The tribe has spoken!

What I learned from an independent survey of MacGAMUT instructors

By the time I began programming MacGAMUT, I had come to the realization that mine was not the only "right" way to teach dictation skills. From the first, therefore, I was determined to build lots of flexibility into the software, giving each instructor the option of custom-tailoring MacGAMUT to maximize its effectiveness for his/her unique combination of student population, curriculum, text, and teaching style. To that end, I've always welcomed instructor input on the content, structure, and operation of MacGAMUT, and I'm pleased that those using MacGAMUT in the classroom have never been reticent about letting me know what they thought. In fact, many of the most valuable improvements I've added to the software over the years have been prompted by suggestions from individual instructors (not to mention their students!).

Of course, all the input I've had from instructors over the years has been from individuals who have taken the time to e-mail me or to talk with me at professional conferences. These contacts have given me lots of anecdotal information about specific instructors and how they're using MacGAMUT with their students. But I've never had a statistical study to give me a broader picture of the whole "tribe" of MacGAMUT instructors and their interaction with the software. I was intrigued, therefore, when Sheila Clagg Cathey approached me, proposing a dissertation research project examining the background and experience of this group and how those factors impact their involvement with MacGAMUT.

I provided background information and sent out e-mails to my confidential list of MacGAMUT instructors, soliciting their participation in Sheila's spring 2011 online survey. Beyond that, I had no input into her study, thus insuring the integrity of her statistics and the independence of her conclusions. At length (a far greater length than anyone might have wished, as is so often the case with dissertations), Sheila completed her document and successfully

defended it. The newly-minted Dr. Sheila Clagg Cathey has written a brief summary of her research, entitled "Diversity and Similarities among Instructors Who Use MacGAMUT," (following page 8, below). I was excited to read the complete dissertation myself, both for the new perspective it gives me into our instructor population and for its valuable insights into how I can make the MacGAMUT experience even better for instructors and their students alike.

I know many of you have been eagerly awaiting the release of these results because I often hear from instructors who are curious about how others are using the software. Dr. Cathey states her findings clearly, but her study is also full of numbers, percentages, and statistically significant findings—enough to please the most detailed-oriented among us. Personally, I found her literature review to be absolutely fascinating, in no small part because it brought back memories of colleagues I worked with years ago when computer-assisted music instruction was in its infancy. We've come a long way since then, but some things haven't changed—like the fact that mastery-based learning works, even if students may not initially appreciate how valuable it can be for them! Also, those studies show something many of you have learned: students do better if they have guidance about how to use computer-assisted instruction, even when it seems like they shouldn't need any help.

As many of you know, I've been hard at work on a new version—**MacGAMUT 7**—but Dr. Cathey's valuable research has suggested a number of additional enhancements I want to incorporate into this new release. Programming these new features will further delay release of **MacGAMUT 7**, but I think you'll agree the improvements outlined below are worth the wait. (Remember that anyone who has bought **MacGAMUT 6** will be able to download the FREE upgrade to **MacGAMUT 7** after its release.) BUT, I don't want to make you and your students wait to benefit from all the new instructional options prompted by Dr. Cathey's results, so I'm making a couple of them available immediately as noted below.

A new strategy for beginning Harmonic Dictation:

Instructors responding to the survey give high marks for the effectiveness of all MacGAMUT components, though they are slightly less enthusiastic about Harmonic Dictation. In fact, instructors are most likely to customize the Harmonic Dictation library and to alter the presets

for that particular component, presumably to remedy perceived shortcomings. Dr. Cathey's survey did not ask exactly how instructors change the way Harmonic Dictation is organized, so I can only guess what they do or why they do it. But for instructors who would like to try a different approach without having to modify the Harmonic Dictation library themselves, I'm providing an alternative to the beginning Harmonic Dictation levels in the default library, following a strategy I've used with great success throughout my years of teaching. The difference is in the way Harmonic Dictation is introduced to beginning students, and only the first four levels in the new library are changed.

