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"Any student that is going to give a speech in front of anyone could benefit from the speech lab."

— John

Currently, universities, colleges and other places of higher education throughout the country are including public speaking courses in the general education curriculums. Scholars continue to develop, test, and implement different strategies in order to better assist students enrolled in these courses. A new trend, that is gaining popularity within the communication discipline, is the development of communication laboratories to supplement these courses. The above quote was from John, a black 18-year-old male student, who was enrolled in a basic public speaking course and had recently concluded a visit to a communication laboratory.

The communication labs (otherwise known as oral communication laboratories, speech labs, speaking labs, speaker labs, etc.) are designed to specifically assist students enrolled in basic public speaking and commu-

nication courses. Morreale (2001) states that these laboratories are beneficial because they support student attitude-change and the development of multiple communication skills. Additionally, Morreale, Ellis, & Mares-Dean (1992) indicate that these facilities provide assistance to students enrolled in basic public speaking courses by acting as supplemental tools for the students enrolled in these courses. Speech labs provide students with a facility to practice and videotape speeches (Teitelbaum, 2000) as well as receive verbal, written and videotaped feedback from monitors (otherwise known as lab attendees) working in the lab. Before communication labs can be fully endorsed, an in-depth analysis exploring the pedagogical effects of these labs on students must first be conducted. The purpose of the current research study is to contribute qualitatively to this ongoing analysis.

RATIONALE

Recently, more and more academic institutions are beginning to develop versions of speech laboratories to provide assistance to students enrolled in basic public speaking courses. A list of academic institutions that currently have a functioning speech or communication laboratory include, but is not limited to, Columbus State University, East Tennessee State University, Golden West College, Ithaca College, Luther College, San Jose State University, College of San Mateo, the College of William & Mary, Southwest Texas State University, and the University of Colorado, Colorado Springs (Morreale, 2001). Other labs have been developed at Butler

University, Depauw University, Hampden-Sydney College, Illinois State University, Mary Washington College, Mount Holyoke College, University of Central Arkansas, University of North Carolina at Greensboro, University of North Texas, University of Pennsylvania, and University of Richmond. Again, this list is not all-inclusive but it does indicate that the development of speech/communication labs is gaining momentum throughout the country.

One reason behind this increased development of speech laboratories is the recognition by educators, department chairs, and universities that there is a growing need for an out-of-class facility that provides students an opportunity to hone their public speaking skills. Previous scholars have echoed these sentiments. Ellis (1995) states that an instructional environment conducive to increasing students' self-perception is attainable through the establishment of one-on-one speech laboratories. The lab environment promotes student goal-setting, accountability interviews, skill coaching for upcoming speeches, as well as various forms of feedback (e.g. video, written, and verbal) (Ellis, 1995). Additionally, Morreale (2001) found that speech labs also have the capacity to provide individual coaching and training to students for a wide range of communication skills (speaking, listening, interviewing, speech preparation, outlining, Internet research skills, etc.).

However, even though these labs are being developed at academic institutions throughout the nation, very little empirical research focusing on the labs' pedagogical implications has been conducted. According to Owens, Hunt, and Simonds (2000), "Only a handful of studies have been conducted regarding the academic

benefits of participation in speech laboratories" (p. 2). The few studies that have been conducted, however, have attempted to investigate the effects of lab participation on student retention (Brownell & Watson, 1984), peer feedback (audio/visual) on communication skills (Berube, 1988), skill-competency (Ratliffe, 1984), and public speaking anxiety (McKiernan, 1984). More recent research has shifted focus towards the efficacy and enhancement of students' classroom performance (Hunt & Simonds, 2002) as well as the potential benefits labs may have on an academic institution as a whole (Hobgood, 2000).

The previous research, all taking a similar perspective on this topic, has examined the speech laboratories' effects on students from the *researcher's* perspective. Very little research has been dedicated to examining speech laboratories and its' effects from a *student's* perspective. The current research study will attempt to fill in this existing gap in the research by examining speech laboratories from several students' points of view. This research will be an exploratory investigation focusing on what students perceive to be the effects and implications of one specific speech laboratory that they had attended.

