertinent literature and related research. Chapter III is the presentation and analysis of the data. The summary, conclusions, and recommendations of this study are reported in Chapter IV.

## CHAPTER II

## REVIEW OF THE LITERATURE

The literature dealt with in this study was concerned with the nature, status, and use of free and inexpensive materials in the school program.

Historic nature of free and inexpensive materials.

The nature of free and inexpensive materials as teaching tools, as viewed by authors and educators, has changed during the past four decades. Burk illustrated this when he compared the titles of several studies completed during that time. In 1932 Columbia University published a booklet entitled Propaganda and Education. Seven years later, when Addicott submitted his dissertation it was titled A Study of the Nature and Elementary School Use of Free Printed Matter Prepared as Advertising Media. By 1952, when Netzer's dissertation was published, the terminology had changed to The Use of Industry Aids in School. In the course of twenty years the terminology had progressed from "propaganda" to "free printed matter prepared as advertising matter" to "industry aids."

At about the same time that Netzer's dissertation was published the National Science Teachers Association of the National Education Association published a report that referred to "business sponsored teaching aids." (Advisory Council:pamphlet) Approximately ten years ago the National Council for the Social Studies issued a committee report

entitled Sponsored Resources for the Social Studies, (Joint Committee:pamphlet) while eight years ago the United States Atomic Energy Commission issued a mimeographed report dealing with the use of their "educational materials." (United States:pamphlet) Several years later Mowrey delivered an address entitled "Criteria for Publishing and Providing School Instructional Materials by Industry" to the National Association for Industry-Education Cooperation of the National Education Association at their National Headquarters in Washington, D.C. (Mowrey:unpublished paper)

In addition to the change in terminology used in referring to free and inexpensive materials there was also an increase in the numbers of such materials available. Sinclair attributed this increase to the influence of the armed forces training methods and the training materials used during World War II. (Sinclair:8) Many of the devices used by the armed forces during this period were of the "comic-book or simplified-graphic" type. The filmstrip was also widely utilized.

Status of the use of free and inexpensive materials today. Prospective and experienced teachers have received advice on the acquisition and use of free and inexpensive materials from authorities who have written textbooks used in college and university teacher training courses dealing with social studies. The accepted status of free and inexpensive materials as an integral part of the school

program is unquestioned, if the writings of experts in the field are to be lent credence.

Michaelis dealt in some detail with standards for the selection and use of free and inexpensive social studies materials. In addition, he presented a selected bibliography of published guides that might help the teacher acquire such materials. He also provided a checklist for teachers to use in evaluating these materials. This checklist dealt with (1) the purposes for the acquisition or utilization of these materials, (2) the readiness of the class for their use, (3) suggested procedures to be followed during use, (4) follow-through procedures, and (5) teacher evaluation procedures. (Michaelis:301-08)

The status of free and inexpensive materials in the social studies was explained in a report published by the Joint Committee on Cooperation of Business and Industry of the NCSS. They stated:

Sponsored instructional materials and services can add substantially to the variety, timeliness, and depth of . . . teaching. They can motivate, interest, serve as a reservoir of information, present points of view forcefully and meaningfully, and extend the range of direct experience. . . .

As a supplement to the textbook and other commercially produced learning materials, sponsored resources have certain advantages. They can be more up-to-date . . . They can extend the depth and specificity of topics and dramatize their subjects effectively. (Joint Committee:2)

Jarolimek stated that free and inexpensive materials have become a valuable resource for the teacher. He also

noted the companies which produce the materials have realized that if the materials were to meet the needs of the classroom teacher the advertising aspects would have to be kept to a minimum, and the presentation kept objective and honest. (Jarolimek:103-04)

Curtin admonished the "citizen teacher" to have, in addition to textbooks, a "wide-scale adoption of the best instructional materials and practices which leaders in the field have been putting into use for the past 15 years." In addition, he gave a selected list of materials prepared specifically for student use. (Curtin:92 and 107)

Ragan, discussing the different aspects of the curriculum and the many types of instructional materials that the teacher uses, stated: "Pictures, charts, maps, . . . can be obtained from many large commercial organizations, . . ." (Ragan:250)

Fay, Horn, and McCullough, in their pamphlet titled Improving Reading in the Elementary Social Studies, stated that teachers should take advantage of the many free and inexpensive materials available from industrial organizations, trade associations, governmental agencies, and others. They also mentioned the fact that many state and national professional journals periodically review these materials. (Fay:10-11)

Not all authors viewed the plethora of free and inexpensive materials as an unmitigated blessing. Cooney,

writing in the Saturday Review, summarized his views of the problem as follows:

This is the mixed blessing being conferred on the American school by the education and public relations departments of business and industry, trade organizations, and labor unions in the form of "free and inexpensive teaching materials."

. . . Aside from the physical problems of where to put the stuff as it pours in, the educator's main task has become to separate the educationally useful from the irrelevant. (Cooney:33-34)

The American Association of School Administrators, in their booklet Choosing Free Materials for Use in the Schools, cited the potential market represented by the captive audience of over thirty million children, and the obviously poor quality of some of the materials as factors which should be recognized in using these free and inexpensive "handouts." They recommended that a school policy be established in order that the individual teacher might have proper guidelines in the selection of free materials (American:3-5 and 11-15)

In two studies (1965; replicated 1970) involving all cities in the United States of 100,000 or more population, it was determined that over 90 per cent of the school districts did permit the use of free and inexpensive materials in their programs, and less than 3 per cent specifically prohibited their use. The principal, curriculum coordinator, and the individual teacher shared in the responsibility for determining the acceptability of these materials. (DuVall: 21-33)

Teacher use of free and inexpensive materials.

The research that has been published shows that there has been a marked tendency on the part of teachers to use more free and inexpensive materials in their teaching.

Addicott found in 1939 that over 85 per cent of the 500 elementary teachers and administrators he surveyed had been using "advertising" materials, while only 10 per cent had not. (Addicott:38-39)

Netzer surveyed Wisconsin elementary teachers ten years later and found that 96.7 per cent were using industry-sponsored materials during the school years 1948-49 and 1949-50. These teachers reported that the amount of industry sponsored materials that they used depended to a great extent upon whether these materials met the standards of good supplementary instructional aids. (Netzer:145)

Burk, in his unpublished research paper, reported that over 97 per cent of the teachers interviewed in Jackson County, Michigan, reported using free materials in some form. Burk's findings, with regard to the per cent of utilization, agreed almost exactly with those reported by Netzer four years earlier. (Burk:unpublished paper)

Another indication of the extensive use of free and inexpensive materials is the assumption on the part of contributors to professional journals that these materials are universally used and accepted.

Wagner, writing in the official publication of the

Iowa State Education Association, stated "it should be recognized that vertical file materials, like many of the best things in life, are free or at least easily accessible." (Wagner:23-25)

Grant, writing in The Texas Outlook, official publication of the Texas Education Association, observed:

The teacher of . . . social studies is often bewildered as to where to begin looking for free materials and samples for her class. Here is a summary of places and addresses from which you may obtain free materials that will be a source of delight and enjoyment to your students. (Grant:13)

#### SUMMARY

A review of educational research revealed that free and inexpensive materials are used today to a much greater extent than they had been in the past. The use of these materials by teachers is encouraged by the recognized experts in the education field, despite certain inherent limitations imposed by the fact that they are free. Studies conducted within the last quarter of a century showed that over 90 per cent of the classroom teachers surveyed had been found to have used some form of sponsored materials. Studies of school policies and administrative procedures reveal that the use of these materials is permitted if not, indeed, encouraged.

## CHAPTER III

## PRESENTATION OF THE FINDINGS OF THE STUDY

This chapter is an analysis of the data relating to the three filmstrips under study. These filmstrips were:

The Chemistry of Steel

America Grows with Iron and Steel

Money at Work in the Steel Industry

All were produced and distributed by the American Iron and Steel Institute, Washington, D. C.

An examination of the total mail returns will be made and then responses will be examined by individual item on the questionnaire (See Appendix A) together with an examination of selected comments (See Appendixes B, C, and D)

Mail returns. A total of 1200 questionnaires were mailed. Of this total 74 were returned because they could not be delivered, which meant that over 95 per cent were delivered to the sample. Of the total assumed to be delivered an overall response of 74 per cent were returned. Because of the relatively high rate of returns generalizations were drawn concerning the data. A complete breakdown of these data are presented in Table 1, showing the per cent of response by filmstrip title as well as label type (ISI Label or producers postcard).

Table 2 presents the same data broken down by ZIP Code Number (geographic area). The midwest (4) and the New York

TABLE 1. ANALYSIS OF MAIL RETURNS, BY FILMSTRIP AND TYPE OF LABEL

Label	f	Return	Net	Received	% Resp.
<b>"The Chemistry of Steel"</b>					
Postcard	100	9	91	70	77
ISI Label	300	18	182	199	71
Sub Total	400	27	373	269	72
<b>"America Grows with Iron and Steel"</b>					
Postcard	100	8	92	66	72
ISI Label	300	14	286	209	73
Sub Total	400	22	378	275	73
<b>"Money at Work in the Steel Industry"</b>					
Postcard	100	8	92	76	83
ISI Label	300	17	283	218	77
Sub Total	400	25	375	294	78
<b>Summary by type of label</b>					
Postcard	300	25	275	212	77
ISI Label	900	49	851	626	74
<b>Total</b>	<b>1200</b>	<b>74</b>	<b>1126</b>	<b>838</b>	<b>74</b>

TABLE 2. ANALYSIS OF MAIL RETURNS BY AREA OF THE UNITED STATES (CLASSIFIED BY FIRST DIGIT OF ZIP CODE NUMBER)

ZIP#	States	f	%/Resp.
0	Conn., Mass., Maine, New Hamp., Puerto Rico, Vermont, Rhode Island, Virgin Is. New Jersey	99	12
1	Delaware, New York, Pennsylvania	128	15
2	Dist./Columbia, Maryland, Virginia, North & South Carolina, West Virginia	60	7
3	Alabama, Florida, Georgia, Mississippi Tennessee	52	6
4	Indiana, Kentucky, Ohio, Michigan	162	19
5	Iowa, Minnesota, Montana, North & South Dakota, Wisconsin	100	12
6	Illinois, Missouri, Nebraska, Kansas	94	11
7	Arkansas, Louisiana, Oklahoma, Texas	41	5
8	Arizona, Colorado, New Mexico, Utah, Wyoming, Idaho, Nevada	40	5
9	Alaska, Hawaii, California, Oregon Washington	62	7
Total - United States		838	100

Pennsylvania area (1) had the highest per cent of returns, while the southwest (areas 7 and 8) had the lowest per cent of responses. Examination of the data in Table 2 did not lead to the revelation of any particular pattern of response.

In addition to examination of the data by filmstrip title and type of mailing label (ISI Label of postcard) the following demographic factors were also chosen and data broken down and analyzed utilizing the following factors: Academic training; Type of school district; and Age range of the respondents. Data from the three filmstrips were combined and single analyses by factor were prepared, within question asked (numbers 7 - 13 incl., see Appendix A).

Tables 3, 4, and 5 present the total per cent of respondents by each demographic factor analyzed.

TABLE 3. TYPE OF SCHOOL DISTRICT IN WHICH RESPONDENT TAUGHT CLASSIFIED BY POPULATION SIZE

Size	f	Per Cent Response
Rural	130	15.51
Suburban	168	20.05
Village (under 10,000)	119	14.20
Town (10-50,000)	163	19.45
City (50,000+)	183	21.84
No Indication	75	8.95
Total	838	100.00

TABLE 4. EDUCATIONAL BACKGROUND OF RESPONDENT

Degree	f	Per Cent Response
Less than bachelor's	27	3.22
Bachelor's degree	99	11.81
Bachelor's degree plus	281	33.53
Master's degree	109	13.01
Master's degree plus	257	30.67
No level indicated	65	7.76
Total	838	100.00

TABLE 5. AGE RANGE OF RESPONDENTS

Age Range	f	Per Cent Response
20-25 years	147	17.54
26-30 years	156	18.62
31-40 years	212	25.30
41-50 years	168	20.05
Over 50	89	10.62
No Indication	66	7.87
Total	838	100.00

Question 7. This question was designed to elicit information concerning the respondents views dealing with the "curricular acceptability" of the materials. This question was phrased as follows:

"How does the filmstrip fit into your instructional program?

- (a) outstanding      Comments:  
 (b) good  
 (c) fair  
 (d) poor"

Of the total responses received over two-thirds rated the materials as either good or outstanding. Indeed nearly one-fifth rated them as outstanding.

These figures are particularly significant when it is considered that over one-fifth of the respondents failed to respond to this particular item on the opinionnaire. Indeed, the matter of non-response to items plagued the researchers throughout the study. That is to say that while the respondents returned the instrument they failed to respond to one or more items on the questionnaire.

Another fact which was considered to be of particular significance was the fact that fewer than one per cent of the respondents rated the materials as "poor."

Detailed analyses of these data are presented in Tables 6, 7, 8, 9, and 10, which follow.

A perusal of the comments (Appendixes B, C, and D, Question 7) shows that many teachers tend to use these materials as supplements to their regular program. Overall assessment: Good.