You may well wonder why MacGAMUT's original Harmonic Dictation organization doesn't quite match the way I have taught all these years. When I first designed the Harmonic Dictation
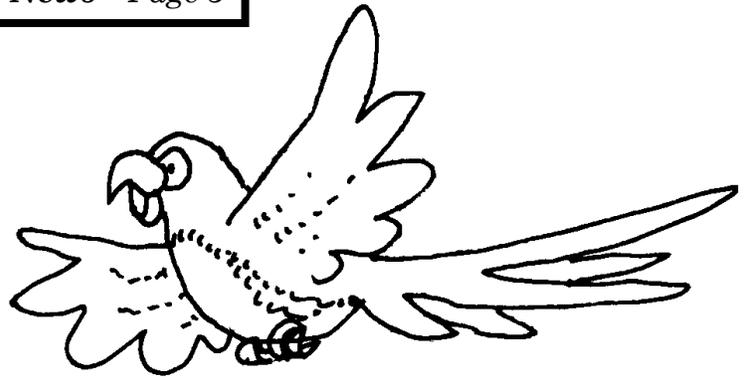
component of MacGAMUT, I reluctantly conceded to a small but determined group of instructors who insisted the beginning levels had to consist of "progressions" only two chords in length. I have never used those 2-chord levels myself because I think their lack of harmonic context makes them far too difficult for beginning students. I can't help but wonder if many instructors have found that those initial 2-chord levels do not provide their students a good introduction to Harmonic Dictation.

In the new alternative Original Presets Rev MG6.mgp and MG Progressions Rev.mgh files I'm now introducing, those beginning 2-chord levels have been replaced by levels consisting of exercises seven chords in length. It may seem counter-intuitive to start students with progressions of that length instead of the very short 2-chord progressions. But the 7-chord progressions in these new levels consist of only the most basic harmonic materials: levels 1 and 2 contain only root-position dominant and tonic chords, and levels 3 and 4 consist entirely of subdominant, dominant, and tonic chords, also in root position only. Dealing initially with such very limited harmonic materials helps students concentrate on the all-important bass line as they listen for "same" (tonic) or "different" (dominant) in terms of harmonic movement. While keyboard players may find these levels very easy, for vocalists and single-line instrumentalists, this very focused introduction makes a significant difference in their progress through the increasingly varied Harmonic Dictation levels that follow. Please note that the revised presets and library are a possible alternative you may choose to have your students use this year; the original Harmonic Dictation organization remains the default for 2014-15.

Available now! The new Original Presets Rev MG6.mgp and MG Progressions Rev.mgh files are included in the Original Presets & Libraries folder inside the MacGAMUT Presets & Libraries folder available to instructors on our website. You can access this download yourself right now: just register again, using your special Instructor-only Registration Number, and click the link in the "Instructors, please note:" section of the "Registration Complete!" page. *Note:* If you want your students to benefit this year from the same beginning Harmonic Dictation strategy I have my own students use, you only need to give them the new Original Presets Rev MG6.mgp file. The new MacGAMUT 6.2.4 installers will include the new MG Progressions Rev.mgh library which the Revised Presets file will link in for them. (But be sure to remind your students to install that 6.2.4 update!)

Whether or not you use the new library, your students may be less apprehensive about Harmonic Dictation if they understand that the 3-chord levels in both the original default library and the new MG Progressions Rev.mgh library are not just successions of random chords. Instead, they are all very basic chord sequences common in "real" music. If students learn to listen for and recognize multi-chord "chunks" as distinct units, they have a big head start on mastering any harmonic dictation challenge that comes their way. I have always given my own students a "Basic Short Chords" handout with these basic "chunks" written out. MacGAMUT's 3-chord levels are based on the progressions in this handout, and the 6-chord exercises of the following levels are largely combinations of one of the Major or Minor 3-chord chunks and one of the 3-chord Cadence chunks. If you spend a little time helping your students internalize the basic 3-chord progressions, mastering Harmonic Dictation (both in MacGAMUT's exercises and in real life) will become much easier for them.

Available now! I am posting my "Basic Short Chords" handout for you and your students

to download from **www.macgamut.com** (look under the MacGAMUT *6* tab).

A new "Easier Presets" file:

Over the years, I have come to know many instructors who customize MacGAMUT, so I was a little surprised to find that about 40% of the instructors participating in this survey do NOT customize. Not surprisingly, instructors who have used MacGAMUT longer are more likely to adjust the way it works for their students. About 80% of those who do customize make the presets easier, but 28% make them more difficult (obviously, a few instructors do some of each, depending on their students' needs, the course level, etc.).

