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ABSTRACT

The state of the art of the educational publishing industry is reviewed. The points are made that the industry is highly competitive and diversified and that sales of all media amount to $1.2 billion annually. Publishers are defined as individuals who assist in the communication of ideas and whose functions include the creation, editing, production distribution, serving and financing of materials. Diversity is insured by the large number of companies in the field, but this fragmentation also prevents basic research on a large scale. Publishers cannot yet be held accountable for the success of their materials because control over the selection and assignment of materials is held by state and local committees and control over their use remains in the teachers' hands. Thus, market penetration and profitability are the best available criteria of success. Publishers do conduct a limited amount of pilot testing and in-service teacher training and the Association of American Publishers stands ready to cooperate with the National Institute of Education (NIE) in programmatic, problem-solving projects. These efforts, in conjunction with NIE's basic research, will help to promote more effective education. (Author/PB)

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Publishing in Education: A Statement Prepared for the National Institute of Education by the Association of American Publishers. November, 1971.

PUBLISHING IN EDUCATION

A Statement Prepared for the National Institute of Education

by the Association of American Publishers

SUMMARY

Introduction

The publishing industry, through the Association of American Publishers, appreciates the opportunity to work with the Planning Unit for the National Institute of Education.

The Publishing Industry

There has been a publishing industry in this country since 1685. It is a diversified and highly competitive industry, whose products in print and all other media, represent approximately 1.4% of expenditures on education in the U.S. Various statistics are given on sales by type of material and by subject matter. Other data are presented.

The Publishing Process

The publisher is not a printer. He communicates ideas. The publishing process involves the functions of creating, editing, producing, distributing, servicing, and financing.

The School Marketplace

Education is basically a state responsibility. In 23 states there is a state-wide system of adoption or listing which results in the selection of a limited number of publications from which local schools can choose.

This system is generally more dependable in providing basic materials and in replacing materials on a regular cycle. It restricts the choices, aims at the "average", and operates conservatively to continue the traditional and established. In 27 states there is a system of local adoption where local districts select materials in various ways. In all states the procedures for selection are well institutionalized.

Publishing Success

Market penetration and profitability are the best indicators of success because other possible indicators all have significant limitations in application. Successful programs normally fit within established procedures, budgets, and patterns of use.

Accountability

The publisher's lack of control over the assignment of students and the teacher's use of his materials makes it impossible for there to be publisher accountability. Performance contracts have given publishers the controls and the accountability.

Pilot Testing

Extensive pre-publication testing is seldom done for a variety of reasons, most of which are connected with the environment in which testing must be done in the schools. However, publishers regularly do pre-publication try-outs and prototype evaluation.

In-Service Training

Publishers do much in-service training but it is limited by financial

barriers. Under proper conditions, in-service training can be much more wide-spread and effective.

Unconventional Distribution Channels

Publishers have worked with television, bookstore distribution, home-selling, direct mail and book clubs, distribution through supermarkets and other chain stores, and other distribution channels. However, parents generally perceive the schools as the educational agency and have not responded so far to efforts to distribute educational programs on a mass basis outside of schools.

The Role of Publishers With NIE

Educational publishers have unique resources for the development and distribution of educational programs. They are willing to undertake projects on their own or in partnership with other agencies.

Conclusion

Basic research in many areas is needed before significant breakthroughs are likely to occur. While NIE works on such basic research, publishers are ready to cooperate with NIE in dealing with developmental projects that will tackle immediate problems.

PUBLISHING IN EDUCATION

A Statement Prepared for the National Institute of Education
by the Association of American Publishers

Introduction

The publishing industry appreciated the opportunity to meet with the Planning Unit for the National Institute of Education. We appreciate, too, this opportunity to submit a written statement to assist the Planning Unit in preparing for an NIE that will make the maximum contribution to the improvement of the education.

The Association of American Publishers represents most of the companies who are active in the preparation and distribution of learning materials for use in the schools of the U.S. AAP, through its Washington office, provides a convenient channel for communication and cooperation between the publishing industry and the various federal agencies concerned with education. The AAP is ready to make available staff personnel or representatives of member companies to meet the needs of the Planning Unit or other groups. Specialists in designing instructional programs, in production, in distribution, in training, in evaluation and testing, and in other relevant areas can be assembled by the AAP upon request. Speaking for the companies who are members of the AAP, we look forward to a continuing dialog between our industry and all those who are concerned with improving education.

