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Abstract

This article addresses diversity in the classrooms and the need for technology for English language learners. Language acquisition and English language learning are overviewed with highlights of the different stages in language learning and various methods used for language. Integrating the role of technology in learning English as a second language is presented as a practical way in which to instruct English language learners. However, selection of software is seen as a critical aspect of effectively using technology for English language instruction. Various important aspects for evaluating a software program for English language learners are presented. A software evaluation form developed by the author is provided and discussed, with an example of how it can be used. A reaction to the software evaluation was written to give the reader further understanding about the effectiveness of the software. To sum up the paper the author has discussed the usefulness of the software evaluation form as it can be used to help evaluate the strengths and weaknesses of software programs.

This research Paper by: Sonia Uppal

Titled: Second Language Learning with Computer Software

has been approved as meeting the research requirement for the degree of Master

of Arts in Education.

_10 - 4 - 02_

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Oct. 4, 2002

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SOFTWARE

A Graduate Journal Article Proposal

Submitted to the

Department of Curriculum and Instruction

In Partial Fulfillment

Of the requirement for the Degree

Masters of Arts in Elementary Education

UNIVERSITY OF NORTHERN IOWA

By

Sonia Uppal

October 2nd, 2002

Abstract

This article addresses diversity in the classrooms and the need for technology for English language learners. Language acquisition and English language learning are overviewed with highlights of the different stages in language learning and various methods used for language. Integrating the role of technology in learning English as a second language is presented as a practical way in which to instruct English language learners. However, selection of software is seen as a critical aspect of effectively using technology for English language instruction. Various important aspects for evaluating a software program for English language learners are presented. A software evaluation form developed by the author is provided and discussed, with an example of how it can be used. A reaction to the software evaluation was written to give the reader further understanding about the effectiveness of the software. To sum up the paper the author has discussed the usefulness of the software evaluation form as it can be used to help evaluate the strengths and weaknesses of software programs.

Second Language Learning with Computer Software

Diversity in United States' schools is growing. As a result schools in the United States have a vast variety of students having a different learning styles and ethnicity. Research shows that one in every three students currently enrolled in elementary or secondary schools has a different background than students from the mainstream (Banks & Banks, 2001). It is predicted that 46 percentage of the school population by 2020 will be composed of immigrant children who speak languages other than English and come from various cultures (Banks & Banks). School age children who speak a language other than English at home often have a difficult time speaking and learning English (Federal Interagency Forum on Child and Family Statistic, 1998.)

Second Language Learning

According to Lado (1977), language acquisition and language learning are involved in mastering the skills of speaking, reading, and writing a language. McNeill (1970) states that no one teaches the first language to a child. Typically the child just acquires it. Language acquisition means mastering the language without conscious awareness or efforts to learn. On

the other hand, language learning is also part of mastering a language. Language learning occurs when a child makes conscious efforts to grasp and remember the sounds and words related to the language.

Research conducted by the California State Department of Education (1981) states some specific differences between "language learning" and "language acquisition." According to this study, language learning is a method that focuses on the forms to be mastered. The language learners learn the rules of the language and apply them later. Lessons in language learning are based on grammar. On the other hand, language acquisition is a method based on the need to communicate. It is also considered language acquisition when an individual learns the rules of language needed to communicate in daily life contexts. In language acquisition, lessons are based on interest, desire, and the need to communicate.

Methods for Language Learning

According to Kenneth (1988), there are three different methods that contribute to second language learning. These methods are: (a) translation method, (b) audio lingual or aural oral method and (c) natural method.

The translation method is a scholarly way to learn a language. In this method the learner studies the rules of grammar. Whereas the Audio-lingual method involves the techniques of mimicry and memorization. In Audio lingual method learner listens to tapes to learn the language. The natural method, according to Halliday (1975) and Hennings (1983), utilizes a natural approach for second language acquisition. The natural approach involves learning a new language through a need to communicate rather than through an imposed set of lessons.