Almost half of survey respondents modify the default presets to make them less challenging for their students. I have always included a "Much Easier Presets" file on Instructor Disks to demonstrate the extreme of just how easy MacGAMUT drills can be made, but I realize now it would be useful to include an "Easier Presets" file as well—relaxing the mastery requirements of the Original Presets somewhat, but still retaining a measure of rigor appropriate for music majors in post-secondary courses. According to Dr. Cathey's survey results, those who make the presets easier are most likely to allow slower tempi, increase the number of hearings, and lower the percentage required for mastery, so those are the modifications that characterize my new Easier Presets file. These new Easier Presets use the revised Harmonic Dictation library described above (beginning with 7-chord progressions and omitting the 2-chord progressions) to help students get off to a better start with Harmonic Dictation.

Available now! I have already added the new Easier Presets MG6.mgp and MG Progressions Rev.mgh files to the Easy & Hard Presets folder inside the MacGAMUT Presets & Libraries folder available to instructors on our website. To access this download, you will need to register again, using your special Instructor-only Registration Number, and click the link in the "Instructors, please note:" section of the "Registration Complete!" page. *Note:* If you choose to have your students use the new Easier Presets this year, you only need to give them the Easier Presets MG6.mgp file. The new MacGAMUT 6.2.4 installers will include the new MG Progressions Rev.mgh library which the Easier Presets file will link in for them. (But be sure to remind your students to install that 6.2.4 update!)

Big Brother as private tutor:

I was surprised to learn from Dr. Cathey's survey results that—while instructors encourage their students to use both Mastery Mode and Practice Mode—few instructors urge their students to take advantage of the "Make My Own" drill option for Intervals, Scales, and Chords. Make My Own grew out of my experience, looking over my students' shoulders as they worked on MacGAMUT in the lab. I saw them making the same mistakes over and over again, and I realized how useful it would be if they could focus only on the specific intervals or scales or chords they were most likely to confuse. Instead of very likely guessing wrong again the next time either P4 or P5 (for instance) popped up in the software's intelligently random order of exercises, they could concentrate on only those two intervals until they
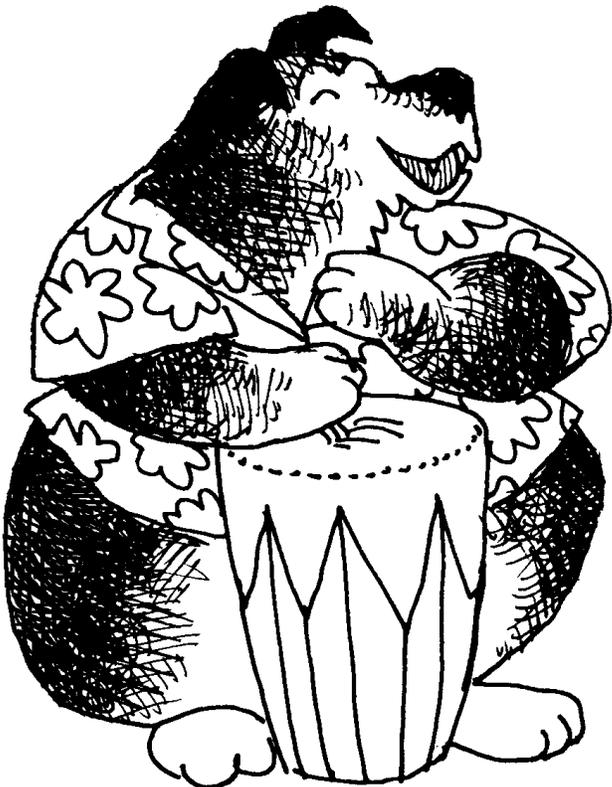
knew which was which.

Inspired by Dr. Cathey's research, **MacGAMUT 7** will incorporate diagnostic tools to help each student focus on and solve individual dictation weaknesses. The software will essentially "watch" your students at work and will offer appropriate suggestions for how best to remedy each individual's specific problems. For instance, if a student consistently confuses two intervals, MacGAMUT will point out which intervals are problematic and suggest using Make My Own Drill for concentrated work on just those two intervals. Another example: if a student has difficulty hearing the bass in Harmonic Dictation, MacGAMUT may suggest working in Practice Mode and using the Sound menu to boost the volume of the bass line or to change instruments for individual voices to make the separate lines more easily distinguishable. It will be like having a private tutor working beside each student, diagnosing individual problems and reminding them of MacGAMUT tools that can help them succeed.

