

Guiding principles for evaluating and using ESL multimedia software



Jennifer Foote
Project Manager: Justine Light

Introduction

The objective of this document is to assist ESL instructors and program coordinators in choosing and using ESL multimedia software. The term “ESL multimedia software” refers to all software that utilizes different types of media, such as audio and video, to aid in the teaching of English as a second language. This software could be designed to increase general English proficiency or be focused on practicing one type of skill such as pronunciation or listening comprehension. The guiding principles contained in this section are divided into two parts. The first part focuses on evaluating ESL multimedia software for the purpose of selecting software for an ESL class or program. Literature focusing on the evaluation of ESL multimedia software takes a number of different approaches including: research-based, checklist-based, and framework-based (Hubbard, 2006). The guiding principles contained here attempt to incorporate useful and effective ideas from each approach. The second section offers guidelines for using multimedia software effectively with ESL learners.

These guiding principles are based on an extensive review of the literature on evaluating and using ESL multimedia software. References that informed these principles are provided at the end of this section. The following resources were particularly influential in the creation of this document and are highly recommended for further reading:

Chapelle, C. (2001). *Computer application in second language acquisition: Foundations for teaching, testing, and research*. Cambridge: Cambridge University Press.

Hubbard, P. (2004). Learner training for effective use of CALL. In S. Fotos, & C.M. Browne (Eds.), *New perspectives on CALL for second language classrooms* (pp. 45-68). New Jersey: Erlbaum.

Hubbard, P. (2006). Evaluating CALL software. In L. Ducate & N. Arnolds (Eds.), *Calling on call: From theory and research to new directions in foreign language teaching*. (pp. 313-334) San Marcos, TX: CALICO.

This document is divided into the following sections:

ESL Multimedia Software Evaluation

Evaluation Principles

Practical considerations

Materials

ESL Pedagogy

Implementing and Using ESL Multimedia Software

ESL multimedia software equipment and physical environment

Introducing ESL multimedia software

Learners

ESL Instructors

Appendix

ESL Multimedia Software Evaluation

Evaluation Principles

- Evaluations of ESL multimedia software involve two or more evaluators in order to increase the reliability of the evaluation and decrease evaluator bias.
- When more than person is evaluating ESL multimedia software, the approach to evaluation and individual criteria are agreed upon and understood by all evaluators.
- ESL Multimedia software evaluations are most effective when the software is actually used by the people who are choosing software, so that evaluators have a thorough understanding of how the software works in practice.
- Evaluations of ESL multimedia software are tailored to the specific situation in which the software will be used and, as such, specific criteria are added or omitted as the individual situation warrants.
- Where available, published reviews of ESL multimedia software, such as CALICO reviews (www.calico.org), are utilized alongside personal evaluations developed by individuals selecting multimedia software.
- Evaluations of ESL multimedia software consider how the software will be integrated into a language learning course and how much time will be spent using the software over the length of a course.
- Consideration is given to how much time ESL learners will require to learn the software and how much explicit instruction will be needed for ESL learners to use the software effectively.
- Curricular aims and objectives of the ESL program are determined prior to selecting software and software is chosen that will help achieve those aims and objectives.
- Consideration is given to whether the use of a particular software program will make curricular goals easier or faster to achieve, or will produce better results than would have been achieved using more conventional teaching methods.
- When evaluating ESL multimedia software, evaluators are mindful that the methodological claims made by software advertising may not be reflected in the actual software.
- Identifying the theoretical or methodological teaching approaches utilized by the software designers can help evaluators decide whether these approaches are consistent with the philosophy of the ESL program and/or ESL instructors using the software.
- Evaluators of ESL multimedia software are aware that overly positive or negative initial reactions to specific multimedia programs can cause bias in overall evaluation, especially if this initial reaction comes from aesthetic features of the program.