TABLE 6. OPINIONS CONCERNING CURRICULAR ACCEPTABILITY OF FILMSTRIPS CLASSIFIED BY TYPE OF MAILING LABEL AND TITLE, EXPRESSED AS A PER CENT OF RESPONSES

Title w/i Mail Type	f	Out- standing	Good	Fair	Poor	No Response
<b>Postcard</b>						
"Chem."	70	10	56	11	--	23
"Amer."	66	18	64	5	--	13
"Money"	76	7	46	11	--	36
Sub Total	212	11	55	9	--	25
<b>ISI Label</b>						
"Chem."	199	16	56	10	1	17
"Amer."	209	28	49	7	-1	15
"Money"	218	11	45	13	1	30
Sub Total	626	18	50	10	1	21
<b>Total</b>	<b>838</b>	<b>17</b>	<b>51</b>	<b>10</b>	<b>1</b>	<b>21</b>

TABLE 7. OPINIONS CONCERNING CURRICULAR ACCEPTABILITY OF FILMSTRIPS CLASSIFIED BY TITLE AND TYPE OF MAILING LABEL SAMPLED, EXPRESSED AS A PER CENT OF RESPONSES

Title and Mail Type	f	Out-standing	Good	Fair	Poor	No Response
<b>"The Chemistry of Steel"</b>						
Postcard	70	10	56	11	--	23
ISI Label	199	16	56	10	1	17
Sub Total	266	15	56	10	1	18
<b>"America Grows with Iron and Steel"</b>						
Postcard	66	18	64	5	--	13
ISI Label	209	28	49	7	-1	15
Sub Total	275	26	53	6	-1	14
<b>"Money at Work in the Steel Industry"</b>						
Postcard	76	7	46	11	--	36
ISI Label	218	11	45	13	1	30
Sub Total	294	10	45	13	1	31
<b>Total</b>	<b>838</b>	<b>17</b>	<b>51</b>	<b>10</b>	<b>1</b>	<b>21</b>

TABLE 8. OPINIONS CONCERNING CURRICULAR ACCEPTABILITY  
OF FILMSTRIPS WHEN CONSIDERED BY TYPE OF USING DISTRICT,  
EXPRESSED AS A PER CENT OF RESPONSES

District	f	Out- standing	Good	Fair	Poor	No Response
Rural	130	22	58	8	--	12
Suburban	168	17	53	13	1	16
Village	119	13	61	10	1	15
Town	163	15	57	9	--	19
City	183	21	48	13	2	16
No Indic.	75	4	13	--	--	83
Total	838	17	51	10	1	21

TABLE 9. OPINIONS CONCERNING CURRICULAR ACCEPTABILITY OF FILMSTRIPS WHEN CONSIDERED BY EDUCATIONAL LEVEL OF RESPONDENTS, EXPRESSED AS A PER CENT OF RESPONSES

Degree	f	Out- standing	Good	Fair	Poor	No Response
Bachelor's-	27	15	48	15	--	22
Bachelor's	99	15	52	14	--	19
Bachelor's+	281	19	55	9	-1	16
Master's	109	16	61	7	2	14
Master's+	257	20	54	11	1	14
No Level	65	--	6	2	--	92
<b>Total</b>	<b>838</b>	<b>17</b>	<b>51</b>	<b>10</b>	<b>1</b>	<b>21</b>

TABLE 10. OPINIONS CONCERNING CURRICULAR ACCEPTABILITY  
OF FILMSTRIPS WHEN CONSIDERED BY AGE RANGE OF RESPONDENTS  
EXPRESSED AS A PER CENT OF RESPONSES

Age Range	f	Out- standing	Good	Fair	Poor	No Response
20-25 years	147	14	51	13	--	22
26-30 years	156	17	54	13	1	15
31-40 years	212	20	53	8	1	18
41-50 years	168	18	61	11	1	9
Over 50 yrs.	89	21	56	7	--	16
No. Indic.	66	2	6	2	--	90
<b>Total</b>	<b>838</b>	<b>17</b>	<b>51</b>	<b>10</b>	<b>1</b>	<b>21</b>

Question 8. This question was designed to determine the respondents assessment of the accuracy of the contents of the filmstrips, based upon their personal knowledge of the curricular content. The question was phrased as follows:

"The information contained in this filmstrip is:

- |                          |                    |           |
|--------------------------|--------------------|-----------|
| <input type="checkbox"/> | (a) very accurate  | Comments: |
| <input type="checkbox"/> | (b) accurate       |           |
| <input type="checkbox"/> | (c) generally true |           |
| <input type="checkbox"/> | (d) misleading"    |           |

Of the total responses received nearly three-fourths rated the information as "accurate" or better. Only five per cent rated it as "generally true" while not one respondent rated it as misleading. Again the "non-respondent" was a significant factor.

Detailed analyses of these data are presented in Tables 11, 12, 13, 14, and 15.

A perusal of the comments failed to reveal any significant trends, in the opinion of the author, as this question did not elicit a great number of them. In several cases the respondents stated they did not feel qualified to judge, a situation the author tends to question in-as-much as they were utilizing the filmstrips with their classes. Indeed, it is assumed that they found the contents accurate to the extent that they (the respondents) did use the materials in their classes.

TABLE 11. OPINIONS CONCERNING ACCURACY OF INFORMATION  
CONTAINED IN THE FILMSTRIPS, CLASSIFIED BY TYPE OF MAILING  
LABEL AND TITLE, EXPRESSED AS A PER CENT OF RESPONSES

Title w/i Mail Type	f	Very Accut.	Accut.	Gen'l True	Mis- ldg.	No Response
<b>Postcard</b>						
"Chem."	70	19	53	3	--	25
"Amer."	66	29	52	6	--	13
"Money"	76	20	39	4	--	37
Sub Total	212	22	48	4	--	26
<b>ISI Label</b>						
"Chem."	199	31	48	4	--	17
"Amer."	209	33	45	4	--	18
"Money"	218	17	44	9	--	30
Sub Total	626	27	46	6	--	21
<b>Total</b>	<b>838</b>	<b>26</b>	<b>46</b>	<b>5</b>	<b>--</b>	<b>23</b>

TABLE 12. OPINIONS CONCERNING ACCURACY OF INFORMATION  
CONTAINED IN THE FILMSTRIPS, CLASSIFIED BY TITLE AND TYPE  
OF MAILING LABEL, EXPRESSED AS A PER CENT OF RESPONSES

Title and Mail Type	f	Very Accut.	Accut.	Gen'l True	Mis- ldg.	No Response
<b>"The Chemistry of Steel"</b>						
Postcard	70	19	53	3	--	25
ISI Label	199	31	48	4	--	17
Sub Total	269	28	49	4	--	19
<b>"America Grows with Iron and Steel"</b>						
Postcard	66	29	52	6	--	13
ISI Label	209	33	45	4	--	18
Sub Total	275	32	47	4	--	17
<b>"Money at Work in the Steel Industry"</b>						
Postcard	76	20	39	4	--	37
ISI Label	218	17	44	9	--	30
Sub Total	294	18	43	8	--	31
<b>Total</b>	<b>838</b>	<b>26</b>	<b>46</b>	<b>5</b>	<b>--</b>	<b>23</b>

TABLE 13. OPINIONS CONCERNING ACCURACY OF INFORMATION  
CONTAINED IN THE FILMSTRIPS, CONSIDERED BY TYPE OF USING  
DISTRICT, EXPRESSED AS A PER CENT OF RESPONSES

District	f	Very Accut.	Accut.	Gen'l True	Mis- ldg.	No Response
Rural	130	31	54	4	--	11
Suburban	168	30	52	2	--	16
Village	119	27	52	7	--	14
Town	163	27	45	6	--	22
City	183	24	48	10	--	18
No Indic.	75	7	9	1	--	83
Total	838	26	46	5	--	23

TABLE 14. OPINIONS CONCERNING ACCURACY OF INFORMATION  
CONTAINED IN THE FILMSTRIPS, CONSIDERED BY EDUCATIONAL  
LEVEL OF RESPONDENTS AS A PER CENT OF RESPONSES

Degree	f	Very Accut.	Accut.	Gen'l True	Mis- ldg.	No Response
Bachelor's-	27	30	41	7	--	22
Bachelor's	99	18	55	7	--	20
Bachelor's+	281	28	51	4	--	17
Master's	109	25	52	5	--	18
Master's+	257	32	47	7	--	14
No Level	65	2	3	3	--	92
<b>Total</b>	<b>838</b>	<b>26</b>	<b>46</b>	<b>5</b>	<b>--</b>	<b>23</b>

TABLE 15. OPINIONS CONCERNING ACCURACY OF INFORMATION  
CONTAINED IN THE FILMSTRIPS, CONSIDERED BY AGE RANGE  
OF RESPONDENTS, EXPRESSED AS A PER CENT OF RESPONSES

Age Range	f	Very Accut.	Accut.	Gen'l True	Mis- ldg.	No Response
20-25 years	147	22	51	5	--	22
26-30 years	156	24	58	3	--	15
31-40 years	212	20	53	8	--	18
41-50 years	168	32	47	8	--	13
Over 50 yrs.	89	36	39	9	--	16
No. Indic.	66	2	5	3	--	90
<b>Total</b>	<b>838</b>	<b>26</b>	<b>46</b>	<b>5</b>	<b>--</b>	<b>23</b>

Question 9. This question was designed to determine the respondents assessment of the "effectiveness" of the filmstrips, based upon their use with students in the classroom. The question was phrased as follows:

"Does the filmstrip tell the story effectively?

- |     |                 |           |
|-----|-----------------|-----------|
| ___ | (a) outstanding | Comments: |
| ___ | (b) good        |           |
| ___ | (c) fair        |           |
| ___ | (d) poor"       |           |

Again, nearly three-fourths rated these filmstrips as good or outstanding, with only four per cent rating them as fair and less than one per cent classifying them as poor. This poor classification was confined to the filmstrip Money at Work in the Steel Industry. An examination of the comments relating to this filmstrip (Appendix D) reveals that the respondents, in selected comments, may feel that some of the materials are slightly outdated.

The reader is urged to examine the appendixes which contain the comments, read them in their entirety, and draw his own conclusions. No attempt at a systematic analysis of these comments was attempted.

Complete data analyses for Question 9, dealing with the effectiveness of the filmstrips, are presented in Tables 16, 17, 18, 19, and 20.

TABLE 16. OPINIONS CONCERNING EFFECTIVENESS OF FILMSTRIPS  
CLASSIFIED BY TYPE OF MAILING LABEL AND TITLE, EXPRESSED  
AS A PER CENT OF RESPONSES

Title w/i Mail Type	f	Out- standing	Good	Fair	Poor	No Response
<b>Postcard</b>						
"Chem."	70	17	57	3	--	23
"Amer."	66	27	56	3	--	14
"Money"	76	13	45	5	--	37
Sub Total	212	19	52	4	--	25
<b>ISI Label</b>						
"Chem."	199	24	56	5	--	15
"Amer."	209	33	49	3	--	15
"Money"	218	17	48	5	-1	29
Sub Total	626	24	51	4	-1	20
<b>Total</b>	<b>838</b>	<b>23</b>	<b>51</b>	<b>4</b>	<b>--</b>	<b>22</b>

TABLE 17. OPINIONS CONCERNING EFFECTIVENESS OF FILMSTRIPS  
CLASSIFIED BY TITLE AND TYPE OF MAILING LABEL SAMPLED,  
EXPRESSED AS A PER CENT OF RESPONSES

Title and Mail Type	f	Out- standing	Good	Fair	Poor	No Response
<b>"The Chemistry of Steel"</b>						
Postcard	70	17	57	3	--	23
ISI Label	199	24	56	5	--	15
Sub Total	266	23	57	4	--	16
<b>"America Grows with Iron and Steel"</b>						
Postcard	66	27	56	3	--	14
ISI Label	209	33	49	3	--	15
Sub Total	275	32	51	3	--	14
<b>"Money at Work in the Steel Industry"</b>						
Postcard	76	13	45	5	--	37
ISI Label	218	17	48	5	-1	29
Sub Total	294	16	47	5	-1	31
<b>Total</b>	<b>838</b>	<b>23</b>	<b>51</b>	<b>4</b>	<b>--</b>	<b>22</b>

TABLE 18. OPINIONS CONCERNING EFFECTIVENESS OF FILMSTRIPS  
CONSIDERED BY TYPE OF USING DISTRICT, EXPRESSED AS A  
PER CENT OF RESPONSES

District	f	Out- standing	Good	Fair	Poor	No Response
Rural	130	32	52	4	--	12
Suburban	168	27	55	4	--	14
Village	119	20	61	6	--	13
Town	163	23	52	4	--	21
City	183	20	57	5	1	17
No Indic.	75	7	11	--	--	82
<b>Total</b>	<b>838</b>	<b>23</b>	<b>51</b>	<b>4</b>	<b>--</b>	<b>22</b>

TABLE 19. OPINIONS CONCERNING EFFECTIVENESS OF FILMSTRIPS  
WHEN CONSIDERED BY EDUCATIONAL LEVEL OF RESPONDENTS,  
EXPRESSED AS A PER CENT OF RESPONSES

Degree	f	Out- standing	Good	Fair	Poor	No Response
Bachelor's-	27	37	41	4	--	18
Bachelor's	99	16	62	2	--	20
Bachelor's+	281	25	56	4	--	15
Master's	109	21	58	6	--	15
Master's+	257	28	53	5	-1	13
No Level	65	2	5	2	--	91
Total.	838	23	51	4	--	22

TABLE 20. OPINIONS CONCERNING EFFECTIVENESS OF FILMSTRIPS  
CONSIDERED BY AGE RANGE OF RESPONDENTS, EXPRESSED AS  
A PER CENT OF RESPONSES

Age Range	f	Out- standing	Good	Fair	Poor	No Response
20-25 years	147	17	59	2	--	22
26-30 years	156	23	56	7	--	14
31-40 years	212	28	51	4	--	17
41-50 years	168	23	61	5	--	11
Over 50 yrs.	89	33	48	2	1	16
No Indic.	66	5	3	2	--	90
Total	838	23	51	4	--	22

Question 10. This question was designed to determine the respondents opinions dealing with the filmstrips applicability to teach what was presented as "difficult concepts." This is probably the most "nebulously worded" item on the entire questionnaire. This view might be supported by the fact that nearly one-fourth of the respondents failed to answer the question as posed.