The Publishing Industry

Publishers have been involved in the practice of education for a long time. The first educational publication in this country was the New England Primer, published in 1685. (Educational publications were used prior to 1685, but were imported from England.) From the beginning of schooling in this country there have been publications in the classroom.

In the 19th century Webster's Blue-Back Speller and the McGuffey Readers sold hundreds of millions of copies. They provided a common core of educational experience that helped draw us together as a nation.

No publications sell as many copies today as those did when our country had many fewer people. The demand today is for a wide diversity of materials in print and other media that meet the needs of a pluralistic nation. The role of published materials in the educational process is as vital today as it has ever been.

Total expenditures on education in the United States are estimated at $85 billion annually. Total expenditures on all forms of published educational materials in all media are estimated at $1.2 billion annually. 1.4% of the total expenditures for education go toward the purchase of published materials.

Unlike many other American industries, publishing is not concentrated in three or four giant companies. The largest American publishing company has less than 10% of the total market. There are fifteen to twenty companies of significant size, and there are literally hundreds and hundreds of companies publishing materials for the educational market. (Over 500

separate companies are on the Philadelphia schools list of publications approved for purchase.)

This type of industry, diversified and highly competitive, insures that new ideas will get a ready hearing. No monolithic semi-moncpoly inhibits the entry of new products and new ideas into the marketplace.

On the other hand, this type of industry cannot generate the capital investment that can be marshalled by a giant in the automobile industry, or oil industry, or computer industry. The publishing industry could not generate the funds needed to develop an Edsel, or to build an Alyeska pipeline. RCA's loss of over $500 million on its computer business is larger than the total amount spent for school textbooks. Ours is an industry that will not require a loan of $250 million to keep a giant from faltering nor will poor management ever result in a multi-billion dollar bankruptcy.

If the small size and fragmentation of the industry inhibit the private application of gigantic research and development expenditures to educational problems, the small size and fragmentation also promote diversity and willingness to accept change. Mistakes are not fatal to either the industry or to education.

The educational publishing industry serves diversified markets. It serves the nation's schools, those organized institutions of learning commonly enrolling children from Kindergarten through high school. It serves the colleges and universities. It serves nurseries, day care centers, and other kinds of organized educational activities for pre-school children. It serves a wide variety of adult and continuing education activities

conducted in schools, colleges, churches, libraries, grange halls, and a variety of other formal or informal learning centers. It serves the individual, through correspondence courses, through book distribution channels such as the bookstore, through a variety of proprietary schools operated by publishers, through numerous seminars, workshops, demonstrations and other small-scale educational activities, and through contract educational programs.

In the past several years the educational publishing industry has expanded substantially beyond its traditional role of selling books to schools and colleges. It now serves many other markets through many other media.

The book remains the primary medium. (A book is a permanent rather than transient medium which can transmit data to the learner at up to 1000 words per minute -- compared with a normal rate of 100 words per minute for audio media. The book normally contains 4000 to 7000 words per cubic inch and transmits (or stores) these words at a cost of approximately 2-1/2¢ per 1000 words. No other medium of communication is currently as cost-effective in the wide-spread distribution of ideas to individuals in a form that can be rapidly assimilated, indefinitely stored, immediately accessed, and which is based on a technology widely understood and practiced. Such cost-effectiveness insures that the book will continue to be a primary medium.) Publishers now offer books in a wide array of sizes, shapes, binding, content, and price.

Publishers also routinely create, produce, and distribute educational materials in other media. Most major publishers carry in their catalogs

motion picture films, sound recordings (disc, cassette, and tape), filmstrips, overhead projection transparencies, manipulative materials, scientific experiment instruments and materials, tests, as well as hardbound textbooks, paper-bound textbooks, workbooks and laboratory manuals, and teacher's manuals and guides. Some publishers have videotape materials or video cassette materials. Some have computer-assisted instruction programs, or computer-managed educational programs.

Publishers have become, in addition to book publishers, film and record producers, computer systems and program developers, purveyors of white mice and bean seeds, scorers of tests, conductors of seminars, supervisors of program installation, contractors for the operation of educational programs, and operators of schools.

There is a unifying factor that underlies all of the diverse activities of publishers in many markets and many media. That factor is the application of private-enterprise capital and management to provide products and services for education.

It is desirable at this point to insert some of the relevant statistics regarding the publishing industry. The statistics shown are for 1970 which is the last year for which data are available. In some cases the data are approximations. The following data are for schools, school publishing, and school publishers only. They do not deal with publishing for colleges or other market areas.