- Developing checklists can be an effective way to help evaluators of ESL multimedia software consider all aspects of a piece of software; however, it is important that the checklist items are appropriate to the specific learning situation and educational philosophy of the program.
- Evaluations of multimedia software are primarily concerned with the language learning opportunities present in the software.
- Individuals being asked to select software are given sufficient time to thoroughly evaluate potential software.
- Where possible, evaluators consult with the instructors who will be using the ESL multimedia software.

Practical Considerations

- The technical facilities where the ESL multimedia software will be used have adequate computers as well as support services to ensure smooth operation of the software.
- Budgetary constraints of the ESL organization using the software are considered and the educational returns on monetary investment are analysed.
- When looking at the cost of ESL multimedia software, factors such as different types of licensing fees including per user costs are considered.
- ESL multimedia software components load and run at an adequate speed, ensuring that instructional time is not lost waiting for response from the program.
- ESL multimedia software is reliable and runs with minimal crashing, freezing, or technical glitches.
- Technical considerations for using ESL multimedia software include considerations of how software performance is affected when large numbers of ESL learners are using a program at the same time, particularly if the software requires internet access.
- Evaluations of ESL multimedia software consider the management that will be required to install and maintain the software.
- If the ESL multimedia software runs in sessions, ESL learners will have time to complete a session during allotted time in class, or progress can be saved for future class times.
- ESL Multimedia software provides data on ESL learners' progress in a way that is meaningful and informative for ESL instructors.

Materials

- ESL multimedia software utilizes language content that is free of cultural bias and stereotypes.
- The language used in ESL multimedia software is authentic and corresponds to the language needs of ESL learners outside of the classroom and/or language lab.
- The content of language materials provided in ESL multimedia software is interesting, appropriate, and relevant for the age and goals of the ESL learners who will be using it.
- The language used in ESL multimedia software is socially and linguistically appropriate for the context in which ESL learners will be using English in the real world.
- Evaluations of ESL multimedia software analyse the language used to ensure that is at the right difficulty level for the ESL learners who will be using it, and that it corresponds to their CLB levels.
- Evaluators of ESL multimedia software are aware that many software companies use the same software template to produce language learning software for different languages, which can lead to a reduced focus on the cultural complexities of specific languages.
- Evaluators consider whether learners will enjoy using the ESL multimedia software, and whether it is likely to result in positive experiences and attitudes towards computer assisted language learning.
- The ESL multimedia software interface can be navigated logically and easily, and is aesthetically pleasing for ESL learners.

ESL Pedagogy

- Effective multimedia software utilizes, and is consistent with, current theories and research in the area of second language acquisition.
- Effective ESL multimedia software activities encourage ESL learners to focus on language meaning.
- Effective ESL multimedia software provides sufficient opportunities for ESL learners to focus on language form.
- Effective ESL multimedia software provides sufficient opportunities for ESL learners to focus on using language in context.
- ESL multimedia software encourages ESL learners to be cognitively engaged in processing language and making linguistic decisions rather than utilizing rote activities such as decontextualized gap fills.
- In situations where there is more than one way to answer a question correctly, ESL multimedia software allows for different answers to be accepted.

- ESL multimedia software provides ESL learners with meaningful feedback to their responses and helps ESL learners understand why an incorrect answer is not appropriate.
- ESL multimedia software uses a variety of techniques (such as highlighting, images, translations, video, etc.) to make the meaning of input clearer and facilitate ESL learners in understanding language slightly above their language level.
- ESL multimedia software provides elaborations and explanations of the language content, such as grammatical explanations, in order to help learners understand the target language.
- ESL multimedia software provides extra help to ESL learners who want further guidance or explanation in the form of glossaries, dictionaries, examples, or listening transcripts.
- ESL multimedia software provides sufficient instructions, examples, and demonstrations to enable ESL learners to fully utilize the language learning opportunities present in the software.
- ESL multimedia software is designed to be accessible to all ESL learners who will use it and is effective for ESL learners with different learning styles, strategies and intelligences.