Non-English speakers acquire English grammatical structure in a certain order and specific things seem to be acquired earlier than others. Halliday (1975) states that language acquisition lays the foundation for fluency in the second language. Kenneth (1988) describes three important rules for language acquirers: a) the learner must know the rules, b) the learner must think about correctness rather than communication, and c) the learner must have time to recall the rules and apply in a conversational context. Kenneth's rules can apply to the natural approach, where children use their need to communicate with others and in that process they learn rules,

correctness, and use those in their conversations to know and understand others.

Translation and audio-lingual methods have fallen into disfavor for teaching young children a second language because they require the production of language in speaking and writing from the outset (Kenneth, 1988). Young children are unable to respond in the language until they have experienced a substantial amount of listening. Forcing a child to learn a second language through translation or the audio-lingual method might result in frustration and poor performance. The natural approach has been found to be more appropriate for young children in learning, as well as acquiring, the second language.

Language development

According to Piaget's theory of language development (1965), young children learn a language through two developmental stages: a) communicating and b) thinking. Communication is one of the developing stages that encourages a child to exchange his/her thoughts with another person by saying words that relate to his/her feelings and are understood by the listeners. Hennings (1983) related his ideas to Piaget's communication developmental stage by stating

that a child is busy in general interaction when he/she is able to comment, request, command, or threaten. Likewise, children will engage themselves in similar communicating activities by asking questions and answering them. Hennings described thinking as a stage of learning when a child repeats the sound again and again and enjoys the pleasure of hearing the sounds. The child starts talking by him/herself aloud without addressing any listener or starts talking in the presence of another person, but the person may not respond. By the time children enter schools, they already know enough about their native language to help them acquire a second language.

For learning a second language, the child goes through 4 stages of development:

1. Pre-production stage - This is the first stage of development, which may last for several months. This stage is also known as a "silent period." During this period, the acquirer is concerned with receiving speech rather than speech production. Non-verbal language such as body language, pointing, touching, and showing pictures are used with children.

2. Early production - The child learning the second language begins to communicate using one word or two

words, which helps in developing primary language

acquisition. Children in this stage may not pronounce

all the words precisely. Children learn some words

easily, as the sounds are familiar to words in their

native language. Repetition and reinforcement assist

the child's acquisition in this stage.

3.Speech emergence - In this stage, the child begins

to speak some simple sentences. The child tries to

memorize some of the simple sentences without knowing

the exact meaning of each word in the sentence.

4. Intermediate fluency- Children engage themselves in

spontaneous dialogue and composition. The activities

used should stress speech production rather than

grammatical accuracy such as talking about themselves,

their desires, preferences, abilities, or feelings.

Children may have special anxieties, motivation,

and self-confidence for the acquisition of second

language (Krashen, 1981). There are two kinds of

motivation that makes student learn a second language:

1. Instrumental motivation- drives people to acquire a

second language for the reason of survival in day to

day living, and 2. Integrative motivation- a desire to

belong to a certain group where children choose to

learn a second language to be accepted by that second language-speaking group.

Technology and Language Learning

As the number of children from different backgrounds living in the United States increases, it is very important for teachers to have knowledge of the difficulties children face when learning English as a second language. Further, teachers need assistance to help with the increasing number of English language learners. Technology has the potential to be a very helpful tool for teachers, as well as for second language learners. According to Butler (1997), technology helps language learners because it creates the independent and collaborative learning environment where students can practice a new language. Technology, such as Internet and Hypermedia, are some of the helpful resources for teachers in teaching second language.

Technology assists teachers in creating an effective environment in the classroom by using the text, picture, sound, video, and animation with a meaningful context that relates the topic to a meaningful comprehension for second language learners (Burner, 1986). According to Krashen (1989), second

language learners feel very secure when they make
corrections on their own without any embarrassment.

Krashen (1989) states that technology helps
students as they move through the stages of language
acquisition. Multimedia helps a second language
learner as it provides comprehensive input during the
pre-production period of language learners. Then, the
second language learners start using the programs,
which require limited responses. In the advance stages
of acquiring a language, the learner uses technology
as a help to solve a problem or to complete a task.