Big Brother does tech support, too:

Everyone praises our outstanding tech support, so it's not surprising that many of the surveyed instructors rated tech support as the single most helpful type of training or support provided (kudos to Bill Dilts, our tech support genius), while others found our "how-to" videos most helpful (the multi-talented Bill also prepared the videos). MacGAMUT's extensive Instructor Guide wasn't listed as one of the choices, although a few people entered it under "other," but almost 40% chose "none of the above." Given that about 40% of the surveyed instructors are not customizing MacGAMUT, it seems likely that most of those instructors aren't looking for assistance in using the instructor materials, so that number isn't as surprising as it first seemed. But that percentage may mean that 40% of instructors don't know enough about the instructor options to understand how effectively they could fine-tune the way MacGAMUT works for their students. For instance, a few respondents did not even know that presets and libraries other than the defaults are available!

I'm afraid it is even less likely that students are consulting the User Guide or watching the "how-to" videos on their own. MacGAMUT is genuinely easy to use, so if your students think it's difficult, they clearly need a little guidance. Instructors who require their students to watch the videos report that their classes are far less likely to have problems with the mechanics of using MacGAMUT. The survey results also suggest that even a short introduction to point out a few "tricks" that will make students' MacGAMUT experience easier saves them (and you too) a lot of time and effort in the long run. Just telling your students that the Help menu at the top of every exercise screen is a good place to look for help (that will be a surprise to many of them!) could make the MacGAMUT experience much less stressful and much more rewarding for them.

Dr. Cathey discusses the importance of instructors helping students learn to use MacGAMUT effectively, but I understand that not all instructors have time to focus on that aspect. As a result, as **MacGAMUT 7** "watches" your students at work, it will coach them on how they can use the software more efficiently and effectively. If there is an easier way to do something, MacGAMUT will alert the student to it while he/she is using MacGAMUT. For instance, if an individual routinely clicks the on-screen duration boxes instead of using the number keys on the computer keyboard

to select durations, MacGAMUT will tell that student about the Computer Keyboard Shortcuts for durations and will suggest they print a handy reference key for the many keyboard substitutes for mouse clicks that may speed their entries. If they appear to be trying to enter Melodic Dictation from the Virtual Keyboard (or from a MIDI keyboard) but are having difficulty entering both pitches and durations simultaneously, MacGAMUT will remind them they can use the Keyboard to enter pitches and durations separately. These are just a couple examples of the many personalized "hints" **MacGAMUT 7** may offer to make individual students' lives easier. Of course, if students prefer not to see these helpful hints (if they really want to do things the hard way!), they can always disable them.

A new "Quiz" option:

I have been working on programming a new "Quiz" option for **MacGAMUT 7**, similar to the quizzes, practice quizzes, and drills throughout the **MFun: Music Fundamentals** eText. I am NOT urging anyone to abandon the Mastery-Based Learning option that has proven so successful since MacGAMUT's initial release in 1988. You can certainly continue using MacGAMUT as you always have. But, if you're weary of attempting to convince reluctant students that mastery-based learning really is good for them, the Quiz option may be easier for them to understand. After all, students are used to taking quizzes to assess their progress in a course, so they may be more comfortable with having to achieve a satisfactory score on a finite number of exercises rather than laboring away on an (apparently) endless procession of problems. Even if you choose to limit the number of times students can take a quiz for credit, they can attempt an unlimited number of practice quizzes to develop competence and confidence in a less stressful atmosphere.

Dr. Cathey's study, however, has made me wonder if some instructors may misuse this new Quiz option as a way to avoid administering and grading in-class dictation tests. For the majority of surveyed instructors, MacGAMUT work counts as 10 to 20% of the final grade, which seems perfectly reasonable to me. And I am pleased to know that most instructors use MacGAMUT as I intended, as a course requirement and for practice outside of class. But I was taken aback to learn that a few of the surveyed instructors use it as "an entire replacement for a traditional course." I can only hope those instructors and the instructors who choose to use the new Quiz option at least give their classes a monitored final exam to be sure students have been doing their own work!

Record-keeping refined:

The survey results show that instructors who have used MacGAMUT successfully for years are the ones most likely to think it important that their students use MacGAMUT in Mastery Mode and submit their stats regularly. No doubt they have discovered most students typically do only what they are required to do AND they do that much only if their instructor checks to be sure they've done the work. After all, if you assigned homework but never bothered to collect and grade it, how many students would actually do the "required" work?