A. Sales to schools by type of materials:

1.	Textbooks	$365 million	(151 million units, 3 per student)
2.	Workbooks	$104 million	(118 million units, 2.3 per student)
3.	Teacher's Edition & Manuals	$ 9 million	(4 million units, 2 per teacher)
4.	Tests	$ 21 million	
5.	Motion Pictures (16mm & 8mm)	$ 57 million	
6.	Filmstrips (silent and sound)	$ 36 million	
7.	Sound Recordings (Disc & tape)	$ 23 million	
8.	Overhead Projection Transparencies	$ 9 million	
9.	Multi-media and Science Kits	$ 17 million	
10.	Maps, Globes, Charts	$ 10 million	
11.	Study Prints	$ 9 million	
12.	Manipulatives, Boxed Matls.,etc.	$ 8 million	
13.	Encyclopedias	$ 20 million	
14.	Children's Books for Supplementary and Library Use	$ 85 million	(approx.)
		$773 million	(approx. $15.15/student)

The sales shown above represent 2.2% of the total current expenditures on elementary and secondary education of $35.3 billion estimated for the 1970-71 school year. Of that total amount 59.5%, or about $21 billion, was spent on classroom teacher salaries.

Approximately 51 million students were enrolled in U.S. schools. (K-12) These students received somewhat less than 1,000 hours of instruction during the school year. One of the ways of looking at educational cost is in terms of cost per student-instructional-hour. Classroom teachers cost $0.404 per student-instructional-hour (cheaper than most baby-sitters). All instructional materials purchased cost $0.015 per student-instructional-hour. Building maintenance cost $0.019 per student-instructional-hour. (See COST-ED Model, referred to in Performance Incentive Remedial Educational Experiment by Blaschke.)

B. Textbook Sales by Subject-Matter and Level, as Percent of Total Textbook Sales:

1.	K-8	Reading and Literature	44%
2.	K-8	Mathematics	17%
3.	K-8	Other Language Arts	15%
4.	K-8	Social Science	9.5%
5.	K-8	Science & Health	8%
6.	K-8	All Other	6.5%
			100.0%

7.	9-12	English and Literature	24.5%
8.	9-12	Science	16%
9.	9-12	Social Studies	15.5%
10.	9-12	Mathematics	12%
11.	9-12	Vocational & Industrial Arts	20%
12.	9-12	Foreign Languages	7%
13.	9-12	All Other	5%
			100.0%

C. Miscellaneous Data (For companies reporting data to AAP for annual statistical report only.)

1. Number of field representatives -- 1,619

   (These representatives working daily in schools, are a major corps of change agents.)

2. Amount spent on free examination copies given to educators - $10.7 million

   (Approximately 15 million books and other products are given away free each year for review by educators.)

3. Amount spent on warehousing and shipping -- $13.8 million

   (This expenditure is essential to provide the physical distribution network that permits timely delivery of published products to the more than 93,000 schools in the country.

4. Amount paid to authors ---------- $20.8 million

5. Amount paid as Federal Income Taxes ------- $24.0 million

6. Net Profits ---------- $22.7 million

   (The preceding figures show that the federal government gets more in taxes from publishers than either authors or the companies get. The net profits of the companies must be used to repay loans, to provide a return to investors, and to provide funds to invest in new projects and programs.)

The Publishing Process

One of the pervading misconceptions that afflicts all who deal occasionally with publishers is that they are printers with a fancier name.

This misconception may arise from the fact that newspapers have their own printing presses rumbling in the basement. And in the McGuffey Reader days almost all large publishers had their own printing and binding facilities. Today, hardly any publisher owns manufacturing equipment. This is because the owner of manufacturing equipment is basically in the business of keeping that equipment rolling. The publisher is in a different business. If they aren't printers, then what do publishers actually do?

Publishers communicate. They transmit ideas that educate, inform, entertain, or inspire. Unlike other segments of the communications industry, the companies represented by the Association of American Publishers do not depend on revenues from advertising, do not need government-licensed airwaves or wires, and do not depend upon assembling an audience in a theater or hall. Publishers transmit ideas through many media -- print, film, tape, objects -- whatever best communicates the ideas.

Educational publishers provide instructional materials used in learning. They are primarily concerned with identifying, developing, organizing, and transmitting ideas that educate and inform. A successful educational publisher orchestrates the functions of creating, editing, producing, distributing, servicing and financing.

