

Education and the SMPTE

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The SMPTE has been involved in education almost since its inception. The earliest specific references in the Society's *Transactions* relate to the technology and uses of the motion pictures in the instruction, rather than the training, of personnel for advancement in the industry, or for the education of individuals preparing for a future position. The Society is still involved in technology for use in education through the work of its engineering committees.

In 1964, the Society formally recognized its responsibility in the area of education when the Constitution and Bylaws were changed to establish the position of Affairs Vice-President for Education, along with those for Instrumentation and High-Speed Photography, Motion Pictures, Photo-Sciences, and Television. The number of Vice-Presidents has since been reduced, and some of the names have been modified to reflect changes in technology as well as needs.

As our world becomes increasingly complex, one of the most significant decisions facing any individual is determining what preparation, knowledge, skills, and experience are necessary to attain specific goals and objectives. The next question, of course, is where to get them.

There was a time when apprenticeship and experience were preparation enough for earning a respectable living. Prior to the industrial revolution, higher education dealt almost entirely with the classics, science, literature,

and the processes of thought. Starting about the mid-19th century, educational programs were gradually expanded to include subjects appropriate to vocational and technical preparation, and new studies were added in science, mathematics, social science, and the arts. The sheer amount of information necessary to do advanced work in any field of knowledge requires a longer period of study than ever before, and the cost of this education has increased manifold.

The Society has made a diligent effort to assist deserving students. In November of 1965 the first scholarship program was announced, with the first award being made in the spring of 1966. Since that time, approximately 75 individuals have received financial assistance from the Society to aid in furthering their education. It should be noted that, for the first several years, the scholarships were financed by grants from individuals. For most of the ensuing years the funding came from Society funds, except that the Education Committee also administered scholarship funds that were provided by the Academy of Motion Picture Arts and Sciences for a part of their educational activity with very similar objectives.

The scholarship program was intended to further the purposes of the Society as stipulated in the Constitution: "To foster, carry on and advance the engineering and technical aspects of motion pictures, television, and allied arts and sciences." The program, however, has mostly produced applicants whose primary interests are in the creative applications, rather than the purely engineering aspects, of the technology. There are many institutions teaching subjects relating to production, and relatively few are of-

fering specifically related engineering courses.

In short, the problems have been that:

1. Most of the applicants for scholarships have not been primarily interested in engineering and technology, and most of the institutions where they were studying do not have courses specifically suited to the needs of potential employees of the motion picture and television industries. Therefore, in the programs for which students have been seeking financial assistance, engineering and technology has been essentially secondary.

2. There has been almost no effort on the part of the Society, and to a great extent its related industries, to develop contacts with scholarship students. The result has been that education financed by the Society has benefited other industries.

The question has often been raised as to why academic institutions do not have more programs specifically related to the needs of motion pictures and television. The obvious answer is that because the total number of *graduate engineers* needed annually is relatively small, there is a limit on the number of academic institutions which might even consider major technical programs. For this reason, future engineers must come from other fields, such as electrical, chemical, and mechanical engineering, as they have in the past. This, of course, may have both advantages and disadvantages, but it does mean that our companies must compete against very organized and aggressive personnel search teams from very high-paying industries, such as aerospace, computers, or petrochemicals, for applicants for positions.

As a result of this situation, the

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SMPTE will discontinue its scholarship efforts for this year in favor of an internship program. There is no question that this new approach should be much more cost-effective for the companies being asked to support it. This program can also be extremely valuable for the individuals who choose to become a part of it by helping them become involved with the latest equipment and technology found in industry.

For this internship program to become a success, one of the first questions which must be clarified is whether the Society will function as a "matchmaker" which simply gets individuals and companies together, or whether it will take a role in guiding both students and companies so that the program will be as productive as possible for both. The Society must really take an active part in the education/training process; it must not merely serve an employment agency function. There are many other factors, of course, which are also under consideration, but this new approach is undoubtedly the proper decision for the immediate future.

There is some question, however, as to whether this approach will serve the long-range needs of both the industries and the individuals who will be called upon to assume positions of leadership. It is this author's opinion that the Society must seek ways to work with institutions of higher education in the future to achieve this goal. Education is much more than learning skills — it is learning how to *think*; it is learning how we arrived where we are, what is

already known, and how to apply that information toward a desired end. The wheel was invented a long time ago, but it is constantly being improved upon and being applied to different tasks.

There are a number of areas in which it is suggested that future efforts would be very productive.

1. The SMPTE should work with representatives from industry to define the knowledge, training, and skills that are desired and expected in future employment applicants. This will help to insure that courses of study will cover established needs.

2. Industry could locate individuals in their organizations who have the potential to justify encouragement and provide at least some financial assistance. Some organizations, of course, already do this.

3. When areas of needed training have been defined, the Society could search for interested institutions which are qualified to fulfill the requirements, and assist them in establishing programs designed to fill that need.

4. The Society might consider providing financial assistance *through* academic institutions which have programs meeting the defined educational needs.


5. The SMPTE should avoid again becoming involved in the selection of individual recipients for financial aid, but it could provide funding for individuals upon the recommendation of outside organizations engaged for the purpose.

6. Academic budgets usually do not provide funding for "state-of-the-art"

equipment and facilities. The SMPTE, working with industry, could assist in developing a program whereby the latest in equipment would be made available to students, instead of the usual "hand-me-downs." This could be done on a loan basis or as gifts to the institution, depending on tax considerations. At the very least, most of this equipment should be made available on a cost basis.

7. In addition to formal educational programs, the Society must not overlook the growing need for short courses and specialized training relating to the ever-increasing complexity of the technology. Many educational institutions have divisions prepared to provide these services, but they need the guidance of professionals in industry.

As a parting thought, we must always remember that engineering, science, and technology, which are the concerns of the SMPTE, are *not* an end in themselves. Their only value comes from effective application in the creative process — production. A significant part of the SMPTE's responsibility is in the education of production and management personnel. If they are well acquainted with the engineering and technology, they can be expected to support not only its full and proper utilization, but also the research and development necessary for continued improvements.

Helping to prepare the younger people who will be assuming leadership roles in the future is probably the most lasting contribution that any of us can make. 

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