Most of you appreciate the importance of collecting stats regularly, and **MacGAMUT 7**

will make those stats even more useful to you by providing additional details to help you assess student effort and achievement. The date/time info will include the year as well as the month and day, and you will also be able to see the date each level was mastered. If you elect to use the new Quiz option, you will see the date the student achieved the highest quiz score on each level, how many times the student has taken each quiz, how many times the student is allowed to take each quiz, the quiz-score goal for each level, etc. I am also improving the layout of the info to make it easier for you to navigate.

In conclusion:

The conclusion I find most encouraging from Dr. Cathey's research is that instructors who customize MacGAMUT to match their curricula and their way of teaching are the ones who keep using MacGAMUT. I have designed MacGAMUT to be as intelligent as I can make it (programming the computer to grade Melodic Dictation, for example, with much the same careful consideration a human teacher would bring to the task), and I have tried to make it as easy for students to use as possible. But I've devoted considerable programming time and effort to providing ways for instructors to customize MacGAMUT. I could have spent that time adding what I view as unnecessary "bells and whistles," but if I had, MacGAMUT wouldn't be such a valuable pedagogical tool for such a wide variety of instructors and students. It's designed for instructors who care about the same things I care about—giving their students the best possible musical education, teaching their students what they really need to know, helping and encouraging their students to improve their own skills, and caring enough about their students to help each one achieve his or her individual potential. I know aural-training and basic theory skills are not the courses a lot of instructors are most eager to teach. After all, getting beginning music students off to a good start in their musical lives isn't an easy thing to do, and it's not necessarily an achievement valued as much as it should be. But for me, and I suspect for many of you as well, each student success is immensely and personally rewarding.

I have also always loved teaching Music Theory Pedagogy: helping advanced students learn how to become successful teachers helps to improve the quality of the profession as a whole. I never wanted my theory ped students to become carbon copies of me. They see how much I love teaching, and I'm sure that's infectious, but I encourage each student to bring his or her own special talents to teaching, and it's always been a joy to watch my theory pedagogy students become successful teachers in their own ways. In short, I believe MacGAMUT is as good as it is because it's designed by someone who really cares about your students and their instructional needs, but also by someone who really cares about you—the instructor—and your pedagogical needs. I appreciate your continuing support, and in return, I will do my best to continue providing you and your students with the most pedagogically intelligent software available!

Ann K. Blombach

Letters, we get letters . . . (well, actually, we get lots and lots of e-mails)
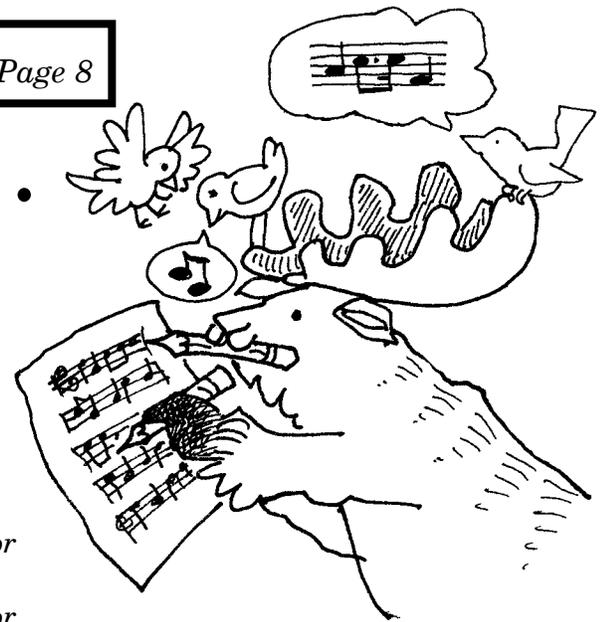
"Best wishes and thanks for MacGAMUT and MFun. I am a big fan and have used MacGAMUT for nine years in my classes."
DZD, Alabama Instructor

"Love this program!"
RB, California AP Music Theory Instructor

"We have been ordering your software through our bookstore for several years now, and we appreciate what MacGAMUT does for our students."
JK, Kansas Instructor

"I taught with MacGAMUT for the first time this summer and loved it!"
NB, Ohio Instructor

"Your customer service is absolutely fantastic. You are quick to respond, friendly, and helpful. Thank you very much!"
AMF, Texas Student

