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## PROGRAMS



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etting up a sound-related program within a theatre department at a university can best be described as “easier said than done.” Rob Milburn, an acclaimed Broadway and regional theatre sound designer, was asked to help develop a new sound curriculum at a prominent university in Chicago. He describes the initial contact:

*A few years ago, a directing friend of mine came to me and my collaborator, Michael Bodeen, and said, “Hey you guys, you’re my buddies, we work together all the time, I would like you guys to come in and teach a class. I would like to explore having an undergraduate program, and maybe even down the road someday having a graduate program in sound design as well.” And he was a real convert over the years working with us, and just being a smart guy and seeing how the world was changing, and how, more and more and more, how sound designers and composers became real collaborators. And he understands that this is somewhere his institution is going to need to go if they are going to attract students; that more and more people are going to be interested in sound in theatre. They’re going to want to know that that is part of the program or they’re not going to want to go, because it’s incomplete. He also knows that in what they are doing production wise, sound is becoming more important and that they are woefully behind... The fastest growing design form is sound. The fastest growing technology is sound. And this technology and design will only continue to grow in its impact on how we produce theatre.*

But underlying this enthusiasm are so many difficult decisions that faculty and staff often fear taking the first steps. Milburn says, “People aren’t that crazy about it, frankly, but... they’re beginning to see the writing on the walls.”

Understanding the causes of both the enthusiasm and trepidation may help provide valuable clues to the challenges facing a theatre department hoping to set up a sound-related program, and may also help shed some light on the question everyone asks, “what should we do with our sound design students.” These challenges can be grouped into three categories: academic, fiscal and interpersonal.

### ACADEMIC CHALLENGES

What’s the existing academic structure that must accommodate the sound curriculum? Are you planning on offering fifteen to twenty courses targeted to the sound specialization, or just one or two classes? The overall length of the program in years and the distribution of types of courses (e.g., general education, theatre discipline, courses in the specialization—in this case, sound) play a key role in determining the type and quality of training an academic institution is able to provide its students.

The specific mission of the academic institution is also critical. Some programs attempt to provide broad-based education, while others lean strongly towards specialization. In addition to understanding the nature

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## IN HIGHER EDUCATION

by **Richard K. Thomas**

of the educational experience, one cannot overlook the intended outcome of the education: what is the market/career for which you are preparing students? In scenery, costumes and lighting one often hopes to prepare students to go out and get a job designing, or at least working as an assistant to an established designer.

The job market for composers and sound designers in theatre prompts one to immediately ask some questions. For example, is the industry established enough that theatres can afford assistants? Can anyone make a living doing only sound scoring or composition for live theatre? Beginning sound designers get paid very little. Do you have to train sound designers to survive in the larger field of performing arts sound or can you focus their training strictly on theatre? The answer to these questions may strongly influence the structure of your academic program in sound, especially the ratios you establish between the various types of education (general education, general theatre, sound specific) discussed in the next section.

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### SPECIAL COMPONENTS OF SOUND EDUCATION

A sound design student's training can be divided into three basic areas: general education, theatre education and sound-specific education. Determining the relationship between specialized sound courses and the other two areas opens a whole new set of problems. As an example, let us agree for a moment to define the term "sound design" as "the organization of the auditory experience of a theatre audience." But this simple definition implies that the sound design team might include a host of people, each having his or her own impact on the auditory experience: the playwright, the director and the actors; the architect, the acoustician, the HVAC engineers and the many other people who actually built the theatre; the sound system designer, the audio equipment manufacturers, the sound contractors; the composer, the conductor, the vocal coach, the rehearsal pianist, the musicians, the recording studio engineering staff; the sound score designer, the assistants, the sound board operators; the sound reinforcement system designer, the assistants, the mixers; and, finally, the audience (or at least anyone who coughs or makes noise during the performance!). Just as scene designers need to understand architecture, and costume designers need to understand fashion, sound designers need to fundamentally understand the many forces that work together to create and shape the auditory experience. The next section explores how sound may or may not integrate into the three general areas of a student's education (general education, general theatre and sound specialization) to provide that general understanding.