Due to the exploratory nature of the current study, We feel that the most appropriate and useful method to fully capture the students' perspective on this topic is through a qualitative research analysis, specifically indepth, student interviews. The decision to use this qualitative research method over some other quantitative analysis is supported by the argument that qualitative studies are more useful because they provide more rich, detailed descriptions of the human experience as

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participants feel it (Sherman & Webb, 1990). Lindlof (1995) may have made the best argument for using qualitative research methods, such as interviews, for situations like the current study on speech laboratories. He states that in qualitative research, researchers interview people in order to "understand their perspectives on a scene, to retrieve experiences from the past, to gain expert insight or information, to obtain descriptions of events or scenes that are normally unavailable for observation, to foster trust, to understand a sensitive or intimate relationship, or to analyze certain kinds of discourse" (p. 5).

In the current study, in-depth interviews allowed the students to generate the issues they felt were most important from their visit to the speech laboratory. The interviews were structured in a manner that gave the students an open opportunity to freely discuss their thoughts, feelings, and reactions (either positive, negative, or neutral) towards the speech laboratory. Due to the exploratory nature of the current research study and the limited prior research focusing on this topic, only one research question was developed to provide a starting point and a guide for the student interviews:

RQ1: What perceptions do students who are enrolled in basic public speaking courses have of speech laboratories?

METHOD

Participants

The participants were randomly selected from a list of students who had attended a speech laboratory at a large, Midwestern university. Each participant's instructor was informed of their student's selection and gave permission to the researcher to proceed with the student interview. Participants were individually contacted and asked to participate in the interview, which lasted approximately thirty minutes. The resulting sample consisted of six females and four males. Nine participants were 18 years old and the remaining participant was age 31. Six participants were Caucasian and four were African-American. Nine of the participants were freshmen and had visited the speech laboratory only once during the school semester.

Data Collection

The interviews followed a semi-structured design format that allowed the participants to introduce concepts and themes with limited direction from the researcher. Sample interview questions, ordered chronologically, were created beforehand to help guide the participants through the interview, but they were open-ended in nature, which allowed the participants the flexibility to comment on anything they deemed important. Because we wanted to gain a students' perspective on the speech lab, free of influence from my own past research on this topic, we made a personal obligation

not to ask questions during the interview that indicated or introduced any pre-conceived categories about the speech lab. Our interview questions strictly adhered to this rule, which allowed us the option of developing themes and categories inductively through this research. The actual interview protocol was divided into six sections of chronological questions:

Demographic Questions. The first portion of the interview consisted of standardized demographic questions for the participants. Participants were asked to provide their full name (changed to pseudonyms for publication), age, gender, race/ethnicity, and year in school (freshman, sophomore, etc.). Additionally, the participants were asked to indicate the number of times they had visited the speech lab during the current semester.

"Grand Tour" Questions. Each participant was asked several "grand tour" questions (Lindlof, 1995) simply asking them to describe their speech lab visit, from when they initially signed up for a lab appointment until they finished their speech presentation and exited the lab. These questions allowed the participants to bring up any details, feelings, or suggestions about the lab that they felt were important. Once a concept was mentioned, additional and more pointed questions were asked about those topics.

"Before Lab Visit" Questions. Participants were asked to describe their emotions, feelings, and expectations of the lab before the actual lab visit. Flexible timeframe boundaries were placed on this question, which allowed the participants to comment on anything they felt from the first day of the course semester until the

moment before they walked into the speech laboratory for their appointment.

"During Lab Visit" Questions. These questions asked the participants to discuss their feelings about the speech laboratory during their actual speech presentation. Anything that occurred, during this specific time frame was free for the participants to comment on.

"Immediately After Lab Visit" Questions. The participants were once again asked to reveal their thoughts, about the lab or themselves immediately after the speech lab appointment. The boundary for this section is more vague in the sense that the participants could comment on anything from how they felt seconds after finishing the lab appointment, to while they were filling out the current speech laboratory assessment form, to several days after the speech lab visit. This gave the participants the opportunity to determine what should be considered "immediately after the lab visit."

"Long-Term Effects of the Speech Lab" Questions. The last section of open-ended questions focused on what the participants felt were the long-term effects of the lab. No arbitrary guidelines were set in place for these questions, which allowed the participants the option of commenting on any effect that they experienced or could potentially experience.

Procedure

Upon arrival for the interviews, participants were asked to read and sign an informed consent form, which included information explaining the research topic, withdrawing from the study, and confidentially. Additionally, this form indicated that the interviews would

be audio taped and transcribed verbatim. All ten participants agreed to sign this form. Each participant was interviewed and recorded in a private, campus room by the researcher, who was a graduate student at the time.