However, despite the shortcomings of the question nearly all of the respondents who did respond rated the filmstrips as "effective" or above in this category.

Few comments were made regarding this item (see Appendixes B, C, and D). Those that were made tend to be somewhat "mixed" in their assessments. These comments fail, in the opinion of the investigator, to shed much light on the problem.

Complete data analyses are presented in Tables 21, 22, 23, 24, and 25.

The question was phrased as follows:

"To what degree does this filmstrip explain difficult concepts?

- |                          |                    |           |
|--------------------------|--------------------|-----------|
| <input type="checkbox"/> | (a) very effective | Comments: |
| <input type="checkbox"/> | (b) effective      |           |
| <input type="checkbox"/> | (c) little value   |           |
| <input type="checkbox"/> | (d) no value"      |           |

TABLE 21. OPINIONS OF RESPONDENTS CONCERNING CLARITY OF PRESENTATION DEALING WITH DIFFICULT CONCEPTS, BY TYPE OF MAILING LABEL AND TITLE, EXPRESSED AS A PER CENT

Title w/i Mail Type	f	Very Effect.	Effect.	Little Value	No Value	No Response
<b>Postcard</b>						
"Chem."	70	16	51	4	1	28
"Amer."	66	11	68	6	--	15
"Money"	76	13	54	5		38
Sub Total	212	13	54	5	-1	27
<b>ISI Label</b>						
"Chem."	199	19	59	3	1	18
"Amer."	209	17	58	5	--	20
"Money"	218	9	56	5	--	30
Sub Total	626	15	58	4	-1	22
<b>Total</b>	<b>838</b>	<b>14</b>	<b>57</b>	<b>4</b>	<b>-1</b>	<b>24</b>

TABLE 22. OPINIONS OF RESPONDENTS CONCERNING CLARITY OF PRESENTATION DEALING WITH DIFFICULT CONCEPTS, BY TITLE AND TYPE OF MAILING LABEL SAMPLED, AS A PER CENT OF RESPONSES

Title and Mail Type	f	Very Effect.	Effect.	Little Value	No Value	No Response
<b>"The Chemistry of Steel"</b>						
Postcard	70	16	51	4	1	28
ISI Label	199	19	59	3	1	18
Sub Total	269	18	58	3	1	20
<b>"America Grows with Iron and Steel"</b>						
Postcard	66	11	68	6	--	15
ISI Label	209	17	58	5	--	20
Sub Total	275	16	60	5	--	19
<b>"Money at Work in the Steel Industry"</b>						
Postcard	76	13	45	4	--	38
ISI Label	218	9	56	5	--	30
Sub Total	294	10	53	5	--	32
<b>Total</b>	<b>838</b>	<b>14</b>	<b>57</b>	<b>4</b>	<b>-1</b>	<b>24</b>

TABLE 23. OPINIONS OF RESPONDENTS CONCERNING CLARITY OF PRESENTATION DEALING WITH DIFFICULT CONCEPTS, BY TYPE OF DISTRICT, EXPRESSED AS A PER CENT OF RESPONSES

District	f	Very Effect.	Effect.	Little Value	No Value	No Response
Rural	130	20	64	3	--	13
Suburban	168	9	72	1	--	18
Village	119	13	67	3	--	17
Town	163	18	52	9	--	21
City	183	17	55	7	1	20
No. Indic.	75	5	11	1	--	83
Total	838	14	57	4	-1	24

TABLE 24. OPINIONS OF RESPONDENTS CONCERNING CLARITY OF PRESENTATION DEALING WITH DIFFICULT CONCEPTS, EXPRESSED AS A PER CENT OF RESPONSES, BY EDUCATIONAL LEVEL

	f	Very Effect.	Effect.	Little Value	No Value	No Response
Bachelor's-	27	37	37	7	--	19
Bachelor's	99	10	66	2	--	22
Bachelor's+	281	14	62	4	-1	19
Master's	109	13	62	6	--	19
Master's+	257	18	60	6	-1	15
No Level	65	--	6	--	--	94
Total	838	14	57	4	-1	24

TABLE 25. OPINIONS OF RESPONDENTS CONCERNING CLARITY OF PRESENTATION DEALING WITH DIFFICULT CONCEPTS, BY AGE RANGE OF RESPONDENTS, EXPRESSED AS A PER CENT OF RESPONSES

Age Range	f	Very Effect.	Effect.	Little Value	No Value	No Response
20-25 years	147	11	62	5	--	22
26-30 years	156	10	67	6	1	16
31-40 years	212	14	62	5	--	19
41-50 years	168	23	57	4	1	15
Over 50 yrs.	89	22	55	3	--	20
No Indic.	66	3	5	--	--	92
Total	838	14	57	4	-1	24

Question 11. This question was designed to assess the respondents opinions concerning the visual content of the three filmstrips. The question follows:

"Are the pictures clear, pertinent, and up-to-date?"

- |     |                 |           |
|-----|-----------------|-----------|
| ___ | (a) outstanding | Comments: |
| ___ | (b) good        |           |
| ___ | (c) fair        |           |
| ___ | (d) poor"       |           |

The single highest positive response received came on this item. One-third of the respondents rated the picture content of the filmstrips as outstanding. An additional 41 per cent rated them good while less than one per cent rated them poor.

Complete data are presented in Tables 26, 27, 28, 29, and 30.

Fewer comments were received on this question than on almost any other item. The comments received tended to shed little light on the tabular responses.

TABLE 26. OPINIONS CONCERNING CLARITY, PERTINENCE, AND REGENCY OF PICTURES IN FILMSTRIPS, EXPRESSED AS A PER CENT, CLASSIFIED BY TYPE OF MAILING LABEL AND TITLE

Title w/i Mail Type	f	Out- standing	Good	Fair	Poor	No Response
<b>Postcard</b>						
"Chem."	70	29	47	1	--	23
"Amer."	66	38	45	3	--	14
"Money"	76	28	30	5	--	37
Sub Total	212	31	41	3	--	25
<b>ISI Label</b>						
"Chem."	199	34	43	6	--	17
"Amer."	209	41	40	3	-1	15
"Money"	218	25	40	4	1	30
Sub Total	626	33	41	4	1	21
<b>Total</b>	<b>838</b>	<b>33</b>	<b>41</b>	<b>4</b>	<b>-1</b>	<b>21</b>

TABLE 27. OPINIONS CONCERNING CLARITY, PERTINENCE, AND REGENCY OF PICTURES IN FILMSTRIPS, EXPRESSED AS A PER CENT, CLASSIFIED BY TITLE AND MAILING LABEL SAMPLED

Title and Mail Type	f	Out-standing	Good	Fair	Poor	No Response
<b>"The Chemistry of Steel"</b>						
Postcard	70	29	47	1	--	23
ISI Label	199	34	43	6	--	17
Sub Total	269	32	44	5	--	19
<b>"America Grows with Iron and Steel"</b>						
Postcard	66	38	45	3	--	14
ISI Label	209	41	40	3	-1	15
Sub Total	275	40	41	3	-1	15
<b>"Money at work in the Steel Industry"</b>						
Postcard	76	28	30	5	--	37
ISI Label	218	25	40	4	1	30
Sub Total	294	26	37	4	1	32
<b>Total</b>	<b>838</b>	<b>33</b>	<b>41</b>	<b>4</b>	<b>-1</b>	<b>21</b>

TABLE 28. OPINIONS CONCERNING CLARITY, PERTINENCE, AND REGENCY OF PICTURES IN FILMSTRIPS, EXPRESSED AS A PER CENT, CLASSIFIED BY TYPE OF DISTRICT

District	r	Out- standing	Good	Fair	Poor	No Response
Rural	130	39	47	2	--	12
Suburban	168	36	45	4	--	15
Village	119	31	46	8	1	14
Town	163	36	37	4	2	21
City	183	32	46	4	--	18
No. Indic.	75	11	7	--	--	82
<b>Total</b>	<b>838</b>	<b>33</b>	<b>41</b>	<b>4</b>	<b>-1</b>	<b>21</b>

TABLE 29. OPINIONS CONCERNING CLARITY, PERTINENCE, AND REGENCY OF PICTURES IN FILMSTRIPS, EXPRESSED AS A PER CENT, BY EDUCATIONAL LEVEL OF RESPONDENTS

Degree	f	Out- standing	Good	Fair	Poor	No Response
Bachelor's-	27	52	26	--	4	18
Bachelor's	99	28	47	4	--	21
Bachelor's+	281	37	43	3	--	17
Master's	109	33	46	6	--	15
Master's+	257	35	45	5	1	14
No Level	65	2	5	2	--	91
Totals	838	33	41	4	-1	21

**TABLE 30. OPINIONS CONCERNING CLARITY, PERTINENCE AND REGENCY OF PICTURES IN FILMSTRIPS, EXPRESSED AS A PER CENT, CLASSIFIED BY AGE RANGE OF RESPONDENTS**

Age Range	f	Out- standing	Good	Fair	Poor	No Response
20-25 years	147	33	40	5	--	22
26-30 years	156	36	46	4	1	13
31-40 years	212	33	43	5	1	18
41-50 years	168	34	52	4	--	10
Over 50 yrs.	89	44	35	3	--	18
No Indic.	66	3	5	--	--	92
<b>Total</b>	<b>838</b>	<b>33</b>	<b>41</b>	<b>4</b>	<b>-1</b>	<b>21</b>

Question 12. This question was designed to determine the respondents attitude toward "industry sponsored" teaching aids, more specifically, if the fact that they contain a "message" is considered to be obtrusive. Based upon the data collected the response is an unqualified no. Approximately two-thirds responded that it was "unobtrusive" or had "no effect." Another one-third made no response or felt that it could not be determined. Only one per cent of the respondents felt that the "message" was an intrusion. Indeed the comments received on this particular item tend to be highly supportive of the American Iron and Steel Institute and their efforts in the area.

The question was presented as follows:

"Does the fact that this filmstrip is industry sponsored:

- \_\_\_ (a) intrude            Comments:  
\_\_\_ (b) is unobtrusive  
\_\_\_ (c) has no effect  
\_\_\_ (d) cannot be determined

Complete data relative to this particular item are presented in Tables 31, 32, 33, 34, and 35.