Creating involves the conceptualization, development, and articulation of ideas. The first step in creation is the identification of a need. Then ideas that will meet the need must be organized and set down -- on paper or film or tape or in some other form. Creating involves identification of need, program design, and the activities of authorship. The ideas of educators, students, parents, research specialists, and many others are

integrated into the creative process. The field testing of prototypes is often involved.

Editing involves all of the activities needed to make the ideas articulated by authorship as useful and meaningful to the user as possible. Editing also involves the preparation of the communication for conversion into the most appropriate medium (a book, recording, or whatever.) The first phase of editing often involves extensive testing and revision. It always involves the application of experienced and knowledgeable critical judgment. Editing results in more precise and effective communication, better suited for the audience for which the communication is intended. Design, illustration, fitting the materials to the space of the printed page or the time of the film or tape, are aspects of the second phase of editing.

Producing involves putting the communication into a form that can be easily and economically transmitted to a widely-scattered audience. Educational publishers must use forms that fit into the constraints of the school budget, the school facilities, the school organization, and the capabilities of teachers and students as well as meeting instructional objectives. The product must be able to be distributed to thousands of separate educational institutions. Educational publishers almost always contract production to an outside manufacturer specializing in the specific product. There are different printers with different machinery who specialize in different kinds of books; full-color or black-and-white, paperbound or hardbound, large or small. There are manufacturers who specialize in recordings or films or other kinds of products. The diversity of product

developed by educational publishers makes it desirable to use a variety of specialized manufacturers rather than to attempt to do all manufacturing on machinery owned by the publisher.

Distributing involves making the educator aware of the product's existence and benefits, eliciting an order, and delivering the product to the customer's location, in the quantity, and at the time desired. Educational publishers conduct extensive selling efforts through advertising, direct mail, and large groups of field representatives to make educators aware of the existence of useful products. Educational publishers normally employ electronic data processing, telex communications, regional warehouse facilities, and large numbers of people to insure efficient and effective distribution.

Servicing involves helping the purchaser to know how to use the product effectively. Educational publishers routinely use in-service training, demonstration teaching, instructional television, seminars and workshops, film, as well as printed manuals and guides in servicing. Servicing must also generate feedback on the efficacy of the product so that it may be revised and improved in the light of actual use.

Financing involves providing the funds needed to support all of the other functions. An educational publication requires funds to support its creation as much as five years before actual production. Expenditures continue through the editing and production functions. Actual manufacturing normally takes place five or six months before the customer places an order. And the customer usually does not pay for the order until two or three months after receiving it. These time factors make financing an indispens-

function of publishing.

The educational publisher must be effective in all of the areas -- creating, editing, producing, distributing, servicing, and financing -- if he is to meet the needs of education and make a profit.

Attempts to parcel out some of these functions to other agencies have not been unqualified successes. Where outsdie agencies have attempted to take over the creating and editing functions, the products have often been insensitive to the real needs of schools, or have not been responsive to the actual conditions of use. The publisher has sometimes been viewed as merely a production and distribution agent, but such a view too often results in products that cannot be produced or distributed on a cost-effective basis. Some of the most successful programs developed by outside agencies have required extensive revision by the publisher in order to achieve the promise nationally of their local experimental success.

The efforts of for-profit enterprises, competing against each other, and controlling the total publishing function, still seem the most effective and efficient way to meet the needs for instructional materials of educational institutions.

The School Marketplace

The educational publisher's ultimate success or failure depends upon the selection and purchase of his product. During our meeting there was substantial discussion of the process of materials selection by schools. We will try to put on paper the essential elements of this process as it actually occurs.

Education is basically a state responsibility. Hardly any one of the 50 states has a selection and purchasing process that is exactly like any

other. For purposes of this paper we will group common practices together into general categories.

In twenty-three states, there is a system commonly referred to as adoption or listing. The typical pattern in these states is this:

The state department of education or a group appointed by the state superintendent or state board draws up a course of study and some definition of the specific kinds of materials they plan to buy. The definition may be as loose as "elementary science materials." Or it may be a very tight definition stating that there shall be textbooks meeting specifically defined manufacturing standards, containing specifically defined content, presented in a specifically defined mode and methodology, to achieve specifically defined instructional objectives.

Then the appropriate state officials appoint a representative committee (usually of educators) who are charged with selecting as few as one or perhaps as many as there are (up to ten or twelve) of the materials that fit the defined criteria.

Publishers submit examination copies of the publications they feel will have a chance at approval, meet with the committee members, send literature, and take such other actions as are allowed by the procedural rules of the selection process. Sometimes a publisher is allowed only one 20-minute session to present an entire series or program to the committee.

