

8mm as a Means for Learning Motion-Picture Production

By ROBERT S. BEELER

Current 8mm cameras and sound projectors offer a practical answer to problems of mastering motion-picture planning and production procedures. Beginners can use simple 8mm equipment to develop ability, whereas production practice with 16mm or 35mm equipment may be prohibitively expensive or require technical skills the beginner does not possess. Techniques learned with 8mm can be transferred to the planning and production of 16mm and 35mm motion pictures.

MANY COLLEGES, universities and industrial organizations offer formal or informal training in motion-picture production. These are neither trade-school nor home movie courses, nor is their purpose necessarily to train camera operators and film technicians. Many are courses primarily for the student who will produce or use motion pictures for education, communication or training — in industry, government or business.

Teaching Problems

Here are some of the problems in teaching these students: It is difficult to teach the "grammar" of motion-picture production, and to teach the planning, execution and use of the film for successful communication. Books and lectures can help. But, finally a student must produce a successful film or film sequences to demonstrate mastery of the medium. The major problem is usually budget. Both time and money are limited.

Most students in motion-picture production courses eventually pursue careers involving the use of motion pictures. They may be planners or producers of educational, training or informational motion pictures. Others will actually engage in cinematography, often in addition to other responsibilities in the planning and preparation of audio-visual materials.

Typically, a beginner in a motion-picture production course serves a kind of apprenticeship. He is an observer or semipassive participant. It's not often that he actually operates the camera, and usually when he does he is given explicit instructions about just what to do.

Ordinarily he shoots only material which has been scripted, storyboarded and is completely cut and dried. This is a satisfactory means for learning the mechanics of camera handling, and later the mechanics of film editing. But it is not the way to learn to communicate

with motion pictures. In many motion-picture courses this more difficult technique is stifled and develops only after the student has finished the course and has had long practice on the job. Too often the ability to communicate does not develop.

This need not be so. Obviously one answer is more student experience in planning, shooting and editing. And, just as obviously, this is difficult or impossible with 16mm and 35mm equipment. The cost of film and equipment is limiting.

There are other problems with professional or semiprofessional equipment in teaching production. A professional motion-picture camera is a formidable and expensive apparatus. The beginning student is overawed initially by the complexity of the equipment.

The instructor reinforces this attitude. The instructor knows that although this may be a student practice camera at the moment, later today or tomorrow it's to be used for a production job and must be in operating condition. Consequently the student is fortunate if he is allowed to load a magazine or thread the camera.

Finally, even if the money for film, equipment and laboratory services is available, the student is still not master of the equipment. By the time he's waded through film speeds, light readings, matte boxes, barn doors, synchronizers, hi-hats and all the rest, he has lost sight entirely of his motion-picture subject and what his movie is expected to do to an audience.

Lower Cost

Let's look at solutions 8mm film may offer for teaching, or learning, motion-picture production.

First, there's lower cost. It becomes practical for each student in even a beginning course to plan and make his own motion picture. A good professional or semiprofessional motion-picture outfit will cost at least several hundred and often several thousand dollars. As an example, one professional quality 16mm camera with a 24-frame motor, 400-ft magazine and 25mm $f/1.4$ lens now sells for \$1,895.00. For the same money a school can purchase 38 8mm cameras

with $f/1.6$ lenses and automatic exposure control.

Many an instructor with beginning students believes in learning by doing. He must teach students such things as screen direction, how to use close-ups and long shots. For about the same equipment investment he can provide a camera for each student with no worry about exposure, focus or other controls. Or, he can have 38 students using a single camera with a multitude of adjustments, loops to form, lenses to focus.

If the object is to teach film techniques and film production rather than equipment mechanics, obviously the 8mm would be preferable from an economic point of view, at least. Much the same is true of on-the-job training situations. Less than \$100 will buy an 8mm camera, tripod, lights and film for a good bit of production practice.

Film and processing can be a major cost, too. The factor is roughly 4 to 1 in favor of 8mm — depending, of course, on how the comparison is made. Assume that screen time is 10 min. That requires 360 ft of 16mm film at sound speed. But 8mm cameras and projectors, for the most part, operate at a nominal 16 frames/sec. That requires about 120 ft of 8mm film for 10 min, or 60 ft of double-8 film. Thus, about $\frac{1}{4}$ as much film is required for a given screen time.

If magnetic stripe is added, the cost per lineal foot is the same for 8 and 16. But the film runs through the 8mm camera and projector only one-third as fast. A dollar buys three times as much sound in 8mm.

Generally, 8mm color and sound, processed, will cost about one-fourth to one-third as much as 16mm black-and-white reversal, minute for minute.

Practical Experience

More important than the cost advantage is that the student can be content, oriented from the beginning. The more mechanics that are eliminated for the beginner, the better. He can concentrate on planning and on producing sequences and complete motion pictures with the audience in mind. He can concentrate on the story he's telling rather than whether he opened the shutter on the last shot, whether someone moved in or out of focus, whether one of the loops is too tight, and so on.