TABLE 31. OPINIONS OF RESPONDENTS REGARDING EFFECT OF FACT THAT MATERIALS WERE INDUSTRY SPONSORED, CLASSIFIED BY TYPE OF MAILING LABEL AND TITLE EXPRESSED AS A PER CENT OF RESPONSES

Title w/ Mail Type	r	In- trude	Unob- trusive	No Effect	Not Determ.	No Response
<b>Postcard</b>						
"Chem."	70	1	19	50	9	21
"Amer."	66	--	30	44	8	18
"Money"	76	3	16	36	8	37
Sub Total	212	1	21	43	8	27
<b>ISI Label</b>						
"Chem."	199	1	15	55	8	21
"Amer."	209	1	17	52	13	17
"Money"	218	2	17	38	11	32
Sub Total	626	1	16	48	11	24
<b>Total</b>	<b>838</b>	<b>1</b>	<b>18</b>	<b>47</b>	<b>10</b>	<b>24</b>

TABLE 32. OPINIONS OF RESPONDENTS REGARDING EFFECT OF FACT THAT MATERIALS WERE INDUSTRY SPONSORED, CLASSIFIED BY TITLE AND TYPE OF MAILING LABEL, EXPRESSED AS A PER CENT

Title and Mail Type	f	In- trude	Unob- trusive	No Effect	Not Determ.	No Response
<b>"The Chemistry of Steel"</b>						
Postcard	70	1	19	50	9	21
ISI Label	199	1	15	55	8	21
Sub Total	269	1	16	54	8	21
<b>"America Grows with Iron and Steel"</b>						
Postcard	66	--	30	44	8	18
ISI Label	209	1	17	52	13	17
Sub Total	275	1	20	50	12	17
<b>"Money at Work in the Steel Industry"</b>						
Postcard	76	3	16	36	8	37
ISI Label	218	2	17	38	11	32
Sub Total	294	2	17	38	10	33
<b>Total</b>	<b>838</b>	<b>1</b>	<b>18</b>	<b>47</b>	<b>10</b>	<b>24</b>

TABLE 33. OPINIONS OF RESPONDENTS REGARDING EFFECT OF FACT THAT MATERIALS WERE INDUSTRY SPONSORED, PER CENT OF RESPONSES CLASSIFIED BY SCHOOL DISTRICT SIZE

District	f	In- trude	Unob- trusive	No Effect	Not Determ.	No Response
Rural	130	2	20	56	9	13
Suburban	168	--	21	54	7	18
Village	119	2	16	54	13	15
Town	163	--	20	42	14	24
City	183	4	17	48	11	20
No. Indie	75	--	4	8	1	87
Total	838	1	18	47	10	24

TABLE 34. OPINIONS OF RESPONDENTS REGARDING EFFECT  
OF FACT THAT MATERIALS WERE INDUSTRY SPONSORED,  
EXPRESSED AS A PER CENT OF RESPONSES, BY EDUCATIONAL LEVEL

Degree	f	In- trade	Unob- trusive	No Effect	Not Determ.	No Response
Bachelor's-	27	11	7	52	4	26
Bachelor's	99	1	19	49	8	23
Bachelor's+	281	1	18	52	10	19
Master's	109	2	21	48	11	18
Master's+	257	1	20	49	13	19
No Level	65	--	2	5	2	91
Total	838	1	18	47	10	24

**TABLE 35. OPINIONS OF RESPONDENTS REGARDING EFFECT OF FACT THAT MATERIALS WERE INDUSTRY SPONSORED, PER CENT OF RESPONSES CLASSIFIED BY AGE RANGE OF RESPONDENTS**

Age Range	f	In- trude	Unob- trusive	No Effect	Not Determ.	No Response
20-25 years	147	3	13	51	10	23
26-30 years	156	3	23	46	12	16
31-40 years	212	1	15	52	11	21
41-50 years	168	--	18	55	12	15
Over 50 yrs.	89	--	33	43	8	16
No Indic.	66	--	2	6	2	90
<b>Total</b>	<b>838</b>	<b>1</b>	<b>18</b>	<b>47</b>	<b>10</b>	<b>24</b>

Question 13. This question was designed, in the overall picture, to determine the respondents overall attitudes toward industry sponsored teaching materials, particularly the three filmstrips produced by the American Iron and Steel Institute.

The results are highly complementary, in the opinion of the investigators. Approximately half of the respondents considered these materials as better than or superior to comparable commercially produced materials. Another one-fourth considered them as good as comparable materials. In the opinion of the authors these materials fared very well in the overall assessment of their educational worth. One per cent of the respondents did consider that improvement of the materials was needed. Again the filmstrip "Money at Work in the Steel Industry" contributed a major share of these negative responses (even though they were a relatively insignificant proportion of the total responses).

The question was presented as follows:

"Comparing this filmstrip to commercially produced materials with which I am familiar I would rate it:

- (a) superior to most      Comments:  
 (b) better than most  
 (c) as good as most  
 (d) improvement needed"

The comments tend to support the data presented in Tables 36, 37, 38, 39, and 40.

TABLE 36. OPINIONS OF RESPONDENTS CONCERNING EVALUATION OF MATERIALS WHEN COMPARED TO COMMERCIALY PRODUCED MATERIALS, CLASSIFIED BY MAIL LABEL AND TITLE, EXPRESSED AS A PER CENT

Title w/ Mail Type	f	Super. To Most	Better Than Most	Good As Most	Improve- ment Needed	No Response
<b>Postcard</b>						
"Chem."	70	10	37	29	--	24
"Amer."	66	14	36	36	--	14
"Money"	76	14	21	25	1	39
Sub Total	212	13	31	30	-1	25
<b>ISI Label</b>						
"Chem."	199	13	37	31	1	18
"Amer."	209	20	38	24	1	17
"Money"	218	10	34	23	2	31
Sub Total	626	14	36	26	1	23
<b>Total</b>	<b>838</b>	<b>14</b>	<b>35</b>	<b>27</b>	<b>1</b>	<b>23</b>

TABLE 37. OPINIONS OF RESPONDENTS CONCERNING EVALUATION OF MATERIALS WHEN COMPARED TO COMMERCIALY PRODUCED MATERIALS EXPRESSED AS A PER CENT AND CLASSIFIED BY MAILING LABEL

Title and Mail Type	f	Super. To Most	Better Than Most	Good As Most	Improvement Needed	No Response
<b>"The Chemistry of Steel"</b>						
Postcard	70	10	37	29	--	24
ISI Label	199	13	37	31	1	18
Sub Total	269	12	37	30	1	20
<b>"America Grows with Iron and Steel"</b>						
Postcard	66	14	36	36	--	14
ISI Label	209	20	38	24	1	17
Sub Total	275	19	37	27	1	16
<b>"Money at Work in the Steel Industry"</b>						
Postcard	76	14	21	25	1	39
ISI Label	218	10	34	23	2	31
Sub Total	294	11	31	23	2	33
<b>Total</b>	<b>838</b>	<b>14</b>	<b>35</b>	<b>27</b>	<b>1</b>	<b>23</b>

**TABLE 38. OPINIONS OF RESPONDENTS CONCERNING EVALUATION OF MATERIALS WHEN COMPARED TO COMMERCIALY PRODUCED MATERIALS, EXPRESSED AS A PER CENT OF RESPONSES BY DISTRICT SIZE**

District	f	Super. To Most	Better Than Most	Good As Most	Improve- ment Needed	No Response
Rural	130	18	41	28	1	12
Suburban	168	14	38	31	--	17
Village	119	13	37	31	3	16
Town	163	16	36	25	2	21
City	183	14	36	30	1	19
No Indic.	75	1	9	7	--	83
<b>Total</b>	<b>838</b>	<b>14</b>	<b>35</b>	<b>27</b>	<b>1</b>	<b>23</b>

TABLE 39. OPINIONS OF RESPONDENTS CONCERNING EVALUATION OF MATERIALS WHEN COMPARED TO COMMERCIALY PRODUCED MATERIALS, EXPRESSED AS A PER CENT OF RESPONSES, BY EDUCATIONAL LEVEL

	f	Super. To Most	Better Than Most	Good As Most	Improve- ment Needed	No Response
Bachelor's-	27	19	41	11	4	25
Bachelor's	99	9	40	27	--	24
Bachelor's+	281	15	36	27	2	20
Master's	109	13	35	34	2	16
Master's+	257	16	39	30	1	14
No Level	65	--	2	6	--	92
Totals	838	14	35	27	1	23

**TABLE 40. OPINIONS OF RESPONDENTS CONCERNING EVALUATION OF MATERIALS WHEN COMPARED TO COMMERCIALY PRODUCED MATERIALS, EXPRESSED AS A PER CENT OF RESPONSES BY AGE RANGE**

<b>Age Range</b>	<b>f</b>	<b>Super. To Most</b>	<b>Better Than Most</b>	<b>Good As Most</b>	<b>Improve- ment Needed</b>	<b>No Response</b>
<b>20-25 years</b>	<b>147</b>	<b>14</b>	<b>51</b>	<b>13</b>	<b>--</b>	<b>22</b>
<b>26-30 years</b>	<b>156</b>	<b>12</b>	<b>33</b>	<b>38</b>	<b>2</b>	<b>16</b>
<b>31-40 years</b>	<b>212</b>	<b>13</b>	<b>40</b>	<b>27</b>	<b>1</b>	<b>19</b>
<b>41-50 years</b>	<b>168</b>	<b>19</b>	<b>43</b>	<b>26</b>	<b>1</b>	<b>11</b>
<b>Over 50 yrs.</b>	<b>89</b>	<b>27</b>	<b>28</b>	<b>28</b>	<b>--</b>	<b>17</b>
<b>No Indic.</b>	<b>66</b>	<b>--</b>	<b>5</b>	<b>5</b>	<b>--</b>	<b>90</b>
<b>Total</b>	<b>838</b>	<b>14</b>	<b>35</b>	<b>27</b>	<b>1</b>	<b>23</b>

Question 14. This question was included in an attempt to determine the overall assessment of the materials by the respondent, after attempting to give him a "mental set" for dealing with the problem, through the use of the preceding questions.

The respondents reacted with a wide range of comments, the overall assessment of these comments being "highly favorable." There were, in the opinion of the authors, few highly negative comments. Some constructive criticism was offered, but, on the whole the comments were highly favorable.

The question which elicited these responses was phrased as follows:

"Use this space for any general comments you may have about this filmstrip."

A complete transcript of all comments will be found in Appendixes B, C, and D of this study.

## CHAPTER IV

## SUMMARY, FINDINGS, AND CONCLUSIONS

This final chapter is presented in three sections. The first section deals with the problem of the study, summarizes the salient positions in the literature and the results of related research, and outlines the procedures which were followed. Section two recapitulates the findings of the investigation. The final section states certain conclusions which were drawn from the findings and offers recommendations for further study.

## SUMMARY

The problem. The problems of this study were to analyze teacher assessment of the following factors related to selected filmstrips provided these teachers (and others) by The American Iron and Steel Institute.

These problems were:

1. An assessment of how these filmstrips fit into the teachers' instructional program.
2. Assessment of the accuracy of the information contained in the three filmstrips.
3. The effectiveness of the filmstrips' content within the instructional program.
4. The teachers' assessment of the degree to which the filmstrips effectively explained difficult concepts.

5. The teachers' judgments of the pictures used in the three filmstrips relative to clarity, pertinence, and recency.

6. An assessment of teachers' opinions regarding the effect that industry sponsorship of the filmstrips might have upon students.

7. A comparison of these industry sponsored filmstrips with similar commercially produced materials, based upon user opinion.

8. A compendium of user comments, classified by the title of the filmstrip and the above enumerated items.

Related literature. A review of the related literature revealed that free and inexpensive materials are used today in classrooms to a much greater extent than in the past. The use of these materials in the classroom is encouraged by recognized experts in the fields of social studies, science, and related disciplines. This encouragement is made in spite of certain inherent limitations imposed by the fact that these materials are free and/or inexpensive and are industry sponsored. The related literature further revealed that there has been a shift in teacher attitude toward the acceptance of these materials.

Methodology. A normative survey was conducted, using an instrument specifically developed for that purpose, of teachers who had received one of the three filmstrips from The American Iron and Steel Institute. The filmstrips

chosen for inclusion in this study were The Chemistry of Steel, America Grows with Iron and Steel, and Money at Work in the Steel Industry (all provided at no cost to the teachers by the Institute). An initial sample of 1,200 persons requesting these materials was randomly selected from a population estimated to be in excess of 11,000 persons.

Responses were analyzed using a per cent of responses. These responses were further classified by type of mailing (ISI label or return postcard), name of filmstrip, age range of respondents, level of educational training of the respondents, and size of the district (range) in which the respondent taught.

#### FINDINGS

The following findings, indicated by the results of the statistical analyses, were reported:

1. A total of 74 per cent of the questionnaires were returned. Because of this per cent of responses, generalizations were drawn to the population of users of the filmstrips.

2. Of the total responses received, when considered by the factor of "curricular acceptability" of the materials, over two-thirds (68 per cent) rated the materials as either good (51 per cent) or outstanding (17 per cent).

3. An "assessment of the accuracy" of the filmstrips' content was made, considered by user response. Of the total

responses 26 per cent rated them as very accurate, 46 per cent as accurate, and only 5 per cent as generally true. Not one respondent, of the total of 838 replies received, rated the materials as misleading.

4. The effectiveness of the filmstrips was assessed by the users. Nearly three-fourths of the respondents (74 per cent) rated them as either outstanding or good. Less than 1 per cent rated them as poor.

5. The opinions of the respondents were assessed in relationship to the filmstrips' applicability in teaching difficult concepts. Of the responses tabulated 14 per cent rated them as very effective while 57 per cent rated them as effective.

6. The visual content of the filmstrips was rated as outstanding by 33 per cent of the respondents and good by 41 per cent, while 4 per cent rated them as fair and less than 1 per cent rated them as poor.

7. When queried concerning their assessment of the materials, in view of their being industry sponsored, 65 per cent of the respondents believed that this fact had no effect or was unobtrusive. An additional 10 per cent believed that they could not determine the effect that it might have. Only 1 per cent believed that the "message" contained in the materials was an intrusion.

8. The respondents overall attitudes toward these filmstrips, as determined by their responses, was deemed

to be highly favorable. Fourteen per cent of the respondents considered these materials as superior to most, while 35 per cent rated them as better than most. An additional 27 per cent classified them as good as most they had seen.

9. A subjective evaluation of the comments received led the investigators to classify these, in an overall sense, as highly favorable.

### CONCLUSIONS

Based upon the findings reported, the following conclusions were drawn:

1. The respondents, who are assumed to be representative of the users of the three filmstrips, are highly favorably inclined toward the materials, when considered by the factors studied. No apparent differences exist when this assessment is considered by filmstrip title, age, educational background of the user, or size of the school district (or population center).