Data Analysis

The data were analyzed using the constant comparative method of Glaser and Strauss (1967; see Lincoln & Guba, 1985). The interviews were transcribed verbatim and content analyzed. First, all transcripts were read to get an overview of categories that needed to be included for each item. The overview broke the transcripts into three distinct stages that closely resembled the last four sections of the interview question protocol: Before Lab Visit, During Lab Visit, and Impressions of Speech Lab. Participant phrases and ideas from the interview transcripts were unitized (Strauss & Corbin, 1990). Second, these independent participant responses, identified by brackets, were coded and grouped together into categories (Baxter, 1991). Third, the categories of participant responses were analyzed for similarities and regrouped together according to the three stages of the speech laboratory developed from the transcripts. Fourth, these categories were examined for emerging themes or connective relationships.

RESULTS

When a student visits a speech laboratory, there is a chronological order of steps that occurs, typically beginning with students signing up for their speech lab ap-

pointments. They then come back to the lab at the scheduled appointment time and actually present their speech. Feedback is provided, the students then exit the lab, and within days they present their speech in the classroom. Due to this progression of events, interviews were structured to examine these steps chronologically. The participant responses were placed into three distinct stages of the speech lab process. The stages, corresponding to the last four sections (stage 3 is a combination of sections 5 and 6) of the interview protocol detailed above, are: Before Lab Visit, During Lab Visit, and Impressions of Speech Lab. In this section, all themes and categories that have emerged within these stages are listed, defined, and supported with interview data.

Stage 1: Before Lab Visit

Nervousness. The first major theme that developed within the "Before Lab Visit" stage was nervousness. Almost every participant mentioned experiencing nervousness at some point before going to the speech lab for his or her presentation. The nervousness experienced by the participants is broad and multi-layered. A variety of categories emerging within this theme represent the participants' various experiences with nervousness. Deb, a black, 18-year-old female expressed several reasons why she was nervous about giving her speech in the lab.

> Deb: I was nervous because I had never really given a speech before…of this magnitude…[and] I knew I had to do well on in order to get a decent grade in the course, …I was nervous because even though I knew

it wasn't for a grade [in the lab]… I was still nervous because I had to get up in front of somebody and give my speech and stay within the time limit.

Matthew, a white, 18-year-old male mentioned that his nervousness was natural and having a prepared speech lab attendee made him feel better about the speech.

Matthew: Well, I was a little nervous because I am a nervous public speaker in general. But I thought it [the lab] would be helpful because the person seemed prepared to…you know, she timed it and she had the same evaluation form that our instructor used for the final grades so there was a sense of competency there, it's not like they didn't know what they were doing. They had a good idea of how to help us and what exactly we had to do for the speech.

These data help show the variety of reasons why participants were nervous. This nervousness would carry over into the actual speech presentations that the participants made during their speech lab visit as well. Further details of this carry over will be discussed in the upcoming stages of the speech lab process.

Student Expectations. The second main theme that emerged within the "Before Lab Visit" stage was student expectations. This theme simply refers to the expectations the students had about the speech lab before they arrived for their initial appointment. The major category that dominated this theme focused on the size of the speech lab. Several participants had different expectations about the actual size of the speech lab. These expectations, or in some cases, the violation of these expectations, prompted a range of reactions from the participants. For example, Paul, a white, 18-year-old male,

was expecting the speech lab to be small, but as states, the size made it more personal:

> Paul: I didn't really know too much about it, I went down there to sign up the first time, but I didn't really see what it was like and a lot of people were telling me that the place I gave the speech was really small…so that was pretty much how I envisioned it, it was really small and really personal too.

Another participant, Lisa, a white, 18-year-old female, expected her speech lab presentation to take place in a large, auditorium. But, as with Paul, the change in setting from what she had anticipated actually improved her speech lab experience.

> Lisa: Well, we were trying to think about what it [the speech lab] would be and me and my friends thought…[we] would be in an auditorium and [at] a podium talking…[in] like a big area and we didn't know what to expect. And then we saw it was just this little room and it felt a lot more comfortable being… in an enclosed area.

Stage 2: During Lab Visit

The second stage was the most discussed stage by the participants. Four primary themes emerged from their responses: Nervousness, Speech Lab Setup, Feedback, and Speech Lab Attendees. Nervousness was comprised of two main categories, which included "Types of Nervousness" and the "Speech Lab's Effects on Participants' Nervousness."

Types of Nervousness. The participants identified several different types, different degrees, and causes of

their nervousness that occurred during the speech lab appointment. George, a white, 18-year-old male, indicated that his nervousness increased while he waited for the speech lab attendee's feedback.