After due deliberation and voting the committee makes its selection. This selection is usually confirmed by the state board or state superintendent, sometimes after opportunities for public protest.

The selections are then made known to the local school districts. Each school district must, by a set time, choose one of the publications on the

state-approved list. That choice will then be supplied to the schools, usually by way of orders placed through the state to the publisher. (In California, the State Printer manufactures most of the books from films or plates supplied by the publisher.)

The primary advantage to such a state-wide system is that it is usually based on state funding of textbook purchases. The children are assured a more dependable supply of basic learning materials. Another advantage is that these states normally follow a regular cycle which means that obsolete materials are replaced on a regular basis.

The major disadvantage of such a system is that by restricting the choice of materials it is much more difficult to meet the specific needs of individual communities, schools, classrooms, and children. Individualization of instruction is difficult to achieve under such a system.

A corollary disadvantage is that a state-wide system operates conservatively. When a limited list of materials is to be approved for an entire state, materials that are too innovative and too different have little chance. The risk is too great. Most materials are selected for the "average" student. Normally state adoptions or listings call for hardbound basic textbooks in the same mold as those previously adopted. Rarely do these adoptions even make allowances for drill and practice materials or for testing materials. Only one state adoption process routinely considers multi-media systems utilizing non-print materials.

In 27 states there is a system of materials selection called local adoption or open territory. Practices in these states vary widely but the common thread is that the local school district establishes its needs, s in publishers, evaluates the offerings, and selects the materials.

When the local school district is the size of Chicago or Detroit or New York, the process takes on many of the aspects of a state adoption. The size of these districts makes for the same problems.

Most school districts in local adoption states select basic textbook series on a district-wide basis. Normally, a committee of teachers, principals, and curriculum specialists is appointed. This committee establishes criteria, reviews examination copies, usually hears presentations by publishers' representatives, then votes for its choice. Once the choice is made, the school district business official estimates the number of books needed and places the order. Teachers often do not see the books chosen for them until they come to school in the fall and find the books in their classrooms. Of course, better districts run workshops on the new programs, order teacher's editions in the spring, and take other steps to make sure that the new materials are introduced in an effective manner.

In many larger districts there is a librarian who orders books for the school libraries. There is an audio-visual specialist who orders films and filmstrips and other such materials. Building principals often take responsibility for ordering a variety of supplementary materials. Pupil personnel specialists order tests. Individual teachers often have classroom funds that they can use to order (such funds typically range from $10 to $50 per year.) The disadvantages of such a system are easy to see. The classroom teacher who deals directly with the learner often has little to say in the selection of most of the materials. The selection process is fragmented in a way that makes it difficult to select integrated, multi-

 systems.

Within local adoption states there are other patterns. In a very few places the superintendent personally makes all of the choices. In some districts, a district-wide committee prepares a list of acceptable series or titles and then schools choose from that list.

Where the choice is made within an individual school, it is sometimes the principal that makes the selection. In other cases, it is a committee of teachers in the school. Infrequently, the individual teacher is permitted to make his own selections within certain budgetary limitations.

In secondary schools, the process is somewhat varied because of the position and role of the subject-matter department chairman. Often the chairman makes the selection himself or else heads a committee of teachers in his department who make the selection.

These institutionalized procedures for the selection of published learning materials tend to discourage small-scale, low risk experimentation. They tend to discourage individualization and innovation.

Like most institutionalized procedures they favor the continuation of established programs and patterns.

This is the milieu in which publishers operate. The most successful publishers have been those most closely attuned to the realities of this milieu.

Publishing Success

One of the questions asked in the meetings was what factors make for success in the launching of a new publication?

First, one must define success. Success may be stated in terms of ficial impact upon the learning of children. It may be stated in terms

of its effect upon the work-load of the teacher. Or it may be measured in terms of market penetration or profitability for the publisher. Or there may be other yardsticks.

Publishers can sometimes measure their success in terms of the impact of their materials on the learning of children. Improvement can be measured on tests. But it is seldom possible to isolate the effect of the published materials from other influences. Children come to school with widely varied backgrounds. Teachers use the materials in widely varied ways. All of the other factors active in the school impinge on learning. In many cases, if the children don't learn satisfactorily, the materials are blamed. If they do learn satisfactorily, the school personnel get credit. Success in helping children to learn is not usually a measure that publishers can use with regularity and confidence although it is possible.