2. Of the sample of recipients of the materials, most reported that they had used the materials received. This finding supports the previously reported research of Addicott, Netzer, and Burk. The conclusion therefore can be drawn that industry and industrial and trade associations should continue to sponsor such educational materials. These materials do have great value to the user, tending to provide the recipient schools and teachers with needed

instructional materials. In addition they do create a favorable impression regarding the sponsor.

3. It is believed that the data presented in this study tend to refute the contentions of Cooney and the AASA booklet Choosing Free Materials for Use in the Schools. The responses of the respondents revealed that they do welcome free and inexpensive materials, and that in the case of these three filmstrips at least, they do believe that they are of a sufficiently good quality to warrant their continued use within the instructional program. In addition it can be concluded that these three filmstrips made a viable contribution to the educational program of the schools where they were used.

4. A perusal of the comments caused the reinforcement of the belief that these materials are extremely well received by those educators who use them. The reader will be well advised to study these comments at some length.

5. Finally, the one salient limitation of this study was the fact that a significant number of respondents to each item failed to respond and therefore were classified as "no response." This high per cent of "no response" within items is believed to have been caused to a great degree by the number of librarians and audio-visual coordinators who returned the instrument without having used the materials in a classroom situation, and reflected this with their lack of response to specific items.

Recommendations for further study. Since the present study revealed that there was a highly favorable attitude on the part of the respondents toward the materials, further study should be continued in the general area. Perhaps a further refinement of the basic instrument might be in order. These studies might include printed materials, realia provided by manufacturers (sample kits, etc.), and films. In addition the readability and/or listenability level of these materials might be determined and a study of the effect of these factors on children's comprehension and use of the materials might be attempted.

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**APPENDIXES**

**APPENDIX A**  
**Covering Letters and Questionnaire**

INDIANA UNIVERSITY at SOUTH BEND

1825 NORTHSIDE BOULEVARD  
SOUTH BEND, INDIANA 46615

81

VISION OF EDUCATION

TEL. NO. 219--282-2341



January 28, 1972

Dear Teacher:

You have received, within the last eighteen months, a package of educational materials from the American Iron and Steel Institute, Washington, D.C. Included in that packet was the filmstrip "Money at Work in the Steel Industry." We are attempting to evaluate the use which was made of that filmstrip by teachers such as yourself.

Will you please take a few minutes of your time to complete the enclosed opinionnaire concerning this particular filmstrip? If you are the audio-visual coordinator, or for some reason did not make use of this filmstrip with your classes, please give this opinionnaire to a teacher who did use "Money at Work in the Steel Industry" with his classes.

The results of this survey will aid the American Iron and Steel Institute in the preparation of future educational materials. Your cooperation is needed and will be deeply appreciated. We have enclosed a self-addressed, stamped envelope for your convenience in replying.

We will be happy to share a summary of the results of this study with you. Please indicate your desire to receive this summary on the opinionnaire.

Sincerely,



Charles R. DuVall  
Associate Professor  
for American Iron and  
Steel Institute

INDIANA UNIVERSITY at SOUTH BEND

1825 NORTHSIDE BOULEVARD  
SOUTH BEND, INDIANA 46615

82

DIVISION OF EDUCATION

1820



1970

TEL. NO. 219--282-2141

February 28, 1972

Dear Teacher:

On January 28th I mailed you an opinionnaire dealing with your reaction to one of the filmstrips produced and distributed by the American Iron and Steel Institute, Washington, D.C. To date I have not received all of the replies. If you have already responded please accept my sincere gratitude.

If you have not yet responded please consider that the successful completion of this study has great potential value to educators as well as industry. The results will have an effect in the production of future materials of this type, thus we are particularly anxious to receive replies from a representative sample of classroom teachers and other users of these materials. If you are able to complete and return the opinionnaire it will be of great value to us.

In the event you misplaced the first opinionnaire I have enclosed another copy, as well as a self-addressed postage paid envelope.

We will be happy to share a summary of the results of this study with you if you will indicate this on the opinionnaire when you return it.

Thank you for your cooperation in this study.

Sincerely,

Charles R. DuVall  
Associate Professor  
for American Iron and  
Steel Institute



5. How many years of teaching experience do you have? \_\_\_\_\_ years

6. What is your present age range? \_\_\_\_\_ What is your sex?

- \_\_\_\_\_ (a) 20-25 years
- \_\_\_\_\_ (b) 26-30 years
- \_\_\_\_\_ (c) 31-40 years
- \_\_\_\_\_ (d) 41-50 years
- \_\_\_\_\_ (e) Over 50

\_\_\_\_\_ (a) Male

\_\_\_\_\_ (b) Female

.....

THE CHEMISTRY OF STEEL

Name of filmstrip: AMERICA GROWS WITH IRON AND STEEL

MONEY AT WORK IN THE STEEL INDUSTRY

If you did not use this filmstrip please check here and return \_\_\_\_\_

Please indicate the grade(s) with which this filmstrip was used:

\_\_\_\_\_ Primary \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_ 7 \_\_\_\_\_ 8 \_\_\_\_\_ 9 \_\_\_\_\_ 10 \_\_\_\_\_ 11 \_\_\_\_\_ 12

\_\_\_\_\_ Junior College \_\_\_\_\_ Vocational (post-high) \_\_\_\_\_ College \_\_\_\_\_ Post-Graduate

\_\_\_\_\_ Other (please comment): \_\_\_\_\_

7. How does the filmstrip fit into your instructional program?

- \_\_\_\_\_ (a) outstanding
- \_\_\_\_\_ (b) good
- \_\_\_\_\_ (c) fair
- \_\_\_\_\_ (d) poor

Comments:

Please turn page

8. The information contained in this filmstrip is:

- |     |                    |           |
|-----|--------------------|-----------|
| ___ | (a) very accurate  | Comments: |
| ___ | (b) accurate       |           |
| ___ | (c) generally true |           |
| ___ | (d) misleading     |           |

9. Does this filmstrip tell the story effectively?

- |     |                 |           |
|-----|-----------------|-----------|
| ___ | (a) outstanding | Comments: |
| ___ | (b) good        |           |
| ___ | (c) fair        |           |
| ___ | (d) poor        |           |

10. To what degree does this filmstrip explain difficult concepts?

- |     |                    |           |
|-----|--------------------|-----------|
| ___ | (a) very effective | Comments: |
| ___ | (b) effective      |           |
| ___ | (c) little value   |           |
| ___ | (d) no value       |           |

11. Are the pictures clear, pertinent, and up-to-date?

- |     |                 |           |
|-----|-----------------|-----------|
| ___ | (a) outstanding | Comments: |
| ___ | (b) good        |           |
| ___ | (c) fair        |           |
| ___ | (d) poor        |           |

12. Does the fact that this filmstrip is industry sponsored:

- |     |                          |           |
|-----|--------------------------|-----------|
| ___ | (a) intrude              | Comments: |
| ___ | (b) is unobtrusive       |           |
| ___ | (c) has no effect        |           |
| ___ | (d) cannot be determined |           |

13. Comparing this filmstrip to commercially produced materials with which I am familiar I would rate it:

- |       |                        |           |
|-------|------------------------|-----------|
| _____ | (a) superior to most   | Comments: |
| _____ | (b) better than most   |           |
| _____ | (c) as good as most    |           |
| _____ | (d) improvement needed |           |

14. Use this space for any general comments you may have about this filmstrip.

Check here if you would like a summary of this study: \_\_\_\_\_

Mail summary to; Name \_\_\_\_\_

Address \_\_\_\_\_

ZIP \_\_\_\_\_

Number \_\_\_\_\_ (for office use only)

Return to: Charles R. DuVall, Associate Professor  
Indiana University at South Bend  
South Bend, Indiana 46615

APPENDIX B  
"The Chemistry of Steel"

## APPENDIX B

SUMMARY OF SELECTED COMMENTS RELATING TO THE FILMSTRIP  
"THE CHEMISTRY OF STEEL," CLASSIFIED BY QUESTION.

Question 7, "How does the filmstrip fit into your instructional program?"

"As additional information." (A6 B)

"Used in both science and social studies classes."  
(A39 B)

"Vocabulary advanced for elementary grades. Used as  
an enrichment film rather than for content." (A45 B)

"Since I used the filmstrip in a chemistry class I have  
found that it covers a unit which I am unable to get to  
during the course of the year, hence it is a very good  
coverage of this particular unit. In better classes  
students can view it on their own free time." (A53 B)

"Served to clarify work we had done in class." (A66 B)

"Have loaned two filmstrips on the chemistry of steel  
(iron). Have not received comment. Filmstrip as shown  
in library seemed very good with good reading materials  
accompanying." (A68 B)

"The kit serves as a tremendous aid in explaining basic  
process in the steel industry. Our city is in one of  
the major steel areas of this nation, in which many  
students' fathers are employed in this particular  
industry." (A79 B)

"Used in sixth grade industriology class." (B10)

"In senior science we have a metallurgy unit. I usually  
have a committee of students preview the filmstrip and  
then conduct the class around it." (B47)

"The Chemistry of Iron was used to greater advantage as  
it was possible to relate it to the fourth and fifth  
grade science discussions on blast furnaces, as well  
as the older classes." (B49)

"It provides just about the right technical level for a  
heterogeneous group in senior high." (B60)

"I felt that this particular filmstrip was too advanced for the fourth grade level." (B74)

"The filmstrip does not fit into the instructional program but can be used for project work in a social studies unit on industrialization." (B98)

"Gave student insights into the nature of steel making, I appreciated the simplicity of presentation." (B102)

"This filmstrip was used at Fairfield School for Boys in high school chemistry classes; Sciato Village High School for girls in chemistry classes. Both science teachers reported its effectiveness and requested more of this type of material." (B115)

"Great with natural resources and steel industry studies!" (B129)

"This filmstrip has been shown a total of 123 times this past year." (B139)

"Very happy to have it." (B171)

"The film was a worthwhile addition to not only science- where it gave a good background- but also social studies and was 'reviewed' in reading as we read a story about steel industry." (B225)

"I use this as supplementary material in our chemistry program." (B260.)

"My students could comprehend the filmstrip without difficulty." (B264)

"Excellent for students who were above average." (B275)

"The filmstrip is excellent. It can be used by students with little educational abilities and with advanced students because of its format." (B288)

Question 8, "The information contained in this filmstrip is:"

"I don't think I'm really qualified to pass judgment on its accuracy." (A66 B)

"A very accurate descriptive analysis on content matter." (A79 B)

"I'm not qualified to answer this but I'm sure it must be accurate." (B5)

"As far as my knowledge goes." (B90)

"According to audio-visual training aids and other educational information." (B139)

"Very well accepted in regards to text and supplementary materials used by classes." (B139)

Question 9, "Does this filmstrip tell the story effectively?"

"It's really hard for me to remember since it was about 6-8 weeks ago that I showed it." (A66 B)

"Not in depth enough for our purpose." (A78 B)

"The frames with the chemical formulas need additional explaining for non-chemistry students." (B60)

"For this type of school and the different backgrounds of our students." (B139)

"Little deep for younger set." (B285)

"A little too much for the lower grade (sixth)." (B214)

Question 10, "To what degree does this filmstrip explain difficult concepts?"

"Do not use to this depth." (A6 B)

"With the accompanying comments, fine." (A39 B)

"For this group of eighth graders." (B46)

"As a teacher with a degree in general education, filmstrips of this caliber explain concepts with much greater clarity than I am able to." (B49)

"Does not go into great depth or detail." (B63)

"Many students were totally unaware of the concepts and therefore this film was expert." (B139)

"Depends on the teacher and his presentation." (B171)

Question 11, "Are the pictures clear, pertinent, and up-to-date?"

"So far as we know." (A39 B)

"As much as I know of the basic process." (A79 B)

"We received a very new filmstrip and good care is taken of our Audio-Visual Aids. This film seemed up-to-date." (B139)

Question 12, "Does the fact that this filmstrip is industry sponsored: intrude, is unobtrusive, has no effect, cannot be determined?"

"Too much like watching a commercial." (A13 B)

"Good for my purpose as sample of available materials." (A46 B)

"I appreciate the interest an industry shows in producing educational materials." (B47)

"The filmstrip was an objective presentation." (B60)

"Many students only aware of the learning process and unaware of the sponsorship." (B139)

"Adds to its value in Industrial Arts." (B171)

"The industry sponsorship was not overly evident. The story was effective." (B225)

"It is fine as social studies teachers correlate with their subject and also with the career orientation program in which our school participates." (B232)

"Very little advertising." (B234)

Question 13, "Comparing this filmstrip to commercially produced materials with which I am familiar I would rate it:"

Haven't seen any others." (A94 B)

Sadly most material readily available to teachers is outdated as far as background is concerned. This always detracts." (B49)

"Better than some." (B63)

"Not familiar with commercially produced material."  
(B69)

"For the specific steel unit it does a good job."  
(B102)

Question 14, "Use this space for any general comments you may have about this filmstrip."