Further, with 8mm the student can work unhindered. He's not limited to working with others in a crew. His talent need not be confined to script-writing, shooting or editing in a group

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project film. He has his own inexpensive 8mm camera to use and he is free from costly and bulky equipment which must be shared. He needs no truck to move equipment to location. Even indoors, a simple light bar will let him work on film content. Later he can worry about improving technique with other lights.

And, since this is his own film production, he's more interested. He does the planning, the camera work, the editing, and the sound — the whole works. His effort is not buried in a group project. What he accomplishes is his responsibility, and he gets the credit, or the blame.

Even if the student does go on to become a camera operator or cinematographer, 8mm is a good beginning. If he can achieve a good screen image in 8, it should be excellent when he moves up to 16, and superb in 35mm.

The fundamentals of treatment, script, shooting and editing are independent of film size. A pan in the wrong place, incorrect screen direction, a poor transition, a tilted horizon: these have little relation to film size.

Many of the technical phases can also be learned well in 8mm. Anyone who has developed skill in the physical handling and editing of 8mm film is not likely to have much difficulty with 16 or 35.

Most nontheatrical films use post-recorded sound. In sound, 8mm permits the student to tackle the same problems of timing and wedding an appropriate screen image to commentary and sound effects as 16 or 35. For learning, magnetic sound has the obvious advantage of freedom to erase and re-record.

For synchronous sound, of course, double system can be used with 8mm. Even a "wild" spring-driven 8mm camera and low-cost home-type tape recorder can produce acceptable double-system sound in short scenes with surprisingly few sync troubles.

There's also a single-system 8mm sound camera available commercially. This, too, is good for learning motion-picture production. The skills and problems in producing and editing single-system sound can be transferred intact from 8 to 16mm.

Summary

Summarizing, 8mm is a valuable tool for teaching motion-picture production. Motion-picture production is easily learned by the beginner on 8mm equipment because it is less complex, easier to handle physically, and permits the student to concentrate on the content of the film rather than on mechanical considerations. The grammar of film, developed with 8mm, can be transferred intact to 16mm and 35mm production. Many of the technical phases of motion-picture work can be learned or begun in 8mm.

Finally, the lower cost means that the student can have access to equipment and materials for practice and experimentation to an extent which is ordinarily impossible with 16mm and 35mm.

Discussion From a Reviewer

There may be educators who would take issue with Mr. Beeler on the issue of whether a beginning student should concentrate on "telling the story" before he has learned the techniques of the medium with which he is working. There is a parallel in the teaching of reading: A few years ago, it was popular to teach the child to scan the words and lines for the overall meaning without learning to spell or to recognize individual words. Many teachers are convinced that this led to many students being poor readers, as well as very bad at spelling, and having a poor vocabulary, too. In other words, they were trying to accomplish the end result before they had mastered the tools for doing the job.

The same argument can be made in regard to film production. Perhaps the student *should* learn about all the gadgetry on a camera, its limitations, and its problems, before he tries to tell a story that cannot be told with the limitations built into the equipment. This reviewer has had considerable experience

dealing with "boy wonders" who posed as brilliant directors when they were vastly ignorant of the technical limitations and capabilities of the medium in which they were working. The result was that they wasted many hours of valuable production time doing silly things that did not fit together on the film editing table. Had they been more thoroughly trained in the technical aspects of the medium, they would have been able to "tell the story" with more force and better economy. This reviewer, then, favors a thorough apprenticeship in which the future director is required to operate cameras, sound recorders, lights, etc., thereby learning at first hand what the boundaries of the medium are.

Except for the question of appropriateness within the educational principles to be followed, the idea of using 8mm for training purposes is a wonderful plan.

From the Author

Edit. Note: At press time the following has been abstracted from informal advice received from the author who does not agree with the reviewer's comment, although both have backgrounds of considerable teaching.

The Author: I did not intend to imply that I believed a motion-picture director (or any other technician) should be without a thorough technical background and knowledge. And I do think that he should be familiar with equipment and techniques.

But I do not agree that the analogy, drawn by the reviewer, in the teaching of reading, is valid. Let's suppose the student begins learning motion-picture techniques by learning the mechanical skills of operating professional equipment. I believe a more valid parallel would be teaching beginning reading by having the student learn, first, how to operate a Linotype machine and printing press. These, not spelling and words, are the mechanical means of producing material to be read.

My experience in teaching in photographic fields has been that many beginning students are hopelessly bogged down in mechanical and technical considerations if they begin with complicated professional equipment.

Many do go ahead and master the techniques and later the medium. But among those who fall by the wayside are some who have nonmechanical creative talent of a kind greatly needed in communications. If they can be "nursed along" with simple equipment and techniques, they'll gradually pick up the requisite mechanical skills and knowledge so they can avoid being "boy wonders." But if they're blocked by technique from using the medium at the outset, or if their creative talents must be subjugated from the outset by a need for mastering mechanics, I feel we've failed as teachers.