"Thank you so much. You're the best part of my music theory class."
GM, Ohio Student

"I've been using MacGAMUT for a very long time with private students and am really eager to try MFun for the younger and less experienced students. Great software!!! Thank you!"
GS, California Instructor

"This is my fourth year using MacGAMUT, and it has been an absolutely wonderful program."
MM, Pennsylvania Home Schoolers

"Thanks for the awesome customer service, even on the 4th of July. I am a music education major, and I will definitely be recommending this program as part of my curriculum. Thanks for a great product."
WC, Student

"Have been using MacGAMUT for many years. Love it!"
BD, Oklahoma Instructor

"I've been using MacGAMUT as a supplement on my own, as my university has limited musicianship training. MacGAMUT is my favorite ear-training program; it has the most comprehensive and best progression of graded exercises that I've found."
AH, Student

"I have noticed that the more students work on MacGAMUT the less they complain about it."
SB, Ohio Instructor

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Diversity and Similarities among Instructors Who Use MacGAMUT

The following is a brief summary from Sheila Clagg Cathey of her 2014 dissertation entitled, *Profiles, Perceptions, and Practices Related to Customizable Computer-Aided Instruction (MacGAMUT) among Postsecondary Aural-Training Instructors*. A longer, more detailed article is intended for journal submission. The entire dissertation will be available through the Boston University Library, and ProQuest Dissertations and Theses.

Introduction

This study examined relationships between demographic and educational characteristics of postsecondary aural skills instructors and their practices using aural-training CAI. In order to examine relationships, a representative application and target group were selected. I selected MacGAMUT as a representative aural-training application; and for the target group, I selected postsecondary instructors who use MacGAMUT. Reasons for selecting MacGAMUT over other CAI are detailed in the dissertation. In brief, MacGAMUT is a flexible drill-and-practice, mastery-based application that encourages instructors' hands-on involvement and emphasizes typical components of postsecondary dictation skills.

After selecting the target group, I created a 31-item, pilot-tested questionnaire. Dr. Ann Blombach forwarded a survey link in March 2011 to all instructors in her database. Potential participants were limited to Ann's confidential database of instructors who have registered their MacGAMUT software and have deliverable email addresses ($N = 1,717$). All instructors were invited to participate. The survey closed on May 6, 2011 with 331 anonymous respondents; 53 pre-college instructors were eliminated from the results, leaving a final sample of 278 anonymous postsecondary respondents. Two MANOVAs were used to analyze whether respondents differed on eight dependent variables. All inferential statistics are found in the dissertation.

Instructors' Profiles

Profile data are useful in describing demographic and educational characteristics of faculty. In the aural-training literature, little research has been conducted that accounts for profile data. For this study, profile items were used to determine specific characteristics such as age, gender, primary area of teaching responsibility,

educational backgrounds, years of experience in teaching aural skills, primary instrument, CAI experience with other applications, years of experience in using MacGAMUT, position or rank, and the type of institution where instructors use CAI (MacGAMUT). The following will summarize key characteristics of the respondents.

Although I am unaware of any anonymous instructors' names, MacGAMUT is used at institutions in 22 countries.[1] Like the diversity found among numerous locales where MacGAMUT is used, the respondents in this survey also represented a diverse group. Profiles revealed that the respondents were diverse in age, rank, and years of teaching experience, with a fairly balanced number of males and females. Overall, these instructors are well-educated with the majority having doctorates (59.85%), which is significantly higher ($p = .05$) than the percentage (45.04%) of music theory/aural skills instructors in the 2011 College Music Society (CMS) Directory. Associate professors and professors were the most frequently-identified ranks, suggesting the inclusion of veteran instructors. The most frequent respondents were ages 30 to 34 years old, but the ages ranged from 22-year-old graduate assistants to a 77-year-old professor emeritus, implying that Mac-GAMUT is used among all career age groups (mean = 43.8). Instructors' teaching experience and years of experience in using MacGAMUT also varied widely, with an average of almost 11 years of teaching experience, and nearly 5 years of experience in using MacGAMUT.