"I use this to supplement and add additional information to a course in industrial arts." (A6 B)

"Very good. Please send any new ones that you come up with." (A13 B)

"Could use in the film one picture to show what is done with the slag. Also, how is a perfect mix obtained when alloys are added if no stirring is done?" (A39 B)

"I use the filmstrip in a media course for future and present teachers to illustrate the type of materials available from industry." (A46 B)

"This filmstrip along with the record is used individually by several students in their science research program. Even though the children are young they did appreciate the filmstrip." (A52 B)

"The vivid colors have greatly improved the visual aid. Most students are not attracted to the black and white filmstrips. This set is very attractive as well as informative." (A53 B)

"Actual photographs might have been better than illustrations." (A55 B)

"The students enjoyed the film very much. They worked on different projects as a result of seeing it." (A56 B)

"We obtained the filmstrip for our curriculum library at Hope College to use as an example for some of the student teachers. As of this time I don't think the filmstrip has been utilized in their student teaching. Sorry." (A76 B)

"Students use this to obtain additional data for reports. It is not particularly suited for classroom use but has proved valuable for students in independent studies. We appreciate the service your company has extended." (A78 B)

"This particular filmstrip is shown in the following manner at our school: seventh grade, geography-four times; eighth grade, history and science-two times; and ninth grade, science-two times. Other teachers have used this kit on special occasions outside the classroom for showing such as, the Boy Scouts of America Merit Badge Program, Guidance and Special Education department." (A79 B)

"Well integrated concepts." (A82 B)

"I have always been pleased with institute materials. They especially fit into our open-spaced classroom activities. Many students select the filmstrips and study guides as individual study pursuits." (A90 B)

"This is an excellent filmstrip and the manual gives many good and useful suggestions. Although the material was prepared for older children it was quite understandable to our sixth graders. I'm sure it must be a very valuable tool in high school classes." (B5)

"Filmstrips used as part of our study of industry, following program set up at University of Wisconsin." (B10)

"Good filmstrip, but students are spoiled, and it is hard to keep their attention with a filmstrip. Films are much more effective." (B15)

"I have been holding this film use up as we are awaiting a proper room to show it as we are two shops, wood and metal in the same shop area." (B37)

"Students at seventh and eighth grade levels have a difficult time relating a piece of steel to a chemistry equation or raw iron, the filmstrip was helpful." (B44)

"Eighth graders in this school do not have the background in chemistry to analyze the formulas. In general I'd say the filmstrip is too difficult for Junior High." (B46)

"It has become difficult for any school system to keep its visual aids current. The fact that these were produced by a specific industry adds to its authenticity and current value. The fact that this type of aid is available, merits our gratitude." (B49)

"Find it useful in Science department as well as social studies." (B49)

"I felt the filmstrip contained very good and accurate information and concepts were well explained. However, I would recommend it for a higher grade level than for which I used it, perhaps seventh and eighth grades." (B57)

"A 33 r.p.m. record could be used to provide a more complete narration." (B60)

"This filmstrip covers a broad area of information. If it went into great detail it would go on for ever. It provides a good over all coverage of the material." (B63)

"The chemistry teacher is planning to use the filmstrip in the class during the 1972-73 year as it is not offered this term. Several of the other filmstrips have been very appropriate in our study of steel making." (B74)

"As a librarian I ordered the filmstrip to be of service to our teachers. None, as yet, have used it, but it is catalogued and listed for them." (B76)

"Fits in very well with the Steel Unit." (B84)

"It did its job very well. It was most informative." (B88)

"Little advanced for average fifth grade. However, we do study iron and steel areas of U.S. and this filmstrip was very effective with advanced students. We regret not having sent this information sooner." (B89)

"The chemical formulas pictured in at least four frames and the language necessary to tell the "steel story" are over the heads of the eighth graders for the most part. The filmstrip could be used as a jumping off point for the rare student who is interested in doing an indepth study on the chemistry of steel." (B98)

"This is an especially great film! It is very effective and useful to the classroom teacher. The summary is much appreciated too!" (B129)

"This was a very good filmstrip and is used quite well with our studies of steel with the Pittsburgh unit." (140)

"The concept of chemistry is far beyond the competence of our students. I had requested the filmstrips from the Iron and Steel industry to provide some background information for the students as they move from wood-working into metal shop, for the high students this worked quite effectively. I realize how much work you must have put into this series and I hope it won't break your heart to know that our teachers have been using the strips for color recognition, visual discrimination, practice on threading a filmstrip projector and in general anything but what they were designed for." (B145)

"Very good, quite effective, used three times - students enjoy it." (B152)

"The organization of this filmstrip and booklets allows a student to use the materials independent of the teacher. Using the Dukane machine was a new experience for some." (B155)

"Are there any others available, or do you have any leads for more?" (B171)

"We are a joint county (7) school system. The strip was put in the collection and is being circulated. I previewed it before adding it to collection and thought it very good." (B185)

"I thank you for your interest in our school's industrial arts and vocational program. The films have been most helpful to the instruction of the classes." (B203)

"Wish we had a shortened version very much like it. At times it gets a little long." (B214)

"Very good, let's have more like it in other areas." (B215)

"I am a librarian; the teachers using this filmstrip said it was excellent." (B223)

"Much of the evaluation was done with committee work among the students." (B225)

"I have found that if a tape recording is used relating the material on filmstrip and the extra material provided in the filmstrip booklet to the filmstrip, makes the filmstrip more effective." (B265)

"It worked out very well in our section of General Industrial Education Metal Working." (B269)

"This filmstrip was received last year. I have answered as accurately as I could." (B275)

"This filmstrip has been placed in our high school library and usage shown by check-out card has indicated it is a good one to have on hand. Thank you for making it available." (B282)

"We appreciate having filmstrips of this quality for school use." (B287)

"Illustrations are great as are the explanations in the captions." (B288)

"The only comment I might make was that there should be a little more preview of just how important the steel industry is to everyone especially sixth and seventh grade children." (B293)

"I wanted the classes to make cassettes as the filmstrips could then be used individually." (B302)

**APPENDIX C**

**"America Grows with Iron and Steel"**

## APPENDIX C

SUMMARY OF SELECTED COMMENTS RELATING TO THE FILMSTRIP  
"AMERICA GROWS WITH IRON AND STEEL," CLASSIFIED BY QUESTION

Question 7, "How does the filmstrip fit into your instructional program?"

"I had used the materials from the Institute before in Indiana and found them to be outstanding." (A110 C)

"Particularity used in independent study programs." (A140 C)

"We study a social studies unit which deals with making iron and steel." (A162 C)

"Although no special emphasis is given iron and steel, such filmstrips help students realize that science and social studies are related to later life situations. It helps students to relate these subjects to practical situations." (A168 C)

"Students in the library can view filmstrips during free time." (A171 C)

"Until this school year the sixth grade curriculum in our city included the study of American History and the filmstrip proved to be an excellent resource for this study. This year the curriculum was revised and the study of Latin America was substituted for the American History. However, I have used the filmstrip with my class for enrichment and conducted an extra-curricular field trip to the Suagres Ironworks Restoration in conjunction with this study." (A199 C)

"It covers the historical aspect far better than I can, and the students retain the facts to a greater degree than before." (C20)

"We are studying economic factors - California - filmstrip contributed much to our study." (C24)

"Needs preparation of class before showing, applicable to theory classes in industrial materials and also United States History." (C29)

"In grade 3, we have a unit on Pittsburgh which leads to a study of the steel industry. Since I was not knowledgeable in this area, I have been endeavoring to find materials we could use to aid us in our study. This filmstrip with the record has been used in five third grade classes. We are delighted to have it. This is a unit we'll be using each year so we can continue to use the filmstrip." (C35)

"After receiving the material I did a complete unit on iron and steel." (C36)

"The filmstrip supplemented our unit on iron and steel and its importance. The filmstrip stressed significant qualities on this area." (C54)

"The filmstrip was used in our school last fall then placed in the County Bookmobile so that other schools could make use of it." (C58)

"Very good as children could understand better where their metal products originated. Also, they have seen and heard about Gary, Indiana, and Pittsburgh, Pennsylvania, and this widened their basic understandings of the factories in those places." (C59)

"Our science books are 14 years old, therefore I felt this was an outstanding filmstrip because it offers much more than our text." (C68)

"We wish to make available to patrons as many materials as is possible." (C85)

"Very fine supplementary material in both geography and history." (C101)

"Use in science classes when we take up iron and steel." (C102)

"Too elementary." (C103)

"We are teaching a unit in manufacturing and have found it to be helpful, especially since very little has been written on manufacturing as it is new. We are looking for other teaching aids for this unit." (C104)

"The filmstrip is intended to be used in Industrial Arts. Although the history and social impact of steel is important we are primarily process oriented." (C108)

"It supports our approach to economics (free enterprise - supply and demand) in our area (Pittsburgh). (C118)

"It is much more satisfactory than a 16mm. film since discussion/questioning can be included as needed." (C120)

"Filmstrip used in production to metals area of years General Science." (C129)

"Very good in our industrial arts class, History of Technology, in the seventh grade." (C131)

"Given to our school library, estimated 900 students saw this film last year." (C132)

"Used in United States History and resource geography." (C147)

"The film was viewed by my mechanical drawing class. Any film dealing with industry will fit into a drafting program, either directly or indirectly. The film was of value to this class because it mentions some of the things that students draw on the drafting board." (C160)

"Excellent, well done, color and record excellent." (C166)

"I was literally thrilled to death with such an array of materials and its being FREE! Each teacher has an Audio Visual notebook (prepared by me) and it keeps them posted as to all materials arriving in the Materials Center." (C177)

"It would be a lot more helpful if there were more subtitles of one sentence explanations of important dates, people, processes and such on the filmstrip." (C182)

"It really gives the children background into a backbone industry of our country. It also fits into our unit on natural resources." (C186)

"Very thorough, interesting, will probably incorporate it into my program every year." (C195)

"I received the total package and am putting it to much use." (C215)

"Our school is non-graded, and we are able to use films and filmstrips with all ages with only slight alterations in the presentation methods." (C216)

"Graphic, serves to clinch textbook data." (C217)

"I have been using the filmstrips as a supplement to an Exploratory Industrial Arts course on the seventh grade level. It fits into the manufacturing unit of the course very well." (C229)

"Set up as introduction to a general metals class. Background for study of metal foundry process." (C230)

"Has been used in social studies and science classes." (C233)

"Students have received a great deal of knowledge in a short span of time through this visual aid. Thank you much!" (C234)

"Most of my programs deal with wood and drafting, and is limited." (C242)

"Fifth grade social studies text uses Steel Industry as the opening chapter." (C243)

"It is above grade level for most, however with the top group of children it can be used." (C245)

"The students liked the record part of this type of filmstrip. Rather than reading the topics below the picture." (C248)

"Our social studies program deals with areas of industry and how industry helps our country grow." (C258)

"Very good starter into metals program." (C275)

"This fits in well with a science unit on 'New Ideas and Materials.' This deals with discovery of iron by cavemen, and other more recent discoveries follow this." (C277)

"It is a good review to use at the end of the year. I used the filmstrip in Indiana History." (C283)

"The fourth grade social studies curriculum has a section on manufacturing specifically steel." (C297)

"My student's backgrounds in geography and history were not good enough!" (C299)

Question 8, "The information contained in this filmstrip is:"

"Slightly outdated." (C29)

"I have nothing to base an opinion on except it presents the material much the same as our text." (C35)

"Relevant Material." (C54)

"From my limited background, it was most accurate. Really appreciated the record. (C59)

"Very accurate as per steel workers in our area?" (C118)

"To the best of my knowledge." (C131)

"It does a good job of basically telling the viewer about how the steel industry originated and how it grew to be the giant it is now." (C160)

"Cannot determine from my experience." (C294)

Question 9, "Does this filmstrip tell the story effectively?"

"Not too technical to the point where it is over their heads." (A140 C)

"Clear organization; concise." (A199 C)

"Children grasped many of the concepts, visuals are excellent." (C24)

"Probably to middle class students." (C29)

"We are having parent conferences at this time. Several parents told me they had learned a lot about steel from their children that day." (C102)

"Easily understood by sixth graders." (C102)

"Yes, for elementary or junior high." (C103)

"For the length of running time." (C131)

"Commentary too long, students became bored when slide was on screen so long." (C135)

"Yes, it covers the high points but supplementary materials are needed to cover the growth of the steel industry and what factors were present to promote the growth." (C160)

"I am referring to the history, not the different processes." (C182)

"Excellent for top students - somewhat of too much detail for average to lower students." (C203)

"The students enjoy the film." (C124)

"I think it appeals to the younger group more, however, the point is made for the older groups as well." (C230)

"Since we have little personal experience with such processes." (C256)

"What else can tell as well." (C259)

"I used this strip with fifth graders with good results." (C275)

Question 10, "To what degree does this filmstrip explain difficult concepts?"

"Except at times, there tends to be an advanced dealing related to the explanation of ideas, but considering the levels of coverage, this is not derogatory." (A161 C)

"Filmstrip is of an expository rather than an explanatory nature. Diagrams and explanations of furnaces and their operation are effective however." (A199 C)

"For this age more examples of each concept are necessary." (C24)

"Possibly due to student ability." (C29)

"Depends on class and student." (C42)

"It is able to present the concepts but at the grade level they were used and further explanations and examples are occasionally needed." (C79)

"Same commentary with more pictures would be better." (C135)

"Hard to define 'difficult'." (C147)

"Effective, to a student who has taken at least an introductory course in metals." (C160)

"The Science Teacher says 'The formulas need to be illustrated both by words and formula'."