Implementing and Using ESL Multimedia Software

ESL multimedia software equipment and physical environment

- Successful implementation of ESL multimedia software includes adequate technical support and computer facilities in accessible locations.
- Computers and networks are properly maintained to ensure that teaching problems and dissatisfaction with software are not arising due to computer hardware problems.
- ESL instructors are given enough time in computer labs to fully utilize the software with their ESL learners.
- Computers labs are designed in such a way that ESL learners can communicate easily with each other; for example, study carrel walls around computers are avoided.
- Computer labs have a large screen that the ESL instructors can use for giving demonstrations and instructions to ESL learners.
- Good communication is established between ESL instructors and technical support teams in order to deal with technical difficulties quickly and efficiently.
- Protections are in place to guard against users accidentally changing settings and/or passwords (e.g., deleting desktop icons or changing language settings) that could cause problems for future users.

Introducing ESL Multimedia Software

- Prior to using ESL multimedia software with learners, ESL instructors spend time using the software themselves and familiarizing themselves with all of the features and activities provided by the software.
- ESL instructors are given opportunities to learn to fully understand the software through orientation sessions or extra preparation time.
- ESL learners' overall computer literacy skills are assessed and, when needed, ESL learners are given basic computing skills and information to enable them to use ESL multimedia software effectively.
- ESL multimedia software training for ESL learners focuses on enabling learners to use software purposefully and confidently, in order to meet their language goals.
- When ESL multimedia software is complex and involves a lot of different components, training with learners is done incrementally, over several sessions, allowing learners to gradually become familiar with all of the options and features available.
- If ESL learners are encouraged to use the ESL multimedia software outside of class time, then learner access to the software is made available and procedures for accessing the software are not complicated.
- Instructors anticipate potential problems ESL learners may encounter when using the selected ESL multimedia software, and take steps to minimize these problems.
- ESL multimedia software implementation involves group work and collaboration as much as possible in order to balance out the isolated nature of many ESL multimedia software programs.
- ESL learners are given time to experiment with selected ESL multimedia software before they are given detailed explanations and instructions so that they are better able to understand and apply the information given to them by their instructor.
- Clear rules and/or guidelines are negotiated for ESL learners using computers for non-ESL related activities such as checking facebook or reading the news while using multimedia software in class, especially if those activities are not done in English.
- If ESL learners require passwords and logins to access computers or ESL multimedia software, these are organized in advance and ESL instructors are able to log on for ESL learners in the event that a password or user name is forgotten.
- Teachers are clear about whether work done with multimedia software will be used for graded assessment and if so, how ESL learners will be graded; this information is given to ESL learners at the start of the course.
- In order to fully utilize ESL multimedia software, ESL learners are guided through the program so they know how various components of the software work and how they fit together as a whole.

Learners

- ESL learners are encouraged to become experts in the software in order to assist each other with difficulties and share successful hints, tips and program features.
- ESL learners are reminded that the goal of using the ESL multimedia software is mastery of the language, not mastery of the software and learners are able to identify the difference between successfully completing a computer task and successfully learning language from a computer task.
- ESL learners are provided with strategies to help them obtain the greatest language gains possible from ESL multimedia software activities.
- While using ESL multimedia software, ESL learners are sometimes asked to stop in order to consider the purpose of the task they are working on and to think of how to best exploit that activity for language learning gains.
- ESL learners are guided in setting clear language goals and objectives for their own progress when using ESL multimedia software.
- ESL learners are encouraged to approach language learning activities with ESL multimedia software in a way that matches their personal language learning goals and learning styles.
- ESL learners are provided with strategies to make materials easier or more difficult depending on their linguistic needs; for example, they can turn help features on and off or choose to use or skip options to repeat listening passages.
- ESL learners understand appropriate use of meaning aids available in ESL multimedia software such that they are used to enhance learning, not detract from learning.
- ESL learners are encouraged to consider their own learning processes when using software, through reflective practices such as journal keeping or class discussions.
- ESL learners are encouraged to take advantage of the feedback they are given in multimedia ESL language learning activities to increase their understanding of language form and meaning, through activities such as keeping logs of missed words.
- ESL learners understand that fully engaging with the ESL multimedia software and exploring all of its features can be more beneficial than using the software for a longer period of time but in a narrow and predictable way.
- ESL learners are encouraged to exploit the ESL multimedia software interface as a language learning tool as well as the actual language learning content used in language exercises.