> George: …I got more nervous waiting for what she was going to say…when you look at an audience you can tell [if] they don't care or if they liked it… but they all have to clap. In the speech lab they don't have to clap…so it is more nerve wracking.
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> ----------
>
> Sara, a white, 18-year-old female: …During the speech I had to stop a couple of times because I was nervous and I couldn't concentrate on my speech and it was just the thought of me being in the room by myself and hearing my own voice made me nervous.

Speech Lab's Effects on Participants' Nervousness. In conjunction with the many of types and causes of nervousness that were identified, the participants provided detailed information on how the lab affected that nervousness. For example, Matthew experienced less nervousness while in the speech lab because he went for his group speech presentation and was surrounded by his classmates.

> Matthew: I think that the group presentation, among the three you have to give… is a little easier because…you are working with other people on it… there is a routine, so instead of one person freezing up and then having nowhere to go, he had other group members to help him out.

John, found that the speech lab attendee's demeanor during his lab visit helped to reduce some of his anxiety that had built up before the speech lab appointment.

> John: It boosted my ego a little bit, made me a little more comfortable…seeing a smiling face, listening to a subject she probably didn't care about, helped me at least relax and actually have a good speech come off in a better form.

Sara, an 18-year-old, white female also experienced a positive lab environment because of the speech lab attendee.

> Sara: But once I got in there…the lady [working in the lab]…made me very comfortable and…[was] encouraging [me] just to take my time and so once I got going with my speech…she kind of made it easier for me, just the whole comforting aspect of it.

Speech Lab Setup. The second major theme of the "During the Lab Visit" stage, focused on setup of the speech laboratory and how that affected the participants. One participant, Sara, described the lab in detail during the interview and believes that the setup was appropriate.

> Sara: …it was very comfortable, you know, they're professional with the camera and the TV and the visual aid…I liked it.

Diagram 1 helps to frame Sara's comments. The presentation room of the speech lab is approximately 12-feet wide by 15-feet long. Privacy was an issue that was identified with regards to the lab setup because it helped several participants to feel more comfortable during their appointment. Beth, an 18-year-old white female felt that the privacy helped to reduce her nervousness by keeping her isolated from other people in the lab waiting to present their speeches.
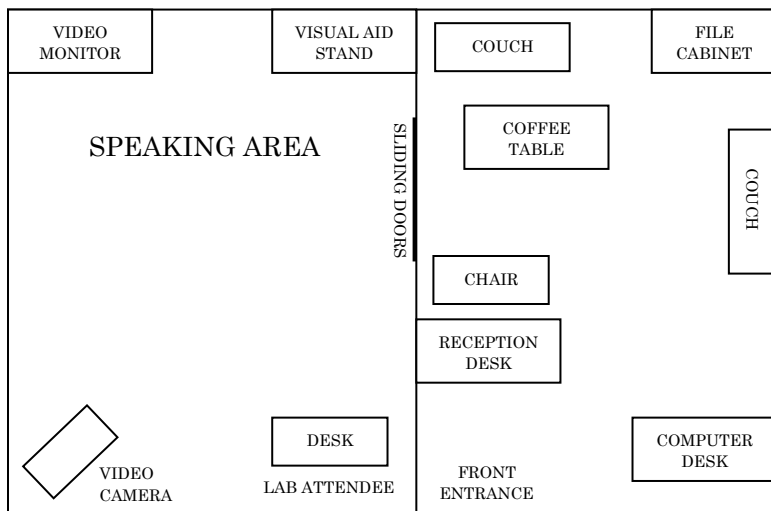
Speech Lab — Presentation Room   Speech Lab — Waiting Area
Diagram 1

> Beth:…[I]was kind of isolated from… the other people doing their speeches….[and] if you are nervous, say you have a peer or a friend that is sitting out there, you don't really want them to see you and especially if you're nervous about [the speech] because it is your first time through, then [the setup] helps a lot.

John agreed that the privacy of the lab was positive aspect of his experience.

> John: …You are excluded from the front area [of the lab]…once you actually go into the speech area… [where] you are going to present your speech. So that privacy issue is there, which is good.

However, not all of the participants felt that the setup of the lab was completely beneficial. Kim, a black,

18-year-old female, felt that the camera placement for the videotaping could be improved.