The same kind of factors make many other possible measures of success unsatisfactory. The publisher usually finds that market penetration and profitability are the most practical measures of success.

With these as the measure of success and with the selection system described above, it should be apparent what factors make for success. A successful program will be one that does not require significant alterations in selection procedures or patterns of use. It will be one that fits into existing budget allocations, purchasing channels, etc. A successful program will have clearly visible features which make it better than its predecessors or competitors but these features will not threaten existing methods.

An analogy may be useful at this point. In the area of personal transtation a successful product is an automobile that runs on four wheels

with a gasoline engine. It will cost somewhere between $2000 and $4000. It will have visible features that are improvements over previous models.

An entirely different product for personal transportation can be conceived. The needs of people might be better served by public transportation, or by three-wheeled vehicles powered by batteries. But it is unlikely that success, measured in terms of market penetration and profitability, can be achieved by straying too far from the established automobile pattern.

Publishing companies have demonstrated their ability to produce materials for new curricula in mathematics, science, social studies, and other areas. They have shown their ability to produce materials in new media. But they have not been able to affect any significant change in the selection procedures, funding levels, and purchasing practices of school districts. Thus success is still largely dependent upon materials which have visible improvements but which do not threaten established ways.

Accountability

There has been much discussion about accountability or guaranteed performance. Publishers have been concerned with these discussions for the power structure of the educational institution makes it entirely possible that published materials will be asked to bear the burden of accountability without being given the authority by which to make accountability meaningful.

The publisher has no control over the students who use his materials. He cannot specifiy that only those students with specific characteristics can be assigned to his materials. There is no doubt that certain students learn better through one sensory input channel than another. There is no

doubt that different methodologies produce different results with students -- some being more attuned to authoritarian approaches while other respond best to unstructured approaches. Some students do best with short bursts of concentrated attention on a specific topic with a quick shift to another topic. Other students seem to do better with a much longer and more leisurely span of attention to a single topic. Some students come to school with a rich background of experience with language while others come from limited backgrounds. Some are prepared for independent work while others operate best in a group.

We know these and many other individual differences exist, but the publisher who may have designed his materials -- and sold them -- to meet a specific constellation of student characteristics has no assurance that the materials will be used with such students only.

The publisher has no control over the teacher's use of the materials. If the publisher has carefully structured a sequential program, the teacher may skip around, jumping back and forth. If the program calls for the coordinated use of print and film, the teacher may decide to avoid the bother of requisitioning the projector and use print only. If the program presumes mastery of skills presented in the earlier part before going on, the teacher may push ahead even though some children have not mastered the skills. These are but a few examples. The teacher is in total control, in almost all schools, of the use of published materials. (See Life in Classrooms, by Philip Jackson, for a pertinent view. It seems evident that teachers do not become teachers to manage instructional resources, nor do they receive any psychic rewards as teachers -- much less financial rewards

-- for effectively utilizing instructional materials to produce pre-defined learning objectives.)

Schools have given the publisher no authority, except in the isolated case of performance contracts. Without authority, the publisher cannot hope to be accountable or to guarantee performance.

Some publishers have entered into performance contracts where they have been willing to be held accountable under contractually defined conditions. Given a more clearly defined situation with better controls over the characteristics of students and the operations of teachers, many more publishers would be willing to accept accountability standards for their publications.

Pilot Testing

Given the budgetary limitations and the nature of the selection process, extensive pre-publication testing is not carried out with most conventional products. Since the products tend to be extensions of an improvements upon already widely-used products there is more than sufficient feed-back from users. For new or unconventional products the situation is different.

The adoption or selection process, with its emphasis on broad-scale use, discourages the small-scale, low risk experimentation that is essential to initial testing. Since any testing involves the lives of boys and girls and usually involves public monies, it is seldom possible to get school districts to commit large numbers of children and large expenditures to test new or unconventional products that are significant departures from established practice. The reluctance of school districts to participate in

wide-scale experimentation of a radical nature is probably a commendable stance. Few parents or taxpayers would have it otherwise.

But the short-time, small-scale experiment, involving only a few children and a few dollars for a brief period, is discouraged by the system of selection and by the reward structure within schools. It is further discouraged by those who denounce such experiments as being statistically invalid and therefore worthless. (Those researchers who expect to get the same neat computerized results from research within schools that they can get with white rats in the laboratory are a significant barrier to progress in education.) Additionally, small-scale pre-testing is usually done by the best trained and motivated teachers, conditions not likely to be found for full-scale use. Finally, an experiment that produces quick improvement usually has parents clamoring to move all children to the experimental methods or materials. This kills the control and the longitudinal aspects of experimentation.