Krashen (1989) states that use of technology like
interactive video programs of real life experiences
leads to critical thinking and problem solving.
According to Bickel and Truscello (1993), technology
also helps students with different learning styles and
strategies in different ways. The aural, visual, and
kinesthetic learners have access to many computer-
based activities, which match their learning styles.
Technology enriched classrooms can change the current
models of teaching and learning to emphasize more
active student learning and change the role of
teachers from deliverers of knowledge to facilitators
of learning (Wiburg, 1991).

Technology is also beneficial to English language learners because it gives prompt feedback and motivates (Kozma & Croninger, 1992; Poirot & Carales, 1993-1994). Technology gives the learner a sense of personal responsibility. Moreover, computers provide the learners with hands-on activities and the opportunity to work in small groups. According to DeVillar and Faltis (1991), computer software has proved an effective means of learning for English language learners because it helps them to connect images, sounds, and symbols. A good software for language learners provides a bridge between hands-on experiences and abstract learning, in which children can learn about a topic through exploration and experimentation (Papert, 1993).

Language should be presented in an on-going verbal and situational interaction. Software developers recognize that learning language is not a mechanical skill, but a cognitive and social skill. Language learning rather than technology learning should be the major focus and reality of the software. According to Kid's Source (an informational website on instructional software), appropriate computer software can engage children in creative play and conversation.

Good computer software develops problem-solving skills and helps students to think and work independently.

Software Evaluation

Software companies have continued to respond to this rise in interest in technology by producing new and constantly changing software packages. Geisert and Futrell (1990) estimated that 2000 new titles are released each year. As a result, the market is flooded with software, all promising amazing results in learning. Design and evaluation, therefore, have become important issues. With such a wide selection of software available, it becomes difficult to choose those which are suitable for use in the second language classroom. Educators need evaluation criteria which will facilitate the selection of appropriate software.

Moreover, according to the Office of Educational Technology (2002), teachers should ensure that any computer software used in a class should reflect educational needs of the students and should be regularly updated. Thus, the Office of Educational Technology emphasizes the need of evaluating software used in the classroom. In the case of language learning, software evaluation should focus on

determining programs which provide good instruction and increase student's language learning.

In software evaluation, the term evaluation is the systematic application of a procedure for assessing the design, implementation, and utility of programs (An Educator's Guide to evaluating the use of Technology in Schools and Classrooms-1998). According to this educator's guide, the evaluation procedure for software involves the following steps: -

- Obtain an overview of the software
- Establish purpose of evaluation
- Come up with some questions for which you want answers.
- Design the evaluation
- Collect some information about the software
- Formulate conclusion
- Communicate results
- Use results to modify software

So now the question arises, how is evaluating a software helpful? Software administrators can use the evaluation to understand how their software is working and to make decisions on improving their software in the long run. For educators, evaluation can be used to help determine appropriate software choices for the

classroom. As an educator who has studied technology and it's use in the classroom, I realize the importance of providing a framework for evaluation that teachers can use for their own classrooms.

A Framework for Evaluating a Language Learning Software

Following the Educator's Guide (1998), I developed my own evaluation form for examining software for language learners. I wanted the following questions to be answered –

1. Is the software helping the language learners in increasing their knowledge about the subject matter, being taught using the software program as support?

2. Is the software easy and appropriate for the grade levels in which it is used?

3. Does the software provide enough levels of difficulty in response to performance?

4. Is the software encouraging students to listen and reply carefully by giving them some kind of reward at the end of each level?

These questions framed the design of the evaluation, which led to the following major evaluation categories: -

- General design of the software

- Ease of use

- Different levels of challenges in the software

- Motivational devices used

- Attention provoking devices

The full software evaluation form is as follows:

Software Evaluation Form

Program Title _____

Suggested Grade Level _____

Subject Area(s) _____

Program Requires

       ❑ Individual

       ❑ Small group (2-3 students)

       ❑ Large group (4-10 students)

Type of Program

       ❑ Drill and practice

       ❑ Educational game

       ❑ Problem solving

       ❑ Demonstration or lab type experiment

• Does the software run on your computer?

       ❑ Yes

       ❑ No

• Does it meet a curriculum need?