> Kim: …When she was taping me, [the video camera] wasn't towards [me]…it was like towards the side of something so I wasn't actually looking at the camera and it was…on the side of my face so I think the camera should be moved to where the [lab attendee] would be sitting at…

Feedback. The third major theme that emerged during this stage was the feedback that was provided to the participants by the speech lab attendees. The responses focused primarily on the three types of feedback that they received in the lab (verbal, written, and video) and in what areas of the participants' speeches the feedback concentrated. Deb provided details on the type of feedback she received in the lab.

> Deb: I was given a sheet [from the lab attendee] that graded me and gave me points on what I did right and what I did wrong and what I need to do in order to fulfill the requirements of my speech and it took about fifteen to twenty minutes to go through all that…she gave examples and even though she was not my teacher, she does teach the public speaking class…[and] she just told me ways that I could fix it….and ways that I could improve.

Jen, an 18-year-old, white female agreed that the feedback she received was helpful because it came from a knowledgeable source.

> Jen: She gave… a lot of detailed information, actually. More than I expected…she looked at it more as a how a teacher would grade it and [gave] points that a teacher would give…that was really helpful.

Paul described how the feedback he received directly improved his speech.

> Paul: It was specific, she analyzed specific parts of my speech she didn't just say like your presentation was good and stuff, she said what was specific about it and what specific parts I needed to take out and she determined with me…whether or not these parts were vital to my speech.

The second aspect of the feedback category focused on what specific areas of the participants' speeches were touched on by the speech lab attendee. Sara found that the feedback she received focused on her references and credibility statement.

> Sara: She timed me and told me… I didn't cite my references in the right place and that I have no credibility sources, so I went home and checked on that…[and] she was right, so that helped a lot to.

John found that he received helpful feedback through the use of examples.

> John: She gave me examples in detail, on past experiences that she had because I don't know how many speeches she has critiqued, but I would say in the hundreds… so it was easy for her to critique a speech and use that to the students' advantage and… honestly, her examples were definitely helpful in that aspect.

Speech Lab Attendees. The last major theme that emerged from the "During the Lab Visit" stage was the lab attendees and how they affected the participants' experiences. Almost every participant acknowledged that the speech lab attendees were very friendly and professional, which significantly helped the participants

during their lab visit. Lisa, found that the one characteristic of the attendee that made her feel more comfortable was having a relaxed attitude.

> Lisa: Like how his attitude was, he was more…laid back… he helped us, he was joking around with us and was real fun…that made it more comfortable.

She also mentioned that she appreciated that the lab attendee talked to her as if they were equals.

> Lisa: …If the people who are working there are just more laid back and more friendly and just talk to you like they are at our level and don't talk down to you, I think that is much more helpful than saying… you did this wrong or you did that wrong. I think if they talk to you on a mature level… it would help you a lot more than just stating what is right and wrong.

The overall effect that the speech lab attendees had on the participants seemed to greatly enhance their speech lab visit. Conversely, from this, it is reasonable to assume that if the speech lab attendees acted more negatively or less supportive towards the participants, their lab experience may also be directly affected. Further research is needed to fully grasp the effects that the lab attendees have on the students, but the current study's findings is a productive start in this area.

Stage 3: Impressions of Speech Lab

Sections 5 and 6 of the interview process were combined to make up the last speech lab stage: Impressions of Speech Lab. Two primary themes emerged under this final stage: Benefits and Limitations of the speech lab. The main benefits of the speech lab focused on the par-

ticipants' relief, the clarification of speech components, and the practical usefulness of the lab.

Participants' Relief. For the majority of the participants, there was a sense of relief that came over them once they finished presenting their speeches in the lab. The participants provided various reasons for this relief. Matthew experienced relief because his speech anxiety and nervousness had been somewhat reduced through the speech lab visit.

> Matthew: Afterwards, I was less nervous. Again talking to the evaluator helped because I got to find out exactly what I was doing differently... afterwards there was more like a suggestive conversation, but there was a definite sense of relief afterwards.

Kim also mentioned that she was relieved as she immediately exited the speech lab because her speech lab requirement for her course had been fulfilled. Participants seemed to experience some type of relief because the lab helped to validate their current progress on the speech. Beth realized, through her lab experience, how much more work was needed for her speech to be successful.

> Beth: I realized I had a lot more to go and needed to work more on my speech and I saw what else I had to do to improve it.

Through his speech lab visit, Paul was able to experience how it really felt to present his speech. This practical experience added to his relief.