There are many examples of lengthy and costly experimentation preceding the development and publication of programs. Publishers have done this, but the realities have prevented significant experimentation and product testing for most of the best-selling products, except as feed-back from wide-spread use can be applied to revised or improved products. However, most new programs do entail some form of prototype evaluation.

In-Service Training

Much attention has been given to the role of the teacher in the learning process and in the use of materials. Publishers have been very aware of the importance of this role. A great deal of effort and money is expended by publishers to assist in the in-service training of teachers. Many million

teacher's editions, teacher's guides, and teacher's manuals are sold or given away each year (many more given away than sold.) Most larger publishers employ specialists whose only function is in-service training — through seminars, workshops, demonstration teaching, individual or small-group counseling, and other means. In addition to these persons, most publishers also provide in-service training through other media. Motion picture films, videotapes, audio cassettes and records are commonly used.

The nature of the school reward structure and the problem of released or free time makes in-service training a haphazard affair. It is neither as extensive or as effective as it could be.

It is also limited because in most cases schools have been unwilling to pay for in-service training in the use of published materials they have purchased. This puts severe financial limitations upon the quality and quantity that can be offered. It also inhibits publication of programs requiring re-education of teachers.

For the National Science Foundation curriculum reform projects of the 1960's this situation was different. At that time there was substantial prestige as well as financial reward attached to attending a workshop on the new curricula. NSF paid the costs so that school districts were not required to pay extra. Much of the in-service training given at that time was unrealistic in its relation to the actual classroom requirements of the attendees, but nevertheless, it was clearly demonstrated that it is possible to insitutute wide-spread in-service training, given the proper conditions.

Unconventional Distribution Channels

The question was raised as to whether or not non-institutional avenues to the education of children could be used more effectively.

Publishers have been active in this area. The key factor seems to be the establishment of viable channels for distribution. One such channel is television in which Sesame Street has been a conspicuous entry. However, the situation does not seem promising for the use of television as a commercially viable channel for cognitive learning.

Other channels of distribution have been tried. Normal bookstore channels are used for a vast array of more or less educational products. Unfortunately bookstores are too few to serve the needs of many.

The home-selling efforts of publishers, particularly those specializing in encyclopedias, have shown another channel for the distribution of learning materials. It is evidently, however, a channel unsuited for low-cost items.

Direct mail and book clubs have been another type of channel often employed by publishers to bring learning materials to the attention of parents.

Supermarkets, drug stores, and other types of chain stores have been enlisted to serve as distribution channels for learning materials.

In these and in many other smaller scale experiments to find viable channels for the distribution of learning materials, publishers have usually found that there is a limited market.

At present, most parents assume that the schools is the institution of education and that they as parents have only an incidental responsibility.

Despite the earnest desire of many upper-income and/or highly educated parents to play an important role in furthering their children's education, the vast majority of parents have neither the time or the inclination to assume an educational role which they believe is properly the function of the school. This belief makes the market for instructional materials very limited outside of organized institutions of education. (Even in the area of children's books, which are very widely distributed through many different channels to parents, it is usually estimated that approximately 85% of all children's books selling for $1.00 or more end up being bought by schools or libraries.)

A massive realignment of the perceptions of parents regarding their educational role will be needed before large-scale efforts to provide education outside of organized educational institutions can expect to have much significance.

The Role of Publishers With NIE

NIE plans to focus a major portion of its efforts on problem-solving developmental projects. In such projects educational publishers can play a significant role. Educational publishers have unique resources to be applied. They have a trained pool of program managers, editors, and designers with long experience in shaping creative ideas into learning programs that are effective, manageable, and economically viable. (Many were educators before moving to publishing.) Publishers have specialists in design and illustration and specialists in various audio-visual and other media so that ideas can be most effectively presented.

The publishers have manufacturing specialists who can find the means of manufacturing quantities of instructional materials on a timely and economically feasible basis.

The publishers have a large corps of marketing personnel who spend full-time introducing new products to schools, doing in-service training, and obtaining feed-back on the results of use.

The publishers have a highly developed capacity for the physical distribution of instructional materials.

And if there is a reasonable opportunity for return, the publishers can provide financing of appropriate aspects of a project.

In the past, it has seemed that a bias against the use of private for-profit companies has led some agencies to ignore the capabilities of the educaitonal publishing industry. Hopefully, that bias no longer exists.