       ❑ Yes

       ❑ No

If yes, please state the objectives or instructional

goals

_____

_____

_____

No, to either of the above 2 questions will eliminate

the software from further consideration.

General Design

- Creative

    ❑ Creative

    ❑ Less creative

    ❑ Not creative at all

Explain _____

_____

_____

- Errors

    ❑ Students get opportunity to correct their

      mistakes

    ❑ Students don't get any opportunity to

      correct their mistakes

- Racial, ethnic, or sexual stereotypes

    ❑ Free of all racial, ethnic, or sexual

  stereotypes

    ❑ Any one of these is present.

Explain _____

_____

_____

_____

Ease of Use

- The program can be opened quickly and easily.

    ❑ Yes

    ❑ No

- The learner can quit from any point in the program/save previous work.

    ❑ Yes

    ❑ No

- Simple and complete instructions.

    ❑ Yes

    ❑ No

Levels

- The software provides different levels in response to performance.

    ❑ Yes

    ❑ No

- The learner can move from level to level easily.

    ❑ Yes

    ❑ No

- Provide and maintain appropriate levels of challenge (e.g. increase levels of difficulty with progress).

    ❑ Yes

    ❑ No

Explain ——————————————————————————————————————

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- Screen is readable and size may be adapted or

  adjusted for the visually impaired.

  ❏ Yes

  ❏ No

- The software avoids clever graphics that make fun to

  fail.

  ❏ Yes

  ❏ No

Motivational Devices Used

- Responses to errors are helpful.

  ❏ Yes

  ❏ No

Explain ——————————————————————————————————————

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- Reward upon successful completion.

  ❏ Some kind of reward which might encourage

     the user

  ❏ No rewards

Explain _____

_____

_____

_____

- Sound in the program

    ❑ Appropriate

    ❑ Annoying

    ❑ No sound

Explain _____

_____

_____

_____

- Sufficient time

    ❑ Gives enough time to think

    ❑ Gives insufficient time to think

    ❑ Gives no time to think at all

Explain _____

_____

_____

_____

- Provides enough opportunities for practice.

    ❑ Yes

    ❑ No

Explain _____

Attention

- Provokes the viewer's attention with the use of

  color

        ❏ Yes

        ❏ No

- Provoke the viewer's attention with the use of sound

        ❏ Yes

        ❏ No

- Provoke the viewer's attention with the use of

  animation and the occasional challenge or surprise.

        ❏ Yes

        ❏ No

The following is an evaluation of a software entitled "English as a second language, E.S.L. for the beginner's". This software program is designed to be used with kindergartners and will help students to increase their general knowledge. This program is designed to help second language learner's build their English vocabulary in the fields of family, common places, and clothing.

Software Evaluation Form

Program Title: English as a Second Language, E.S.L.

for the beginner's.

Suggested Grade Level: Kindergarten

Subject Area(s): General Knowledge

Program Requires

☑ Individual

☐ Small group (2-3 students)

☐ Large group (4-10 students)

Type of Program

☐ Drill and practice

☐ Educational game

☐ Problem solving

☑ Demonstration or lab type experiment

• Does the software run on your computer?

☑ Yes

☐ No

• Does it meet a curriculum need?

☑ Yes

☐ No

If yes, please state the objectives or instructional

goals The instructional goal is to provide second

language learner's information about common places and

family. The objective is that students can identify
the English words, their meaning and relate them to
the images.

No, to either of the above 2 questions will eliminate
the software from further consideration.

General Design

- Creative

    ☐ Creative

    ☐ Less creative

    ☑ Not creative at all

Explain The software only allows the language learners
to click on the images and then describes them. There
is no way a child can do anything except a mouse
click.

- Errors

    ☐ Students get opportunity to correct their
      mistakes

    ☑ Students don't get any opportunity to
      correct their mistakes

- Racial, ethnic, or sexual stereotypes

  ☑ Free of all racial, ethnic, or sexual
    stereotypes

  ☐ Any one of these is present.

Explain <u>In one of the sections where it talks about</u>

<u>family, the software presents information and pictures</u>

<u>related to different ethnic groups.</u>

Ease of Use

- The program can be opened quickly and easily.

