IT WAS six o'clock in the morning when Dr. Mahoney was awakened by a tug on his shoulder. "Wake up, Dad, wake up!" said an insistent young voice. Hospital rounds had kept the doctor up late. Mumbling sleepily, he threw out a hand in protest, and rolled over.

"But, Dad, wake up! I've got to have some dry ice!"

"Dry ice!" echoed the doctor as he squinted at the slender figure of a boy, clad in moss green cambric and wearing a pointed feathered cap. "In heaven's name, who are you?" the doctor asked in drowsy confusion.

"Don't you know, Dad . . . I'm Puck." Then in louder tones the voice continued:

Now the hungry lion roars,
And the wolf behowls the moon;
Whilst the heavy ploughman snores . . .

The irate parent groaned. "Go away, and leave me alone!"

"But listen, Dad!" the boy persisted. "There's more at the end of the play where I say:

If we shadows have offended,
Think but this and all is mended—
That you have but slumbered here
Whilst these visions did appear . . .

"Well, all right," snapped the doctor. "So you're Puck. But what in the world do you want with the dry ice?"

By this time Doctor Mahoney was on his feet.

"Look here, son, what's going on?"

"It's A Midsummer Night's Dream," explained the child. "Our sixth grade class wrote it into a puppet play and taped the music and painted the scenery; and I have to cast spells with flower juice and mix up the lovers and make a big fog in the forest. I can't make fog without dry ice from your hospital, and I've got to have it by eleven o'clock so we can practice pouring water on it and let it steam up back stage before the show starts."

"All right," agreed the boy's father. "Memorial Hospital will not fail you if I have to cast a spell on my patients and
bring the ice myself! But who started Shakespearean drama in the sixth grade?"

"Our teacher, Miss Jordan," answered the gleeful sprite as he turned somersaults towards the door. "She lets us do all kinds of things."

At exactly ten-fifty Doctor Mahoney, with a cardboard box under his arm, walked into Miss Jordan's room in the Glen Hills Elementary School. He saw at once that his son's appraisal of Miss Jordan was correct. She was letting the children do "all kinds of things." In fact, she herself was dancing with some barefooted girls dressed in white muslin tunics. The costumes were obviously child-sewn, and they were bordered in Greek key designs which had been applied with colored crayons. A group of boys and girls, also in Greek tunics, were playing flutes, recorders and psalteries to accompany the dance. Paint jars and brushes littered the floor. Scattered among them were large sheets of wet paper scenery depicting Doric-columned temples, dark green forests, and grassy banks dotted with brightly painted flowers.

Behind the puppet stage two twelve-year-old electricians were testing spotlights as the papier mâché Titania, her fairy wings a-glitter with sequins, popped up to rehearse her lines. Caressing the ass-headed Bottom, she declaimed:

Let me cradle you in my lullaby arms and kiss your fair large ears, my gentle joy.

The kiss loosened one of the donkey's paper ears, and it fell to the floor. At this point the tape recorder blasted out a section of Mendelssohn's wedding march, which the children had spliced onto the tape as a fitting conclusion to their puppet play. When the music clicked off, Dr. Mahoney put the package of dry ice on a table. He finally caught his son's eye, pointed to the box, and was gone.

A Filmstrip Sparks Creation

The doctor left without knowing that the hubbub of activity in Miss Jordan's room had been sparked by a filmstrip—a teaching tool that was nonexistent when he was a schoolboy. In talking with him about it later, Miss Jordan explained:

"I believe that a good learning situation is one in which children become deeply involved, and are encouraged to grow through many different creative experiences. The teacher can only be a guide to help the children discover new meanings as they relate one thing to another. In this instance the children became interested in Greece as a part of their social studies.

"I happened to remember that the setting of A Midsummer Night's Dream was in Athens. In the library we found a color filmstrip and a recording of the Mendelssohn music. The children were concerned at first with visual impressions, noticing the costumes, scenery, and Greek architecture. But, after several showings, their interest shifted to the music and to the play itself. After they had decided to make a puppet show of the play, they wrote many versions of the script. Everyone made puppets. We had four different casts, and gave performances for every classroom in our school.

"By the time the incidental music had been taped, and run for a number of shows the children thought Mendelssohn
was 'a pretty good composer.' They began to bring recordings of his works from home, and they are still dancing to the 'Italian' symphony. So, an experience that began with a filmstrip did not end with the puppet show. The best part of it was introducing children to the poetic beauty of Shakespeare. I now keep a collection of Shakespeare's plays on my desk—at the children's request—and we fill in many spare moments reading together."