"Please remember this is in view of eighth graders." (C182)

"Paves way for discussion." (C189)

"Our students enjoyed the filmstrip, the best indicator we have." (C216)

"Tended to be advanced for my class." (C226)

"When used with good follow up by teacher. Otherwise too difficult for fifth and sixth grade." (C228)

"But is above grade level." (C245)

"I try to follow-up with the 16 mm. film Steel and America." (C275)

"We did not use it for this objective." (C283)

Question 11, "Are the pictures clear, pertinent, and up-to-date?"

"Excellent visuals." (C24)

"Slightly outdated and does not relate to my students." (C29)

"It gives the kids a grand tour of the present iron and steel industry and shows how it is produced." (C79)

"Needs up-dating." (C115)

"Yes, the pictures are clear, and they make the high points understanding." (C160)

"The picture showing the men feeding the charging saugus furnace is misleading." (C186)

"Especially for lower student." (C203)

"Thank you!" (C216)

"Could be more up to date with modern processes." (C231)

Question 12, "Does the fact that this filmstrip is industry sponsored: intrude; is unobtrusive; has no effect; cannot be determined."

"It adds to our efforts to teach the industrial processes more efficiently. We need your support." (A139 C)

"Teachers are aware of what industry has provided, appreciate this effort." (C11)

"I was unaware of this." (C24)

"It's well done because you really know your field. It's really extremely." (C74)

"The technical aspects may be a little over-whelming to many students, but they are fascinated. It is factual shows them the many things that must be accomplished to manufacture iron and steel." (C79)

"This is a basic concept of economics that we attempt to have the students become familiar with. Also psychology and sociology." (C118)

"Is very appropriate for industrial arts." (C131)

"Perhaps it would be better if industry in general would sponsor more educational aids; after all, industry is one of the nation's major employers." (C160)

"Students are very critical in this area." (C171)

"I truly appreciate the fact of no 'Ads'." (C182)

"I was amazed." (C186)

"Students are aware of somewhat biased information but it is not really detrimental." (C189)

"Many of our learning materials are industry produced and sponsored, we welcome and enjoy them." (C216)

"Other than information it is very accurate, not a 'commerical' for a particular company," (C245)

"I feel this is good because it prompts students into looking into the steel industry for employment after graduation." (C268)

"I feel that it is important for the students to know that industry is willing to help schools gain insight into industry and its development." (C275)

Question 13, "Comparing this filmstrip to commercially produced materials with which I am familiar I would rate it:"

"Better than many commericals." (A169 C)

"We do not always have the most recent materials. This filmstrip is recent." (C24)

"I found the teaching suggestions very helpful." (C68)

"Outstanding in all respects." (C79)

"I cannot compare the other materials on steel with this because I don't have such data for comparison." (C138)

"As good as most because all teaching aids which are provided are thoroughly researched and evaluated before they are put out in the market." (C160)

Question 14, "Use this space for any general comments you may have about this filmstrip."

"The questions above covered the general comments about the film. Very informative, some students expressions very, very satisfactory."

"The American Iron and Steel Institute has been providing this service for a number of years to my knowledge. We certainly support this endeavor and have used the materials in our program." (C11)

"I used but one filmstrip - because of time. I plan to use it again. There are many concepts to be taught, especially for this age group. Lessons in economics most appropriate and very effective." (C24)

"Actual picture would be more effective than illustrations." (C30)

"Glad to receive something to help us in our study of steel manufacturing. Our text is Learning About Our Country, Allyn and Bacon, which takes up a few large cities and the industries surrounding them. A booklet to give each child as a follow-up would be good. Is such available?" (C35)

"I feel the filmstrip plus the other materials sent offer a great opportunity to take an excellent look at iron and steel use and production in this country." (C36)

"I used the strip in our institution, and then the Belize Vocational Training Center in British Honduras. They found it so helpful that I left it with them." (C41)

"A very good film, very pleased to be able to use this to supplement." (C45)

"Was interesting to the children, used in science classes." (C47)

"I'd like to see more of these by more companies." (C49)

"Record with film is warped." (C53)

"Education, interesting and was used by six of the classrooms in the school, approximately 220 students." (C55)

"It was so good we made it available to others." (C58)

"I intend to re-use the filmstrip annually even though it is geared to the older child. There are basic concepts that even the suburban nine year old can grasp. The reaction from students was most favorable. That old adage - "a picture is worth a thousand words" certainly does hold water here. Thanks for the films." (C59)

"We have enjoyed the use of these materials in supplementing many units of study involving this area."  
(C60)

"I used it to explain the term 'industry' and mercantilism." (C61)

"Very good, thank you we need more industries doing the same." (C66)

"Filmstrips - good for intermediate - specific details."  
(C73)

"It is such an extremely good educational film that my students and other fourth grade classes I invite to see it profit tremendously. The accompanying record makes your filmstrips even better than they would be alone."  
(C74)

"Excellent source for showing processes in industry. When used in our individualized program, these filmstrips allow the individual student to gain a vast knowledge concerning iron and steel products and steel-making processes." (C75)

"The color and conceptual aspect of the film is very good." (C76)

"I have shared the filmstrip with 13 other junior high level industrial arts teachers and their comments were favorable." (C77)

"The filmstrips provide an inside look at a fascinating and very important American industry. It makes us all aware of the complex and many faceted industry. The information is well presented and is as good as a personal tour of the industry." (C79)

"We use it for 11th grade slow learners in American History." (C88)

"In my opinion the filmstrip was very interesting and beneficial to our study of steel. It explained the process of steel-making very well, and was an excellent supplement to our text. The pictures were bright and colorful and held the children's attention very well. I believe it helped the children understand the process more thoroughly." (C86)

"Thank you for sending these materials. I try to teach social studies from an economic approach and they are helpful." (C92)

"This filmstrip plus the others put out by American Iron and Steel Institute have been very helpful. I teach health and science in the sixth grade, four groups, to expose them to as many different things as possible before going to junior high school. These films and booklets have helped me and the students." (C102)

"Wish there were more industries that had similar such filmstrips especially in plastics, woodworking (construction), drafting, and manufacturing as well as other industrial arts type courses. There is a market for this type of audio-visual material which could help education and also be used as a 'write off' for the industry as well!" (C104)

"I have used the filmstrip once with limited success. However, the problem may have been one of timing on my part. This is something I can only judge in time." (C108)

"This material is of great value to my students in their quest for relevant information. It is of great value to me as a learning facilitator, continually producing material of this quality." (C118)

"The filmstrip on 'America Grows with Iron and Steel' was very effective in giving students an overview of the iron and steel industry in America. The use of this filmstrip was a very good approach in obtaining interest among the students in a junior high school metal working shop." (C123)

"This is a good filmstrip and record." (C126)

"I have found that a tape instead of a record is much more effective. In addition it lasts longer and without the scratching background noise found on used records. (I made a tape recording from the new record and it works exceptionally well.)" (C129)

"This is a fine filmstrip, record set. I hope the American Iron and Steel Institute will be able to add the sound track to the other filmstrips in the future. It makes the information much more interesting to the students." (C131)

"As we study the iron and steel industry of Minnesota. This film strengthens our concepts." (C134)

"It is the only audio-visual material available on steel history. I would not have sent for it if we had not needed it!" (C150)

"Much more effective if actual pictures could be included with art work. Also several frames should be shown for each portion of commentary. If I may be of further service please advise as I am a professional photographer and have done this sort of thing before." (C135)

"The children were very attentive and it produced good discussion questions after films were presented." (C143)

"Appreciate your interest and concern with education." (C148)

"For metal working shop areas it is quite elementary in its areas and doesn't go quite deep enough into general factory types and use of metals. Probably good for junior high shop or science." (C158)

"I believe that this filmstrip basically does a good job of presenting the origination and growth of the steel industry and it would be ideal for implementing it into an introductory course in the metals industry." (C160)

"This filmstrip was requested for use as general enrichment or knowledge for my class Occupational Work Experience. These are students who have been identified as potential drop-outs or underachievers. I attempt to expose the class to a variety of experiences (on screen) which they may be missing in some of the regular academic classes. (Their attendance in academic classes is the minimum.)" (C171)

"I have decided to place it into the Library Resource Center of a school which does not have a copy. They (teachers) will get classroom use of it." (C175)

"Excellent! Anything else you have - send it our way!!! We are mighty poor." (C177)

"I have used this in my social studies methods courses to illustrate type of materials available." (C178)

"Filmstrip and unit on steel very interesting and quite effective in capturing the interest of the class and facilitating more meaningful learning. Thank you so much for making this unit available to us." (C179)

"This filmstrip has the possibilities of being extremely educational and entertaining if only you would add more subtitles. The pictures and history explanations are very good, but students need something they can hear, see in words and then copy. We (students and teachers) sincerely appreciate your help in providing aids for making learning interesting and fun." (C182)

"I use this filmstrip in several classes in metal working, and power mechanics. It is available for use by other teachers, but so far has not been used by them. Perhaps I could make its availability better known to other departments. This strip is a good example of how industry can help in education of the student." (C188)

"I have found this filmstrip to be most useful in my classes. I am pleased to have the assistance of the A.I.S.I." (C189)

"I was quite pleased to receive it, the best free material I have obtained - better than most I have paid clearly for. Thank you for sending it." (C195)

"The filmstrip was used in the industrial arts department by several teachers for a variety of students. It was utilized as a group presentation and also individual. There were a few students that placed it in our departmental study outline to see again." (C199)

"The information given in this film enriched our science and social studies curriculum." (C202)

"This filmstrip was used by many social studies classes and the general feeling expressed by teachers was that this was a very 'worthwhile' lesson." (C203)

"I think the filmstrip is very good." (C214)

"I have been using this package of strips as low as the third grade as part of Career Education and find them valuable. I could actually use a second set as the one I have is continually busy." (C125)

"'America Grows with Iron and Steel' is very good. The entire packet of materials is excellent for use with students of varied ages from elementary through high school. 'America Grows with Iron and Steel' can easily be adapted for use in science and social studies course, and we found it to be quite useful in other areas as well. Many of our students just wanted to watch it for fun." (C216)

"We are grateful for having this "extra" audio-visual for use." (C217)

"I've put the filmstrips in our school library for all to use. I've used it, but more upper grades have used them. Very pleased with the unit." (C218)

"We appreciate the effort industry is making to inform the public and assist the school of the activities involved in their business or area of the world of work." (C225)

"Thanks for making such films on industry available." (C230)

"Filmstrips have been used not only for Social Studies but also for reading motivation. The high interest level demonstrated by students seems to me to be a proof of their effectiveness." (C234)

"I assume these are simply photographed pictures. This is not very effective with students. Live photography is much better. However, I appreciate having this as our available materials are very limited. Thank you." (C235)

"There is very little visual material available on our grade level (3). Yet since this industry is so vastly important to our nation, I feel that the filmstrip and related materials are good for the students. In our area there is no steel making and we must become familiar with it by these means." (C245)

"This filmstrip doesn't hold attention of Junior High students, though probably good for more mature audiences." (C261)

"We appreciate the use of free materials of such quality, and we will welcome any additional materials for use in our instructional materials center." (C262)

"Just great! I'm very glad to have a copy. It fits in beautifully with our social studies program and helps me vary my teaching approaches." (C263)

"The filmstrip is well planned and has a high interest level." (C265)

"Industrial films and strips are methods of contacting the industrial world from a small rural type Wisconsin town. More industries should be willing to produce and distribute such films and strips." (C266)

"Held the interest of students watching and good discussion thoughts." (C272)

"It fills the gap between the printed word and the teacher lecture." (C273)

"We have found this filmstrip most useful in science and social studies classes." (C274)

"Was very surprised to get something worthwhile and so excellent at no cost." (C277)

"I use your filmstrip on each elementary workshop I conduct and also have loaned it from the State Office whenever a request for it is received. I think it is an excellent filmstrip and should be readily accessible to every industrial arts instructor in the United States. Thanks again for your kind cooperation." (C285)

"I was very pleased to be given a filmstrip that fits so well with the material studies." (C297)

"I as an adult enjoyed the filmstrip very much. I had hoped this would give my students an introduction to iron and steel. It did give an introduction, but was a little too technical in parts." (C299)

"I have used these filmstrips in history, social studies, science, and various subjects, as steel, iron, etc." (C304)

APPENDIX D

"Money at Work in the Steel Industry"

## APPENDIX D

SUMMARY OF SELECTED COMMENTS RELATING TO THE FILMSTRIP  
"MONEY AT WORK IN THE STEEL INDUSTRY," CLASSIFIED BY QUESTION.

Question 7, "How does the filmstrip fit into your instructional program?"