The nature of sound is extraordinarily interdisciplinary, and this is a very hard fact to perceive if you are considering sound only as a component of theatre, rather than on its own merits. Milburn describes how this quandary affects him personally when he compares his work in theatre with the personnel brought in to de-

velop a typical film soundtrack:

*All you have to do is look at the credits of a film and see how many different people are doing jobs in the sound department and then in the music department and you actually go, "Oh, I do that. ...I do that. ...I do that. Oh, yeah, I have to do the charts. Yeah, I do the arrangements of the music. ...I'm in the studio. I'm the conductor. Oh! I'm the engineer. Oh my god, I'm the music mixer. Yeah, I do twenty different jobs—which is great—which is one of the things that makes it incredibly exciting. But on the other hand how do you teach all that in a short amount of time. How do you learn all that?"*

Those outside the sound discipline will tend to view the sound area as, at best, one-fourth of the design team, the other members being scenery, costumes and lighting. Because sound design is the newest member of the design team, it is almost never given equal status. The author teaches at a university that has one of the only undergraduate sound design programs in the United States. Despite the wealth of courses in sound, all theatre majors are required to take one course in visual design, one course in visual technology, and no courses in sound. In four years of education, students who don't emphasize sound in their curriculum will get exactly two two-hour classes on sound, taught by a graduate assistant. Other programs may teach more about sound, but it is usually technology, not art, and it is usually taught by faculty who admittedly have a weak understanding of sound design and technology, and music composition.

Sound designers need to have a good general education and a well-rounded background in theatre. Milburn says, *I strongly believe it's important for sound designers to go out to dinner with their fellow designers and director while they're working on a show, and be able to have a conversation with everyone at the table. If you don't know anything about what's going on in the world, and you don't know anything about literature, and you don't know anything about what your colleagues are doing, how can you engage in a conversation? If you want to be a collaborator, if you want to be part of what's going on from the get-go in the design of a production, you must speak, at least on a basic level, the same language, and have some things in common with these people, or you can't contribute.*

The opposite is also true: directors, actors and visual designers need to be able to go out for dinner with sound designers and carry on an intelligent conversation about sound.

Sadly, conversations about sound are rarely very deep. This should not surprise us when we consider some of the vastly different curricular subjects (not including theatre) that the practicing sound professional uses every day: music (history, theory, composition and performance), audio engineering (theory and production), electrical engineering, mechanical engineering (including acoustics), audiology (including both the physical and psychoacoustic), and technology (including instrumentation, design and testing). Then consider the *prerequisites* to this education required in math, physics, psychology, music, applied arts (such as drafting), history, etc. One quickly realizes that the education of a sound designer is by nature one that provides (*requires*) an extraordinarily broad-based education in its own right.

Developing an academic program that includes theatre sound can feel like trying to fit Lake Michigan into a Dixie cup. You need to include general theatre courses and general education courses, and of course, the visual design faculty want to fill that cup with their own courses, none of which are related to sound. Is there a way out of the impossible demands being made on our academic program? Let's consider this problem at two different levels: general introductory sound courses for all students, and then, specialized sound courses for those preparing to enter the profession. And, we must attempt to resolve the simple fact that we will never be able to fit all of the sound courses we want into our curriculum.

## AESTHETICS, PROCESS AND COMMUNICATION

What does every theatre major need to understand about sound design? And conversely, what do sound designers, composers and sound technicians need to understand about what directors, actors, visual artists and other members of the theatre design team do. Let's start our search for what students need to know about each other's areas by asking three basic questions:

- What are the foundations of the aesthetics used in each discipline?
- What are the processes the individual disciplines use to create their contribution to a production?
- How do these other disciplines communicate with each other?

Many may protest the absence in the above list of technical aspects related to the individual disciplines, such as how to build a flat, or how to hem a specific material for a specific period garment. Given the difficulty of finding the time in the student's curriculum to fit everything in, it's interesting how many introduction to design courses focus on these mechanics, rather than on the aesthetics, processes and communication required in the disciplines. We *presume* that the necessary understanding of these disciplines begins with an understanding of how the work is accomplished technically. Perhaps, though, it is this fundamental emphasis on technology that lies

at the root of our preoccupation in the theatre with the technology, often at the expense of the art.

Compounding the problem, processes of aesthetic approach and communication differ markedly for sound reinforcement, scoring design and composing. In fact, these differences seem not unlike those distinguishing scenic design, costume design and lighting design from one another.