- If software does not track ESL learners' progress, learners are encouraged to keep a log to track their own progress in order to help the learner and instructor to plan for future sessions.
- ESL learners are encouraged to reflect upon and share their experiences of using ESL multimedia software via surveys, informal discussions, and reflection journals.

ESL instructors

- ESL instructors are clear about the role that software will play in their curriculum and which learning objectives will be addressed through the use of software.
- ESL instructors understand that the success of ESL multimedia software in a course can be enhanced by the way in which instructors use the resource with their ESL learners.
- ESL instructors have experience using multimedia software to learn a second language themselves and are aware of the potential difficulties and frustrations ESL learners may have.
- ESL instructors are prepared for technological issues that impede software use, such as internet outages, or computer login issues, and have contingency plans in place for when/if these issues occur.
- ESL instructors do not ask ESL learners to use software features with which the instructors themselves are unfamiliar.
- ESL instructors are active coaches and guides in the language lab, offering ESL learners tips and suggestions rather than becoming involved only to troubleshoot difficulties.
- Language and strategy training with ESL multimedia software is integrated into other aspects of a language program in order to make language learning cohesive, focused, consistent, and relevant.
- ESL instructors understand the importance of maintaining a sense of classroom community when using ESL multimedia software and encourage collaboration among ESL learners throughout the course.
- ESL instructors recognize that ESL learners' comfort with, and enjoyment of, working with computers will vary in each classroom and will work with all ESL learners to increase their comfort with, and enjoyment of, multimedia software activities.
- ESL instructors recognize that some ESL learners will progress more quickly or slowly than others and have plans in place to help these learners use and plan their time effectively.

References

- Beatty, K. (2003). *Teaching and researching computer-assisted language learning*. Candlin, C. & Hall, D.R (Eds.). London: Longman.
- Burston, J. (2003). Software selection: A primer on sources and evaluation. *CALICO Journal*, 21(1), 29-40.
- Calico. (nd) Calico software review guidelines. Retrieved from www.calico.org
- Chapelle, C. (2001). *Computer application in second language acquisition: Foundations for teaching, testing, and research*. Cambridge: Cambridge University Press.
- Chapelle, C.A. (2007). Challenges in evaluation of innovation: Observations from technology research. *Innovation in language learning and teaching*, 1(1), 30-45.
- Chapelle, C. (2010). The spread of computer assisted language learning. *Language Teaching*, 43(1), 66-74.
- de Szendeffy, J. (2005). *Using computers in language teaching*. Ann Arbor, MI: University of Michigan Press.
- Egbert, J. (2005). *CALL essentials: Principles and practice in CALL classrooms*. Alexandria, VA: TESOL
- Hegelheimer, V. & Tower, D. (2004). Using CALL in the classroom: Analysing student interactions in an authentic classroom. *System*, 32, 185-205.
- Hubbard, P. (1988). An integrated framework for CALL courseware evaluation. *CALICO Journal*, 6(2), 51-72.
- Hubbard, P. (2001). The use and abuse of meaning technologies. *Association of Teachers of English as a Second Language Ontario Special Research Symposium*, 27(2), 82-86.
- Hubbard, P. (2004). Learner training for effective use of CALL. In S. Fotos, & C.M. Browne (Eds.), *New perspectives on CALL for second language classrooms* (pp. 45-68). New Jersey: Erlbaum.