"Several classes used it." (A202 D)

"These presentations hold the children's interest! They retain it well because it is presented so interestingly." (A203 D)

"Use for general information." (A229 D)

"I coordinate these filmstrips with my economics, American History, and geography classes." (A246 D)

"Used in studying the concept of finance in American Industry." (A250 D)

"Team teaching approach." (A254 D)

"Good for intermediate and junior high." (A276 D)

"Students do not need to read as much." (A277 D)

"I was unable to use it last year, but will be put to use by the end of this marking period." (A289 D)

"Because of our location it is impossible for many students to see (other than filmstrip) anything that pertains to steel making, etc." (D10)

"Rather high level for my kids but the exposure is good for them." (D24)

"As we read our text we showed these filmstrips." (D27)

"Our course is very general science so this was shown more as a point of interest." (D28)

"I have shown the filmstrip to all of my students who are planning to teach metal work either at the junior or senior high school level. They felt it could be valuable information especially at the junior high level or first part of senior high." (D44)

"Filmstrips to be effective should have sound projection." (D61)

"Used for eighth grade career reports and for special term papers on industry and economics. Never used in a classroom situation. Only used on individual basis." (D88)

"The film gave a good background for future 'iron workers'. It was enjoyable yet covered all phases." (D89)

"Filmstrips are interesting to all students, the accompanying booklets helped me immensely. It is particularly difficult to 'describe' large capital investments, this made it much easier for all students." (D103)

"It was outstanding and was educational as well as enjoyable." (D111)

"Excellent material." (D135)

"Filmstrip was used as an enrichment study area in broadening the general knowledge of the students." (D136)

"Used as information film in American Industry class." (D147)

"It is used with our eighth grade social studies, especially in our science classes; introduction to vocations." (D184)

"Very good." (D194)

"Used as an orientation to technological developments in our society and as an indicator of the interests that industry is showing in education." (D195)

"Grest, because we are using the new I.A.C.P. program developed at Ohio State University." (D207)

"I am using the filmstrip in a 'understanding industry' course." (D209)

"It is sufficiently interesting to stimulate comment and discussion among mentally ill who need socializing and stimulating experience." (D263)

"I teach math, however, we emphasize vocational training with many of our students." (D269)

"Outstanding to good. Blends in very well with social studies, industrial arts, and arithmetic studies." (D290)

"Of course, the junior high students were better able to comprehend the concepts presented." (D300)

Question 8, "The information contained in this filmstrip is:"

"It reinforced what they are presently studying." (A203 D)

"It could lose its value." (D34)

"Not being a steel person, I've no real idea how accurate or non-accurate it is." (D41)

"I feel the filmstrip is quite accurate and is most effective in communicating the impact that the steel industry has made on our society." (D195)

"Some outdated today." (D208)

"I'm not really qualified in economics." (D129)

"As far as my knowledge of the industry." (D263)

Question 9, "Does this filmstrip tell the story effectively?"

"Highly superior." (A203 D)

"Should have a record." (D77)

"It's a good start." (D208)

"As a story, meaning the thread of meaningful continuity." (D129)

"For todays child conditioned to color television, the filmstrip approach is inadequate." (D236)

"Provoked comment." (D263)

Question 10, "To what degree does this filmstrip explain difficult concepts?"

"Excellent, on child's level." (A203 D)

"Effective for older children. Primary doesn't understand capital and stocks, etc." (A276 D)

"At fifth grade, some children need at the second and third grade level." (A288 D)

"The concepts although generally pertinent, do not totally fit within the Big Picture of Industry." (D83)

"It does it quite well, even I understood how the system worked!" (D164)

"Updating would help." (D208)

"Effective within the limitations of the form of presentation." (D236)

"Questions showed apparent understanding." (D263)

"This is the weak point. The concepts and their presentations were too difficult to understand except for my best pupils." (D295)

Question 11, "Are the pictures clear, pertinent, and up-to-date?"

"Up-to-date - Yes! Highly superior." (A203 D)

"Color is very important." (A276 D)

"Exceptionally good." (A296 D)

"You have very sharp pictures and they are very modern." (D27)

"The technological aspects are excellent. The supporting materials are of good quality." (D195)

Question 12, "Does the fact that this filmstrip is industry sponsored: intrude, is unobtrusive, has no effect, cannot be determined."

"Helps children realize the assistance we get from steel industry." (A276 D)

"Very little effect." (D6)

"Many of my kids will be employed in several of our steel mills so the background is good." (D24)

"Students generally felt that the 'commercial' effect was not noticeable because no one company was advertising." (D44)

"I believe it to be desirable." (D101)

"We should deal more in depth in the study of industry." (D157)

"It is somewhat slanted toward steel industry. They have a right to do their thing!" (D207)

"Is good for industrial arts." (D218)

"Advertising is so much a part of everyday life now that the 'soft sell' at least is tolerable, if the serious content is not distorted." (D236)

"I have never felt that some indication of private sponsorship was a problem." (D237)

"But generally unobtrusive." (D263)

Question 13, "Comparing this filmstrip to commercially produced materials with which I am familiar I would rate it:"

"Top of the list. The children eagerly mention this fact." (A203 D)

"As good as most filmstrips, but most places or companies are making 16mm films for free loan to schools." (A276 D)

"It has more depth than many filmstrips." (D73)

"Record needed." (D77)

"Questions at end are excellent." (D88)

"Superior by far. One of the best examples, especially at the 'price'." (D195)

Question 14, "Use this space for any general comments you may have about this filmstrip."

"The filmstrip was used for agriculture classes and math classes and also for biology. The teachers seemed to think it was a worthwhile filmstrip." (A202 D)

"I think it is marvelous that you invest in the education of our children. Our district is so poor we can afford very few visual aids. I provide my own stamps and stationery to acquire these marvelous learning aids which you supply at no cost to us. We have lively discussions after we use your visual aids. Would it be too expensive to have a single sheet with just the main highlights that we may keep?" (A203 D)

"More filmstrips of this nature are needed to help supplement high school programs. The fact of the free materials greatly helps budgets of our school to stay down and yet helps enrich our programs." (A246 D)

"We used this filmstrip to introduce the lesson and also in our culmination of the unit. (A254 D)

"Material of this caliber is hard to come by. Many thanks to you." (A258 D)

"Greatly appreciated use of film and your genuine concern." (A263 D)

"I am sorry that I could not be of help. I am most appreciative of what has been provided me for use in the fourth grade. I would appreciate knowing the outcome of the study." (A264 D)

"I found it very hard for small primary children to understand. They did receive the concept of investing their money in something that will in turn aid them in their lives both money-wise and living-wise." (A276 D)

"Some students indicated the pictures were not real enough. After some discussion many of the students understand the concept." (A277 D)

"We appreciate the material, I feel the industry made films are better than the commercial type. Thank you." (A278 D)

"Although information covered was accurate, I feel it may have been a little difficult for grade five."  
(A280 D)

"Used especially in study of economics." (A292 D)

"Good filmstrip." (A300 D)

"Very helpful to my program and the agriculture program also vitalized it as an effective teaching aid." (D4)

"The notations related to specific frames in the teachers guide makes this one of the best teaching and guidance films I have ever used." (D6)

"Excellent presentation but seems slightly biased."  
(D7)

"I feel in my area where the students are completely unfamiliar with this industry the film is outstanding."  
(D10)

"It is difficult for me to determine some answers, as I have not discussed this particular filmstrip with most of the teachers who have used it. I spoke with one and she said, 'yes, I'm pleased with it. It worked into my unit very well. As librarian I preview the audio-visual material and judge its usage according to the texts, etc. That group might use it, it seemed o.k. to me."  
(D11)

"These films are very good but should have more of an appeal to the younger student who in a short span will be purchasing steel products." (D20)

"Your filmstrips cover the subject matter very well and in very much detail." (D27)

"In teaching my unit on metallurgy and metals I stress the chemistry of iron and steel and their production process, whereas, in this filmstrip a general idea of the steel industry is given as related to our society. The filmstrip is effective, however, as a physical science teacher I do teach the chemistry of steel."  
(D30)

"I have pre-viewed this film and cannot understand why the teachers did not choose to use it, except that it reflects the lack of teacher interest in using audio-visual materials in this particular school. Perhaps if I could post a summary in the teachers room their interest would be aroused, therefore I am asking for one to be sent to me." (D39)

"Students were interested in the filmstrip 'Money at Work in the Steel Industry' as an aid to use when they go out in the schools to teach. They were also interested in obtaining the total package of filmstrips record and booklets for their school." (D44)

"The filmstrip would profit greatly from an accompanying sound disc." (D67)

"Very good and we truly appreciate the filmstrip." (D70)

"I appreciate using this filmstrip very much. I feel it is a good aid." (D73)

"The filmstrip is elementary for high school students but it does bring out missing facts about investments and their role in the economy." (D74)

"I have based my judgment from comments from the instructor who used the filmstrip." (D78)

"I do plan to use this filmstrip in the near future, however, when we start a unit on economics." (D81)

"This filmstrip together with other materials produced by the American Iron and Steel Institute are very valuable to the industrial arts program. I am grateful that these films are available." (D83)

"The filmstrip is of great value in understanding industry. It would be nice if more companies made this sort of thing available. A sound recording would make this filmstrip an even greater asset, because the explanations could be more extensive." (D88)

"The coloring was excellent. Even though the girls were not interested so much, it was very appealing to the boys. The industry was well covered and presented." (D89)

"I appreciate the use of this filmstrip." (D95)

"I think it was well thought out and made understandable to a wide range of students." (D101)

"Material that we can keep or file and use when it fits the classwork is a tremendous help. I sincerely appreciate your sponsoring/promoting this educational material." (D103)

"This filmstrip represents the type of content and concepts which should be offered to students as related information in industrial education courses, rather than offered only in social science courses such as "economics." (D110)

"We have no position in our school this present year in curriculum planning to order materials and filmstrips. Most of the materials ordered last year were outstanding, just as this one was. The fact that a private company backed it was beside the point. You people are advancing the course of education in young people. For schools with little money, you are an answer to the teachers prayer. It would be wonderful to work for a company that is doing such an outstanding job for our school system. Thank you." (D111)

"I feel this filmstrip was good, but the vocabulary used was slightly more than a fifth grade child can comprehend." (D119)

"Most useful with a ninth grade new course in industrial processes (science-geography)." (D129)

"Use in high school general metals class." (D133)

"I have found it truly effective!" (D157)

"This was used with a workshop for elementary teachers this past summer. Worked out very well and I am sure that you will receive or have received request for these materials." (D158)

"Thank you." (D160)

"My fourth grade class is a little below average and could not quite grasp many of the concepts in the filmstrips. In my opinion the filmstrip is suited more to a sixth grade or higher levels. The other films in the packet were quite good as well as the literature. I was very pleased with the films and my class enjoyed them also." (D164)

"Film helps explain economics of steel and how it affected history in the U.S." (D166)

"Thank you so much." (D184)

"Filmstrip fits well into a general business class." (D191)

"One of the units that I cover in the course previously described is entitled 'Orientation to our Industrial Technological society.' This film does a nice job of showing the elementary teacher what materials are available from industry which can be used to bridge the gap between technological advancements and cultural lag. I feel that filmstrip and script booklet are excellent and I hope you continue to produce them." (D195)

"The filmstrip was placed in our multi-media center so it could be shared and used by other teachers (ex. social studies)." (D201)

"It's good but please update." (D208)

"It was very informative." (D124)

"I have forwarded the strip to the social studies department - Mr. Paul Holweck." (D219)

"I used this film several times, students liked it and were able to take good notes in order to 'report'." (D233)

"I am a speech and hearing instructor. Hence my use of audio-visual materials is specialized. I try to adopt many materials for variety in my speech correction work. For older students I emphasize correct use of speech sounds in reading the narration, then listen for those correct sounds while discussing the content of the film. I feel that in this way the filmstrips help in two ways: practice of problem speech sounds, study and review of materials relevant to their regular classwork in social studies, etc." (D234)

"Very well done, much more of this type of production should be done by industry. Student are very receptive." (D237)

"Some of the terms are difficult for seventh grade students to understand, but brief explanations usually make the terms understandable." (D248)

"Excellent material." (D259)

"Fits in well with the series on the industry." (D263)

"This is an excellent filmstrip to supplement the material we have for use in beginning economics classes. We appreciate this service of the American Iron and Steel Institute." (D266)

"Excellent film, seems to be well understood by even the slow special education students. I like the follow-up question at the end. Well illustrated, and I appreciate the teacher phamplet." (D267)

"We enjoyed it and I believe my students found it beneficial. It was a catalyst to a really good discussion." (D269)

"Have recommended it to many colleagues in the field." (D278)

"I appreciate your (American Iron and Steel Institute) making this filmstrip available to our school and it fits in most excellently with our study of manufacturing regions." (D286)

"We enjoyed the filmstrips. They are kept in the instructional media center, available to all the students of the school. They have very wide usage." (D290)

"The other<sup>d</sup> filmstrips in the series appear to have a higher interest level that appeal to the class, while 'Money at Work in the Steel Industry' seemed to go right over their heads. Their interest died quickly when there were words in each segment that they could not read and that subsequently had to be explained to them. On the Junior High level this filmstrip would probably have more application." (D295)

"I used this film effectively to teach informative communication in sixth grade English. The presentation and factual material proved most interesting. In social studies in our unit on industry students could see the role money plays. How it is a necessity as well as the raw products, people, and a sale for products." (D299)

"This strip is quite well done. The other five strips in this set are also quite well presented. We have used one or more of the sets with students in social studies classes from grade four to grade eight." (D300)