> Paul: I thought it was really comfortable in there and it just put me at ease and made me feel more comfortable...I think that it definitely gave me the feel of giving a speech, giving just that initial feel because I hadn't really given a speech like that in a long time. I

mean, I did some in high school, but it had been a while and it just kind of got me back in the groove…

Clarity. The second major theme that emerged from this last stage was the clarification of speech components that occurred for some participants during their speech lab visit. Beth, had difficulty grasping certain speech concepts in class, but after the lab appointment, it was much clearer for her.

> Beth: I didn't know what my instructor meant about "transitions' because when I thought of transitions, I thought they should go something like 'First…. and then Second…,' but she wanted each part of the speech to run into each other. Mine were just really separate and they didn't run into each other whatsoever…[the lab attendee] actually explained what a transition was…. she gave me specific examples…

I then followed up by asking her if the feedback that she received in the lab accurately corresponded to what her instructor had taught her in class? Beth responded:

> Beth: Yah, but it just didn't click…when you have someone personally explain it to you, it is always better.

Jen also mentioned that she benefited from the speech lab, specifically the video taping of her speech, because it helped to reinforce and clarify some of the speech aspects she was still struggling with.

> Jen: I think it really helped just to see, because like for me, I'm a visual person, so that helped, like I heard…what [the lab attendee] said but then [the video] kind of backed it up…I think that helped a lot.

Practical Usefulness. First, a majority of the participants felt that the speech lab was useful for many different reasons. Most importantly for the students, it helped to increase their grades on the final speech presentation. John was very pleased with the help he received from the speech lab and he feels that it helped him significantly improve on his final speech presentation.

> John: I'm 99 percent certain that I improved a letter grade. I think if I would not have gone into that speech lab, I would have gave a "C" speech, honestly… It helped me move it to a "B."

Sara, agreed that her final speech presentation also significantly improved because of the assistance she received at the lab.

> Sara: Actually, I think [the lab] did [help] because I went home and viewed [the video tape] and I saw my mistakes and my weaknesses and I tried to work on it before I actually did the speech in the class. So I think the speech lab helped a lot…I would say [the lab] helped [me improve] about 45 percent.

The second major theme of the "Impressions of Speech Lab" stage is limitations that the students recognized. From the interview transcripts, only one significant limitation was indicated through the participants' responses. The limitation focused on the number of attendees that provide feedback to the students during their speech lab presentation. Several participants mentioned that by having more attendees in the lab, the students would obtain much more feedback, which in turn would be more beneficial.

Kim: I think that they could have another person in the room instead of just one… so you could get more than one person's feedback.

DISCUSSION

When examining the many different themes and categories that emerged from the participants' responses, it is very apparent that several key issues are continually addressed throughout each of the three stages of the speech lab visit. The first theme that crossed over all three stages was nervousness. Almost every participant brought up some different aspect of nervousness during the interviews. In the first stage, many of the participants expressed some nervousness about the speech lab visit. This included being nervous towards giving a speech in front of a lab attendee that the participants' didn't know, to just simply presenting the speech itself for the first time. During the speech, the participants indicated that the amount of nervousness fluctuated throughout their presentation. Some experienced nervousness and then it reduced as they presented their speech, others felt more nervous while waiting for the speech lab attendee's feedback. After the lab appointment, many participants commented on the fact that they felt some type of relief when they had finished their presentation. There is no conclusive evidence that the sense of relief occurred because the participants' nervousness had been reduced or if there were other factors that allowed them to relax quickly. Further research will need to examine this relationship more closely in order to uncover the truth of this matter.

Feedback was another major theme that crossed over into multiple stages of the speech lab process. Feedback was primarily discussed during stages two and three by the participants. The different types of feedback used in the speech lab and the manner in which the feedback was presented were the most talked about aspects of this issue. The participants seemed to prefer having all three types of feedback (verbal, written and video) available to them for reviewing. Several commented on how helpful it was to listen to verbal feedback from the speech lab attendee immediately after the speech presentation, but then also have the opportunity to take the written and video feedback home to use as a reference for the needed improvements. Additionally, the feedback issue seemed to have the most overt effects on the students' final speech presentation. The participants indicated that the feedback they received specifically helped to improve their grades on the final speech and in some cases this was an improvement of at least one letter grade. Not one participant mentioned that the feedback they received hindered their final performance in the classroom. These responses all seem to support Ellis' (1995) claim that these laboratories *are* a benefit to students because they are designed to promote goal-setting with the students as well as provide them with the opportunity to experience various coaching techniques that may further enhance their speech performances.