Filmstrips such as the one Miss Jordan showed, and others on a great variety of subjects, are probably the most widely used of all audio-visual media in the elementary grades today. Films and recordings have been an adjunct to the music curriculum for some time, but never before has there been such a wealth of selections from which to choose. Tapes for classroom listening and video tapes for teacher education have also entered the picture. The opaque and overhead projectors are being utilized by an increasing number of teachers for visual projection in the classroom, auditorium or multi-purpose room. The 2" x 2" slides, and even the old 3" x 5" "magic lantern" glass slides have certain advantages that some of the other visual media cannot offer.

Mechanical Aids Change Teaching

Because of the rapid advances in techniques of automation, many devices and mechanical aids, as yet unfamiliar to educators, await trial and evaluation in the schools. At an Educational Media Conference in Washington in 1964, some of the music aids demonstrated and discussed were various new types of projectors, a combination tachistoscope and control reader, an electronic piano, a card reader with magnetic tape, and integrated multi-media systems. Radio and television were both mentioned as media to be studied for further research and development.

Under discussion in this area were the use of ten-watt FM radio, closed circuit radio and stereo earphones; slow scan television, closed circuit television and telequest, and programmed learning over television in the home. Thus are new methods of learning invading the field of music teaching today.

Along with the marvels of automation, deliberately fostered by man's own intensive scientific research, have come the penalties of social adjustment which it induces, and even the fear that human beings may not be essential to the next generation. If a computer can learn to play checkers and win every game from the scientist who built it, and if an IBM machine can sort and post 550 bank accounts in one minute, what will become of our friendly game-playing partners, and who will hire the displaced bank clerks?

More frightening still is the prediction that electronic equipment, devoid of human feeling, may replace nurses, and likewise compose the music of the future. In trying to analyze our present dilemma, which these rapid changes in applied science are creating in all aspects of living, is it not also imperative to look

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ahead in education? Have we used the sorcery of the machine-brain to do our work—only to be caught, like the Sorcerer's Apprentice, in a flood tide that will not subside?

As we work with children and young people today we can only hope that the machine-magic of the future will not deprive them of some fulfillment of their need for purposeful and creative endeavor. An official of the National Aeronautics and Space Administration has estimated that the average 20-year-old can expect to function in six different careers in his lifetime. How can we educate fast enough for new jobs when old ones become so quickly obsolete? And what can we do to help our high school students who will be confronted with jobs that do not yet exist? Realizing that the current educational pattern, itself in a state of flux, cannot hope to fulfill all the needs of human beings in a world of change, teachers are turning to the arts as a means of encouraging ingenuity, adaptability, and original thinking.

**Can a Teaching Tool Function Creatively?**

Teachers with a natural desire to experiment creatively, as Miss Jordan did with *A Midsummer Night's Dream*, are finding ways of using some of the new teaching tools to awaken children's imaginative powers, and bring life into the classroom. Others may need to overcome insecurities, if not actual hostility, toward mechanical teaching devices. Once an underlying fear of trying out something different has been overcome, enough repetitions of the experience should help to build security.

How effective can machines be, and by what criteria should teachers evaluate their usefulness? The answers will be different for each person in any given teaching situation. But since there is no doubt that automation is here to stay, it is essential to think about how we are going to live with it and take advantage of whatever help it may offer. In evaluating any one of the many supplementary teaching aids we might ask ourselves these questions:

1. **Does it save time?** Is the time saved available for other meaningful activities?
2. **Is it a springboard to better learning and doing,** to creativity and human growth?
3. **Does it teach something that cannot be taught in a better way by another method?**
4. **Will it increase productivity?**
5. **Does it deepen knowledge or help to solve problems creatively in relation to other things?**
6. **Does it help to relate an individual's experience to our total culture?**
7. **Are we using it as a substitute for a real experience that would be more vital and more meaningful?**

In music, the live performance is everything, and anything else must be considered as a substitute. This became clear to John Barger's fourth grade teacher when she read a note he had written after attending his first chamber music concert.

**Dear String Quartet:**

Thank you for coming to our school to play for us. I liked seeing you in person. You sounded as good as a stereo recording.

Your friend, John

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*a NEA Journal, February 1965.*