Consider that every production has two elemental components: what we see and what we hear. From the vantage point of the senses, sound provides half of the sensory stimulus received by the theatre audience. However, most people think of sound design as being one quarter of a production's design elements. This belief leads naturally to an academic model in which course content focuses on scenery, lighting, costumes and sound equally. In a "well-rounded" curriculum, all students take one course each in scenery, costumes, lighting and sound. The poor instructor of the sound course is left scratching his or her head trying to figure out how to fit such disparate elements as sound reinforcement, sound score design and music composition into a single course. For several years, the USITT Sound Commission has held roundtable discussions trying to solve the problem. So far, the participants, some of the best theatre sound minds in the country, haven't found a solution that they agree provides a good foundation in all three disciplines.

To complicate matters, one of the main reasons many academic programs want courses in theatre sound is to help them address weaknesses in their production program. We wouldn't have so many problems with sound in our productions, they think, if students were given a course in sound design. But how do you simplify sound to the point where you can, in one class, give the students what they need to know about what everybody thinks they should know? This is especially true when what everybody thinks people should know about theatre is whatever the problem is at hand. We tend to think that whatever the problem is at hand that needs a solution, you should have taught that in your general sound class because, obviously, that must be a problem that occurs often (even though this is the first time you've seen it yourself!).

Another difficulty lies in who will teach the courses. Typically technical directors are asked to include sound in their introduction to technology courses. And although a really good technical director *should* be able to communicate fluently with all design disciplines, many tech directors tend to be highly visually oriented and are sometimes overwhelmed by the same learning curve in sound design that hampers the sound curriculum in the first place.

## SPECIALIZATIONS WITHIN SOUND DESIGN

In the same way that visual design has split into three disciplines—scenery, costumes and lighting—auditory design is separating into discrete disciplines. There are currently three different types of "sound designers" working in the theatre: the *composer*, the *sound score designer* and the *sound reinforcement designer*. Producers and directors seek out these artists based on their needs for a production: they might look for a Jonathan Deans, or a Tony Meola if their needs are largely sound reinforcement. However, they might look to Michael Roth or Phillip Glass if they really need composed music. Finally, they might hire Jon Gottlieb or Jim LeBrecht if they need a sound score created. There are, of course, many artists out there who, like Rob Milburn, routinely work in more than one of the above areas.

This concept of sound design specialists is important because it helps to limit and further define the fields of study *within* the larger field of theatre sound design. These fields can broadly be divided into four categories:

1. Aesthetics (including both music and theatre);
2. Theory (including technology and engineering);
3. Craft (including audio production); and
4. Professional practice (including business, process and collaboration).

The educational needs of the composer, the sound score designer and the sound reinforcement designer are as different as those of the costume, lighting and scene designer. One is rooted in music, one is rooted in the recording studio and one is rooted in PA (public address) systems. Each area has a career path and life that can be completely independent of theatre (the pure composer, the Grammy award winning record producer, the sound system designer for the sports arena). Yet each area can be elevated to its own art form when brought to bear on theatrical form.

Each discipline has its own natural curriculum. It is much easier to construct a curriculum for a sound reinforcement designer, or a composer, than for someone who does both. This should not surprise us. It is much easier to devise a curriculum for a scene designer, or a lighting designer, than it is to design a curriculum for both. A good general approach may be to design a curriculum for each of the three types of auditory artists working in theatre, and then adapt the curriculum to the needs of students who are inclined to specialize in more than one area.

Even if we divide the study of sound into three component disciplines similar to the way visual art divides itself into scenery, costumes and lighting, how does one reconcile the vast amount of knowledge required in the specialty with the requirements of a general education, and a general theatre education? There are two approaches to teaching that seem to help mitigate these overwhelming needs, and provide hope that education can indeed address the real underlying needs of students. The first is ensuring that the program teaches students how to teach themselves, and the second is providing a program that helps students find their own way.

## LEARNING FOR LIFE

Tom Mardikes, who for over twenty years has headed the outstanding graduate program in theatre sound at the University of Missouri, Kansas City, accepts many students into his program with little or no formal theatre training. “If a student has a really strong music background,” he says, “I can teach him or her the theatre easily enough. If students have no music background, that will eventually limit the kind of things they can do professionally.”