A final theme that emerged from the participants' interview responses was the overwhelming difference between the indicated benefits and limitations of the speech lab. During the interviews, the participants mentioned many more benefits than limitations from

their initial experience in the lab. The benefits mentioned included how the lab helped to reduce students' nervousness, that going to the lab clarified speech components and concepts for the students, it provided some degree of validation of the students' progress on their speeches, and overall, the lab provided the students with authentic speaking experience that helped them, in some cases, dramatically improve on their speech presentations. The participants indicated only one true limitation during the interviews and that focused on the number of attendees working in the lab. Currently, it is clear that the benefits of the speech lab being examined in this study heavily out weigh any potential limitations that facility may have.

With regards to the design and execution of the current study, several limitations were identified. First, the sample of participants could be larger and more diversified. Only ten students were interviewed for this study and the majority of the participants were 18-year-old freshmen. It is understood that this demographic represents the majority of students enrolled in basic public speaking courses and those same students represent those who are most likely to attend speech laboratories. However, before any generalizations can be made about the speech lab a more diverse sample of students needs to be studied. Also, the findings of this study are not necessarily applicable to all speech and communication labs. Different lab setups and designs may have an effect on the perceptions of students who visit.

Even with these limitations, much can still be learned from examining the participants' lab experiences. The themes and categories that emerged through this examination do seem to provide initial support for

previous research conducted on this topic (Morreale, 1992; Ellis, 1995) claiming that communication laboratories are indeed a beneficial tool for students enrolled in basic communication courses. Further research is now needed to discover the full range of benefits that these labs are capable of offering to students.

Best Practices for Operating Speech Labs

After analyzing the themes and categories derived from this study as well as discussing the potential limitations of this research, it is important to detail specific strategies for creating, operating, and maintaining speech laboratories. In this section, several pedagogical strategies for operating efficient, effective speech laboratories will be offered.

From the results of this research and the experiences gained from operating a speech laboratory, there are several strategies that one may consider when creating or operating one of these facilities. The first strategy focuses on the training the speech lab attendees receive. In order for those attendees to fully help each student who comes to the lab, they must be able to provide assistance for public speaking skills deficits as well as help the students manage their public speaking anxiety. To accomplish this, the lab attendees must be trained to not only assist students with any issues dealing with problematic public speaking skills, but also help students cognitively restructure their negative thoughts about public speaking along with helping them to manage their emotional affective responses.

For this strategy to be effective, it may be necessary that speech lab attendees be trained on techniques such

as systematic desensitization (McCroskey, 1970), visualization (Ayres & Hopf, 1993), communication therapy (Motley, 1991, 1995), along with cognitive restructuring (Fremouw & Scott, 1979) and skills training (Phillips, 1977; Kelly, 1989). The attendees would then be able to implement the appropriate technique to address the students' specific needs. It is not the researcher's assumption that this type of extensive training could be expected of all graduate teaching assistants (GTAs), who currently make up the speech lab attendees. It may be more worthwhile and practical to split the duties and functions of the lab to separate parties. Professionals trained in treating individuals who suffer from high public speaking anxiety (PSA) could be hired to care for those students with the more complex cases of PSA. For those students who only need assistance for their public speaking skills, the regular lab attendees would be available to work with them in the same manner as the current lab setup.

One potential hurdle to overcome with this strategy is having the ability to recognize which students have skills deficits and which need the additional assistance provided by a professional. A solution to this would be to have students participate in a battery of tests at the beginning of the semester that would help to indicate their problematic areas of public speaking. Cognitive examinations could be performed to uncover students' irrational beliefs about the public speaking process and public speaking skills tests could be used to understand which areas students need the most assistance with. The students could then bring the results of these tests to their speech lab appointment and the attendee could determine what type of assistance is needed. The lab

session would then be modified for that student based on their specific situations. This questionnaire could be created and designed originally for this purpose or portions of previously created measures could be modified to form a new instrument. Further research is needed to determine the most effective method.

Based on the findings of this research, an additional strategy for speech laboratory setup and design (in conjunction with the basic communication course) could be to require all students enrolled in the course to attend the lab at least once during the semester. With many basic communication courses becoming required at the collegiate level, those universities that have established speech laboratories can provide students with a supplemental tool that can be a benefit to all who are enrolled in those courses. It is not the researchers' assumption that by requiring every student to attend the lab, all would do so each semester. But by making the lab a requirement, many more students would attend the lab compared to the number of those who currently participate. This would mean more students each semester would fully utilize the lab and would be gaining additional valuable assistance with their public speaking abilities. With this strategy, as with the previous strategies, more resources would need to be allocated for the speech lab to comfortably accommodate every student enrolled in the basic communication course. These resources would include having additional attendees working in the speech lab as well as adding more rooms to the facility itself to allow for multiple students simultaneously.