  ☑ Yes

  ☐ No

- The learner can quit from any point in the
  program/save previous work.

  ☑ Yes

  ☐ No

- Simple and complete instructions.

  ☑ Yes

  ☐ No

Levels

- The software provides different levels in response
  to performance.

  ☐ Yes

☑ No

- The learner can move from level to level easily.

    ☐ Yes

    ☑ No

- Provide and maintain appropriate levels of challenge (e.g. increase levels of difficulty with progress).

    ☐ Yes

    ☑ No

Explain The software does not allow the students to

go to different levels of challenge.

_____

_____

- Screen is readable and size may be adapted or adjusted for the visually impaired.

    ☑ Yes

    ☐ No

- The software avoids clever graphics that make fun to fail.

    ☑ Yes

    ☐ No

Motivational Devices Used

- Responses to errors are helpful.

    ☐ Yes

☑ No

Explain <u>There are no responses to errors because the</u>

<u>software does not provides students with activity</u>

<u>sheets to work on.</u>

- Reward upon successful completion.

  ☐ Some kind of reward which might encourage

  the user

  ☑ No rewards

Explain <u>The software program does not give any kind</u>

<u>of rewards to the students.</u>

- Sound in the program

  ☑ Appropriate

  ☐ Annoying

  ☐ No sound

Explain <u>This software has done a very nice job in</u>

<u>putting sounds together in the program. Every sound</u>

<u>present in the software is appropriate. The response</u>

<u>reads the answer in a clear voice that is easy to</u>

<u>understand.</u>

- Sufficient time

  ☑ Gives enough time to think

  ☐ Gives insufficient time to think

  ☐ Gives no time to think at all

Explain <u>The software allows the learner to think and</u>

<u>listen carefully to what is being said. They have as</u>

much as time as they need.

- Provides enough opportunities for practice.

  ☐ Yes

  ☑ No

Explain <u>The software does not gives any kind of drill</u>

and practice sheets to the learners to work.

Attention

- Provokes the viewer's attention with the use of
  color

  ☐ Yes

  ☑ No

- Provokes the viewer's attention with the use of
  sound

☐ Yes

☑ No

- Provokes the viewer's attention with the use of

  animation and the occasional challenge or surprise.

  ☐ Yes

  ☑ No

Reaction to software evaluation

This software program allows an individual student to work at one time and is a demonstration-based program. The program provides second language learner information, which is related to common places and family. The objective of the program is that the students identify English words, their meaning and relate them to the images.

Although the program provides second language learner information that is related to common places and family the program is not creative at all as the program only allows the language learners to click on the images and then describes them. It does not allow the language learners to do anything except a mouse click. As a result the students do not get any opportunity to learn from their mistakes. The software program is free from racial and ethnic stereotypes as

it is presenting information and pictures related to
different ethnic groups.

The software program can be opened easily and the
learner can quit from any point without any difficulty.
It also gives complete and simple instructions to the
learners. The software does not provide different
levels in response to the performance therefore the
learner does not have enough opportunities to go to
different levels of challenge.

There are no responses to errors because the
software does not provide students with activity
sheets to work on. The software program does not give
any kind of rewards to the students. The sound present
in the software is appropriate and very clear, which
is easy to understand. The images in the software
present a very dull color combination and some of the
information is not age appropriate.

After completing the evaluation, I determined that
I would not choose to use this software. Although it is
easy to use this particular software program is very
weak in the areas of creativity, error correction,
levels of difficulty, and age appropriateness. These
deficits make English as a Second Language, E.S.L. for

the Beginner very unstimulating and of little use in the classroom.

Teacher might find this evaluation useful as this evaluation can be used as criteria to help evaluate the strengths and weaknesses of programs and will help them make better decisions. With the lack of time that all teachers contend with, anything that that saves time is valuable therefore this evaluation will save their time as it explains all the components that should be present in software and the teacher's will come to know after a few questions whether to continue the evaluation or to go on to other software. This evaluation form presents objective criteria on each to compare and use to decide which program should be use or purchase.

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