Milburn adds:

*One of the main things I'm trying to do is to teach them enough so that they can teach themselves. Because there's no way in two years, or for that matter four years or even eight years...that I can teach them how every piece of gear works—what every situation's going to be in a recording studio, how to deal with directors in every meeting they're ever going to go into, how to examine every play and come up with fresh ideas about how you're going to frame the piece, how you're going to take the emotional journey along with the actors. We need to provide the fundamentals that allow them—and not only allow them but encourage them—to continue their education. Part of the education process is teaching this. Are we encouraging a student who's then going to, for instance, get on the theatre-sound web every day...and learn about new methods and technologies and find out about different kinds of music and go out and hear concerts and read books and articles...to continue to actively be interested in theatre and drama and how it works?*

Students entering a theatre sound program have a variety of interests and backgrounds. In college, Milburn was interested in philosophy, science, history and English literature. He was also in a rock 'n roll band. Curiously, he doesn't feel that he would necessarily take theatre classes if he went back to school. “Maybe one survey class or something,” he says, “just to get...history under the belt. I've been able to pick up a lot of that on my own...just working. We may get more of an education in a year spent working in theatre than we could get in a theatre education program.” Milburn didn't start doing sound design until he was about thirty years old.

*I don't believe that anybody should be limited in what they think they can be when they're nineteen. I don't think they know what they're capable of. People come in and are convinced that they have no creative ability. That's not necessarily true. They need to be encouraged into realizing their own potential. Some haven't tried to be creative, some have been told (as tech students) that they're not creative, but when you get them all into a Pro Tools or DP project they all come up with something creative...Whether it's students good at technical drawings or design students who are wonderful artists, it shouldn't matter. You provide exposure in these areas and then, hopefully, you are sensitive enough to these different people to just help them on their own road.*

## FINANCING THE SOUND DESIGN PROGRAM

It's a lot easier said than done. Even after you've decided that you want a sound program, and you know what you want in your sound program, it's very difficult to figure out, and agree on, the costs and the financing. Milburn points out that while all academic programs are financially working with a “fixed pie,” creating a sound curriculum demands not only trying to make the pie bigger but also dividing up the pie in different ways. Doing sound well requires a lot of money and a lot of resources and commitment. Other elements of the design team may want to have more money for sound but not at the expense of their hard-won piece of the pie. Everybody naturally feels protective of their own areas.

Another obstacle, maybe the biggest one, is a lack of commitment. The university may feel caught between a rock and a hard place. It wants good sound but doesn't want to sacrifice anything to make it happen. To overcome this resistance, sound designers need perseverance; they need to out-last everybody. They need to do good work, produce good students who go out and do good work, and eventually they will develop reputations. With a good reputation will come more respect within the university.

Milburn, looking on the bright side, says, “You can teach a hell of a lot about sound design with two speakers in a black box.” He goes on to describe a bare-bones set-up for an undergraduate sound program.

“All you [need] is a G4, or two G4s (Macintosh computers) and a couple of ProTools setups (sound editing software from Digidesign). Now, get a couple of decent microphones, a few books and several small playback systems.”

In the real world, financing a new sound program can resemble the only half-humorous axiom: I need to hire a faculty person to come in and teach sound design so he/she can design four shows a year. Milburn seconds that sentiment with this hypothetical:

*Say you have an academic production manager or head of a theatre program who says, “I’m in the situation now where I’m hiring outside sound designers because I don’t have anybody on staff who can do it, and there’s this much that’s being spent on it a year. Now I’ve got two sound design classes and I’m paying for those to be taught and this is costing this much. Pretty soon I’m going to have the same amount of money it would cost me to have a full time person here who’s going to be a full time educator on a tenure track and develop the program. That is when we will start our sound program.”*

## FITTING SOUND INTO TRADITIONAL THEATRE EDUCATION PROGRAMS

By the time the general education requirements and the general theatre requirements are accounted for in the student’s undergraduate curriculum, precious little time and space exists in the student’s plan of study for courses in audio technology, production and music. Given this restriction, it is interesting to look at what faculty members that teach theatre sound programs look for in terms of experience in incoming graduate students.