- Hubbard, P. (2006). Evaluating CALL software. In L. Ducate & N. Arnolds (Eds.), *Calling on call: From theory and research to new directions in foreign language teaching*. (pp. 313-334) San Marcos, TX: CALICO.
- Hubbard, P. (2007). Critical issues: Professional development. In Egbert, J. & Hanson-Smith, E. (Eds.) *CALL environments* (pp. 276-292). Alexandria, VI: TESOL.
- Hunter, L. (2001). CALL labs: have they run their course? In K. Cameron (Ed.) *CALL-The challenge of change, proceedings of 10th Exeter CALL conference* (pp.61-72). Exceter, England: Elm Bank.
- Jamieson, J. & Chappelle, C.C. (2010). Evaluating CALL use across multiple contexts. *System*, 38(3), 357-369.
- Jamieson, J., Chappelle, C. & Preiss, S. (2004). Putting principles into practice. *ReCALL*, 16(2), 396-415.
- Jamieson, J., Chappelle, C., & Preiss, S. (2005). CALL evaluation by developers, a teacher, and students. *CALICO Journal*, 23 (1), 93-138.
- Johnston, B. (2007). Theory and research: Classroom atmosphere. In Egbert, J. & Hanson-Smith, E. (Eds.) *CALL environments*. Alexandria, VI: TESOL.
- Jones, J.F. (2001). CALL and the responsibilities of teachers and administrators. *ELT Journal*, 55(4), 360-367.
- Kolaitis, M. Mahoney, M.A., Pomann, H., & Hubbard, P. (2006). Training ourselves to train our students for CALL. In P. Hubbard & M. Levy (Eds.) *Teacher education in CALL* (pp. 328-344). Amsterdam: John Benjamins.
- Levis, J. (2008). Computer technology in teaching and researching pronunciation. *Annual Review of Applied Linguistics*, 27, 184-202.
- MacCarthy, B. (1999). Integration: The sine qua non of CALL. *CALL-EJ Online*, 4(2). Retrieved from <http://www.tell.is.ritsumei.ac.jp/callejonline/journal/1-2/mccarthy.html>
- Murray, L. & Barnes, A. (1998). Beyond the "wow" factor-evaluating multimedia language learning software from a pedagogical viewpoint. *System*, 26, 249-259.

National Foreign Language Resource Center. (1998). *Checklist: Evaluative criteria for computer-delivered language learning systems*. University of Hawaii at Mānoa. Retrieved from <http://www.nflrc.hawaii.edu/NetWorks/NW31/NW31t.pdf>

O'Connor, P. & Gatton, W. (2004). Implementing multimedia in a university EFL program: A case study in CALL. In S. Fotos, & C.M. Browne (Eds.), *New perspectives on CALL for second language classrooms* (pp. 199-224). New Jersey: Erlbaum.

Pomann, H. & Hubbard, P. (nd). Collaborative CALL strategy training for teachers and ESL learners. Retrieved from <http://www.j-let.org/~wcf/proceedings/d-009.pdf>

Rani, R. (2003). Selecting materials. In B. Tomlinson (Ed.). *Developing materials for language Teaching* (pp. 37-57). London: Continuum.

Robb, T.N. & Susser, B. (2000). The life and death of software: Examining the selection process. *Calico*, 18(1), 41-52.

Roberts, J.T. (1996). Demystifying materials evaluation. *System*, 24(3), 375-389.

Scholfield, P.J. (nd) Evaluation of CALL software. Retrieved from <http://privatewww.essex.ac.uk/~scholp/callevel.htm#bas>

Shaughnessy, M. (2003). CALL, commercialism and culture: Inherent software design conflicts and their results. *ReCALL*, 15(2), 251-268.

Susser, B. (2001). A defense of checklists for course evaluation. *ReCALL*, 13(2), 261-276.

Tomlinson, B. (2003). Materials evaluation. In B. Tomlinson (Ed.). *Developing materials for language Teaching* (pp. 15-36). London: Continuum.

Watts, N. (1997). A learner-based design model for interactive multimedia language learning packages. *System*, 1(25), 1-8.

Appendix

Checklists

Checklists can be a useful way to get a general sense of the features of a multimedia software program. However, using generic checklists can be difficult, as the appropriateness of a particular program depends largely on the learners who will be using it, and the goals of the program. Further, checklists should not necessarily be used as the ultimate deciding factor in whether or not to use a piece of software, but rather as a way to consider aspects of a program that may have gone unnoticed if only relying on general impressions.