Instructors' Practices

Survey questions related to instructors' practices focused on current use of MacGAMUT; importance of MacGAMUT's modes; how assignments are made, required, and impact overall grade; ways MacGAMUT is customized to fit pedagogical needs; and most frequently-used textbooks coordinated with MacGAMUT. For the purpose of this Newsletter, I will summarize a few of the key ways that instructors use MacGAMUT. This narrative will be limited to basic uses of Presets, Libraries, Set Params, and

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[1] MacGAMUT is used at institutions in Australia, Belgium, Brazil, Canada, China, Finland, France, Israel, Italy, Korea, Mexico, Nepal, Netherlands, New Zealand, Norway, Philippines, Slovenia, Sweden, Taiwan, Turkey, United Kingdom, and the United States (Blombach, 2010).

checking students' statistics. It will conclude with the importance of longevity in using MacGAMUT.

Although it is unknown which versions of MacGAMUT respondents were using, MacGAMUT 6.1 was the latest version available at the time of the survey. MacGAMUT 6.1 comes with the Original Presets and Libraries pre-loaded as the default settings. Presets included on the MacGAMUT 6.1 Instructor Disk are: *Original Presets MG6.mgp, Much Easier Presets MG6.mgp, Much Harder Presets MG6.mgp,* and *Prep Presets MG6.mgp.* Overall, instructors make MacGAMUT's Presets easier rather than harder. MacGAMUT also contains Presets and Libraries for three textbooks: Phillips, Clendinning, and Marvin's (2005) *The Musician's Guide*; Kostka and Payne's (2009) *Tonal Harmony*; and Damschroder's (2005) *Listen and Sing*, which was added in 2013. Although instructors have several library files from which to choose, a strong majority of the respondents use MacGAMUT's Original Presets and Libraries. The next most frequent responses were "my own libraries," MacGAMUT's Prep Presets and Libraries, and "libraries common to my department."

Instructors can modify any of the parameter or level settings in a presets file using a program in MacGAMUT, called Set Params. While there are many ways to change default settings, the most common are: (1) increasing the number of hearings before the first answer check, (2) allowing students to choose any tempo, (3) choice of levels that students are required to complete, and (4) order of levels that students are required to complete. Overall, 75.58% do not create new levels, while only 24.42% create new levels in any component. Because most respondents do not create new levels in MacGAMUT, this implies satisfaction with the already designed levels.

MacGAMUT and its predecessor—GAMUT—have always had extensive student statistics, flexibility for instructor usage, flexibility for student usage (practice, review, help), mastery-based learning for aural training, and intelligent response judging and question preparation (Blombach, 1980, 1986; Blombach & Murphy, 1981a). Checking students' statistics is still one of the most important features to instructors. In fact, survey respondents indicated that checking students' statistics on a regular basis is their top pedagogical practice with MacGAMUT.

I will briefly address how experienced MacGAMUT users

have advantages over less experienced users. Instructors who had used MacGAMUT for four or more years were significantly higher ($p = .05$) than instructors who had used MacGAMUT for zero to three years in their perceptions that CAI, customization, and instructors' interactions with MacGAMUT have a positive impact on students learning dictation. Experienced MacGAMUT users were also significantly higher in the importance of using Mac-GAMUT's Mastery Mode, and how often students submit Mac-GAMUT assignments. This implies that experienced users trust MacGAMUT's ability to provide students with a personal tutor that can facilitate the acquisition of dictation skills.

Most instructors require students to submit assignments using MacGAMUT's Mastery Mode on a regular basis. Required use of Mastery Mode and regularly requiring MacGAMUT submissions imply strictness in practice and confidence in the software's ability to meet dictation needs. Although mastery-based CAI can ignite frustration or resentment among students, a review of the literature consistently indicated that students who use mastery-based CAI make significant improvements in dictation skills. Furthermore, longevity of using MacGAMUT also produces seasoned CAI users who maximize the benefits of customizable software in a meaningful way to aid students in the progressive stages of acquiring aural skills. In sum, longevity of using Mac-GAMUT increases instructors' interactions and involvement with MacGAMUT, and the perceived value of MacGAMUT.

In Closing

I again want to thank the anonymous pilot group and anonymous respondents. Thank you for your voluntary time and effort in answering questions in great detail. This project focusing on the MacGAMUT community would not have been possible without the gracious support of Dr. Ann Blombach. Ann's consent for me to conduct this critical examination is representative of her desire for future researchers to be knowledgeable of postsecondary instructors' perceptions and practices as they relate to the uses of CAI. Ann, I thank you for granting me permission to conduct a study that would entail a close examination of the personal ways that instructors use MacGAMUT. May God bless you.