Tom Mardikes:

*It is important for any sound design student to have some musical instrument training, especially a keyboard skill like piano. Music history is necessary, but it should be more than just classical western music; they should discover musical styles worldwide, experience jazz, spend a lot of time listening.*

*Two types of students emerge for each incoming class. Some have extensive music backgrounds with no theatre experience; others have undergrads in theatre with little musical background and don’t play music, period. The challenge is to cross-train these students, then merge them into an effective design team and training program. At this, I feel we do an excellent job. Audio recording expertise is every incoming student’s weakness, so we expect to train all students rigorously in music production and hard disk recording. Finally, it is important for new students to have experienced a design*

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*process through the guidance of a book like Sound and Music for the Theatre by Kaye and LeBrecht. This is a very good general introduction book for undergrads; we don't actually use it in our grad program because students should already know this material.*

Beyond these sound-specific courses, Mardikes mentions others related to general theatre study: *Shakespeare courses, taken from both theatre and English departments, lots of theatre history or dramatic literature classes, baby tech classes so the students know their way around the theatre. Acoustics is excellent preparation, usually available from the music department. Some empathetic diversions like an acting class or two, maybe lighting or scenic design. It's great for them to have a directing class. I like the students to have done a realized design or two just to make sure they like sound design by experience, not by poking around for a major. It is not mandatory for me, however*

Incoming students often ask the question, "Do I have to be a composer to be a sound designer?" The answer is no, but it helps. If you understand how music works, you understand how plays work because plays are inherently pieces of music. Actors and good directors are especially aware of the musicality of the script.\*

## THE DIFFICULTY WITH THE UNDERGRADUATE THEATRE DEGREE

Purdue University, where the author teaches, has one of the few undergraduate programs in the country that allows students any degree of specialization in sound. Even then, however, students can only get six to eight courses in sound during their undergraduate career, and this includes production work! Surprisingly, many faculty argue quite strongly that this amount of specialization is too much and too soon. Clearly, this attitude is at odds with the desired preparation Mardikes is seeking for his graduate school.

It is no wonder then that students who have earned a theatre degree do not do nearly as well in getting into the good grad schools in sound as students with music or engineering degrees. The typical undergraduate theatre education simply cannot provide the necessary fundamentals required in engineering, technology and music to allow students to survive and thrive in graduate school programs in theatre sound. The very real problem for composers and sound designers in any program is that they need a fundamental music education similar to the fundamental education they receive in theatre: theory, history, practical (applied) courses. Engineering and technology courses have their own foundations that must be served (math, science, physics, etc.).

## CONCLUSION

In the final analysis, it's not easy to map a clear road to a great career as a theatre auditory artist. Rob Milburn, one of the premiere sound designer/composers in the country, focused his education on philosophy and science, history, and some English literature. And he spent a lot of time in a rock 'n roll band. Clearly there is much to be said for the general education requirements of a liberal arts degree! On the other hand, a prerequisite for a lasting career as a theatre sound designer is a love of theatre, and of plays, and ideas. If a student is mainly interested in recording studios, or in music, it's not likely that he or she will last very long in the theatre. The reality of the job market is that students entering the profession *must* have a firm grasp on their craft and their art, and these come with sustained and focused study of sound and music. It is no wonder then, that the typical path for theatre sound students in American theatre increasingly encompasses at least seven years—four as undergraduate students and three as graduate students. And even in these seven years, schools still find it very difficult to provide even the basic courses in all of the disciplines related to the study of theatre sound. The best programs find a way to get students started—to give them basic tools and then nurture and guide their passion into whichever sound-related discipline that their passion leads them. If we can provide a framework in our sound education programs that accomplishes this, we will have accomplished a marvelous thing. ❖

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\* It is interesting to note the similarities and differences between standard musical structure, and standard dramatic structure. A piece of music ends with recapitulation, whereas standard dramatic form ends with resolution. Those two differences do intersect, however, in the world of thematic content. The dramatic structure of a play reaches resolution after its climax. At the same time the restatement of a musical theme as a recapitulation may lead our audience into a new meaning or way of feeling about the resolution. This relationship between dramatic and musical structure has served countless numbers of plays and films, as the main theme emerges one final time in the resolution of the play or film. Once one learns to look and listen for it, one can be quite surprised at how often directors and composers use the technique.)