Below is a sample checklist for evaluating pronunciation software. It is not an exhaustive checklist, and is intended to be used as an example of how to create a checklist for a specific learning situation. This checklist was developed with a CLB 5-6 class in mind. Some sections of this checklist would work for evaluating almost any type of ESL multimedia software; however, other sections are very specific to pronunciation. The purpose of choosing pronunciation for this section was to demonstrate the importance of tailoring a list to your specific instructional goals.

The following article and checklist were particularly helpful in guiding the creation of this checklist.

Levis, J. (2008). Computer technology in teaching and researching pronunciation. *Annual Review of Applied Linguistics*, 27, 184-202.

National Foreign Language Resource Center. (1998). *Checklist: Evaluative criteria for computer-delivered language learning systems*. University of Hawaii at Mānoa. Retrieved from <http://www.nflrc.hawaii.edu/NetWorks/NW31/NW31t.pdf>

Sample Checklist for Pronunciation Software

Program Name: _____

Cost: _____

Additional costs (e.g., licensing fees): _____

Level: _____

System requirements: _____

Number of units/lessons _____

Approximate time required to complete all activities/lessons _____

Technical Aspects

- Software runs consistently and smoothly
- Software is compatible with available computers
- Software is easy to load and loads quickly

Program Design

- Software interface is logical and easy to navigate
- Learners' progress is saved from one session to the next
- Learners are able to "escape" activities easily and return to the main menu
- Software has technical help features built in
- Help features can be accessed easily from any place in the software
- Learners can repeat sections of the program as many times as they like

Support

- Technical support is available to users who have questions
- Software includes a teachers' guide
- Technical support includes the option of talking to a tech support person
- Software includes FAQ

Activities

- Both perception and production based activities are included
- Suprasegmental activities (e.g., stress, intonation) are included
- Segmental activities (e.g., consonants and vowels) are included
- Activities are provided at different levels of difficulty
- Activity types vary
- Activities progress in difficulty
- Practice activities include both controlled practice and free production
- Materials focus on aspects of pronunciation most likely to make speech less intelligible (e.g., word stress)
- Learners or instructors can select different activities based in the pronunciation needs of individual learners (e.g., more time can be spent on the sounds that are most problematic for a particular learner)

Instruction

- Instructions are clear and at an appropriate level
- Explanations of pronunciation features are simple
- Explanations of pronunciation features are accurate
- Audio and visual aids are utilized to make explanations clear
- Instructions include different strategies to help learners tackle specific problems
- Instruction includes strategies to help learners improve their pronunciation outside of class

Audio

- A variety of voices are used in materials
- Synthesized voices are not used
- Speech is naturalistic
- Audio is clear and high quality
- Learners are able to listen to their own recorded speech
- Learners are able to re-record pronunciation activities

Video

- Video is clear and runs smoothly
- A variety of video techniques are used to explain pronunciation features such as:
 - animated diagrams of places of articulation
 - videos of speakers' faces when making different sounds
 - visual representations of suprasegmental features such as phrases, thought groups, inking, etc.

Content

- Materials are free of cultural bias
- Language is at an appropriate level for the learners
- Language is authentic
- Sounds and words are presented not only in isolation, but also in context
- Language reflects the type of language learners will use outside the classroom

Feedback

- Software provides feedback for learners
- Feedback is immediate
- When learners make mistakes, they are able to try again until a feature is mastered
- When incorrect answers are given, learners receive additional feedback to help them recognize their mistakes
- Learners progress can be tracked over time
- Speech recognition features are included
- Speech recognition features are accurate for a variety of accents

Program Specific Considerations

- Language learning goals are consistent with curricular goals and learner outcomes
- Content is appropriate for learners
- Learners will have enough time to complete lessons during computer lab time
- Instructors can receive feedback reports of learner progress

General Impressions: _____