In developmental projects publishers are prepared to undertake an entire project, directing all aspects. Many publishers have had experience in operating projects on this basis. Publishers are also prepared to cooperate with other organizations in providing publishing services.

In such cooperative ventures it is essential that the publisher be selected and become involved early. Too often in the past, publishers have been invited into projects long after unworkable or uneconomic materials have been frozen into the project.

In projects that are planned as cooperative ventures between publishers and other organizations, it is desirable to ask that the cooperative team involved from the very beginning. Projects that are likely to involve

published materials should specify that proposals presented by publishers or teams involving a publisher will get the most favorable consideration, all other things being equal.

Publishers stand ready to cooperate with others -- universities, non-profit research centers, etc. -- in preparing proposals and in working on projects.

The Association of American Publishers will undertake the responsibility of informing all publishers (members or not) of opportunities of this nature. Then the competitive nature of the industry will insure that several publishers will become involved.

However, no publishers will be likely to become involved if there is no opportunity for a return on the investment of time and money made by the publisher. If publishers commit personnel and funds to projects, they anticipate that this commitment has a reasonable chance of producing as good a return as the commitment of these resources to other possible projects. The same position is likely to be held by all agencies and organizations, non-profit or for profit, private or public. The NIE will also commit its resources to projects that have a higher potential return than other available projects. We all recognize the risk of failure. But that risk must be balanced by the hope of return.

The measurement of return may vary somewhat, depending on the nature of the organization. Publishers often think in terms of the profits that may be generated -- return stated in dollars. Since money may be placed in prudent securities and earn a return of five to six percent a year, publishers generally expect to invest their funds in projects which will earn a return r than that minimum. However, in all business and certainly in the

publishing business, companies forego immediate return for the sake of the future.

Many publishers would be willing to forego profits from a specific project if the results of the project -- in terms of experience gained, materials developed, techniques perfected, or whatever -- promised the hope of significant returns at a later date.

The publishing industry has companies with experience in conducting complete projects on their own. Publishers have been the contractors for R&D activities of many kinds. Publishers have also worked cooperatively with universities, regional labs, R&D centers, and many other organizations in activities of many kinds. Publishers are flexible and can bring to bear a wide variety of resources under a wide variety of conditions, so long as there is some reasonable expectation that at some foreseeable time the investment of these resources will produce a return to the publisher.

Conclusion

Publishers are probably not well-suited to undertake basic research projects. And yet most publishers feel strongly that it is through such projects that NIE can make its major contributions.

The nature of the educational establishment as a social institution deserves extensive study for it is the dynamics of this institution which prevent many changes from occurring.

The nature of the human learning process deserves study from many different aspects. We are gravely limited in improving education by our lack of knowledge about human learning. We do not even have any very good

theories upon which to base developmental projects.

The absence of productive theories has hampered publishers as it has all others working in education. Newton's theories in physics provided the basis for massive developments in technology, developments that remade our world. The theories of quantum mechanics have largely displaced Newtonian physics, but that in no way diminishes the significance of Newton's theoretical base for the technological developments built upon that base. We need powerful theories of human learning which can generate the same burst of development in education.

Education as a social institution and human learning are but two of many areas in which our basic research is sadly deficient and in which theoretical foundations are lacking.

Publishers can fully participate in programmatic, problem-solving projects. Their experience and capability suits them for this. But they recognize that such projects are likely to have only limited impact without a stronger foundation of basic research.

Publishers welcome the opportunity to work with NIE on developmental projects. But they strongly encourage NIE to push forward the frontiers of knowledge through basic research so that more significant and lasting improvements can be made.

Perhaps the automobile analogy can be used again. Automobile companies are working with the Department of Transportation to develop safer cars, more pollution-free cars, and so forth. But it is likely that significant changes cannot be made without a better understanding of the implications of the automobile to the social, psychological, economic, and political

arenas. Why do people persist in driving even when good public transportation is available? Is there some potential technology which would satisfy the psycho-social needs of man, be economically and politically feasible, which would also avoid all of the well-known problems of the automobile? Hopefully, such research is going on at the same time that efforts to improve existing vehicles traveling on existing highways are being made.

Publishers are painfully aware of the ignorance that prevents them and the educational establishment they serve from providing effective learning to all children. But publishers are also aware of the capabilities and experience they have developed and which is available to help make improvements in our schools today. The publishing industry looks forward to being a partner with NIE and with other agencies in improving education.

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