Through the participants' suggestions, several specific improvements were offered regarding the design

and setup of a speech lab. First, all video equipment should be removed out of sight from students in the lab presentation room because it can be a distraction at times. Appointment times at the lab should be increased to allow students more time to receive feedback. Also, the participants indicated that having more than one lab attendee providing feedback would not only give the students various perspectives on their speech, but it also would help make the lab environment more realistic to the classrooms.

Future Research

The major themes and categories that have emerged from this study as well as the practical implications suggested previously need to be closely examined in order to fully understand the effects the speech laboratory have on students enrolled in basic public speaking courses. Specific areas of future research should focus on how speech laboratories clarify aspects of public speaking for students, which in turn reduces their uncertainty about the public speaking process as a whole. Results of a previous study examining speech laboratories conducted by Jones, Hunt, Simonds and Comadena (2002) suggest that students may use speech laboratories as a method for reducing uncertainty about public speaking, which the researchers termed Public Speaking Uncertainty (PSU).

In that study, the researchers also created the Public Speaking Certainty Scale (see Appendix A) that was successfully used to measure this potential relationship between speech labs and student uncertainty regarding the public speaking process. The Public Speaking Cer-

tainty Scale (PSCS) is a modified version of Clatter-buck's (1979) CLUES7. Previous research studies using this modified measure have reported alpha reliability estimates of .78 (Jones et al., 2002). In future studies, researchers could compare students' PSCS scores before and after visiting a speech lab to see if that experience has any effect on students' levels of uncertainty about the public speaking process.

Additionally, future research should more closely examine the "relief" that the participants of this study experienced after concluding their speech lab visit. This is necessary in order to discover the origin of this response, which could then be enhanced for students.

Finally, the relationship between the lab attendees' personalities and the students' overall impressions of the lab should also be investigated. The current study only revealed that when the lab attendees were friendly, respectful, and more positive towards the students, their overall impression of the lab was more positive. Could the opposite also be true? If the lab attendees were not supportive during the visit, could the students' perception of the lab be affected negatively?

CONCLUSION

At this point, the development of speech laboratories as a supplement for basic public speaking courses is a trend only a handful of universities currently embrace. However, this trend is gaining momentum. In order for everyone in the educational hierarchy, including students, teachers, course directors, department chairs, and university leadership, to fully realize the benefits of

speech and other communication laboratories, comprehensive examinations must be conducted to completely understand the effects these facilities signify. As for the speech laboratory from the current study, John may best summarize the usefulness of these facilities with the following quote:

> John: I would say the lab is a very useful tool for anyone giving a speech or that is preparing to do a speech whether it is their first time…or as a freshman or a senior. Also not only does it ease your anxiety of giving speeches…you may receive a different side of a topic you never realized was there before.

Only through a dedicated effort to thoroughly examine speech laboratories will we be able to determine how accurate his assessment truly is.

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APPENDIX A

PUBLIC SPEAKING CERTAINTY SCALE (PSCS)

Rate your feelings towards the following questions by circling a number between 1 and 5. If you are EXTREMELY CONFI-DENT with a question, circle a 1. If you are NOT AT ALL CONFIDENT with a question, circle a 5. If your confidence with a question falls between these, please circle the corresponding number 2 through 4, 3 representing that your feelings are NEUTRAL.

	EC				NC
1. How confident are you in your general ability to predict how an audience watching your speech will behave?	1	2	3	4	5
2. In general, how confident are you of your ability to accurately determine how much speech audience members like (or dislike) you?	1	2	3	4	5
3. In general, how confident are you of your ability to predict accurately a speech audience member's values?	1	2	3	4	5
4. In general, how confident are you of your ability to predict accurately a speech audience member's attitudes?	1	2	3	4	5
5. In general, how confident are you of your ability to predict accurately a speech audience member's feelings and emotions?	1	2	3	4	5
6. In general, how confident are you in your knowledge of the public speaking process?	1	2	3	4	5
7. In general, how confident are you in your public speaking skills?	1	2	3	4	5

Developed by Jones, et al. (2002).