Computer Assisted Language Learning: Theory and practice

Chapter 10: Material Development in CALL

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Introduction

The relationship between technology and teaching in general and particularly English language teaching and learning is an important issue since 1980s. A lot of studies have been conducted by researchers in language learning and teaching to examine the effectiveness of the material in the pedagogy.

Two main areas in the researchers are development research and effect research.

Development research:

Focuses on the development and production of computer soft wares and materials.

This chapter mainly talks about the important issues in the area of materials development in terms of technology and computer contribution.

CALL materials in the past

In the history of CALL, we can see Soprano developments of software and hardware:

1950s and 1960s:

Programmed Logic/Learning for Automated Teaching Operation (PLATO) is the base on which the first applications were used.

1970s and 1980s:

Macario (linear) and Montevidisco and Interactive Digame (both non-linear) as some videodisc programs were discovered. These programs have a constructivist instruction model.

One of the advantages of non-linear approach is that it allows for Greater learner autonomy and encourages critical thinking.

Athena Language Learning Project (ALLP): was a project which examined the computer role in education in 1970s and 1980s. Instead of working with large mainframe computers, it relies on universal interactive executive (UNIX.).
Hyper cards: were one of the applications which took advantage of the theoretical hypertext and hypermedia capabilities of computers which was invented in 1980s. It helped teachers and learners to create their own applications a few years later in 1992; the World Wide Web was launched.

Multimedia in CALL

By the combination of photographs, images and video recordings, the first manifestation of multimedia call were developed. This idea was used by application developers for multimedia personal computers (MPCs) in 1918s which is now a standard form of personal computers.
Multimedia refers to making use of several types of Media like text images, sounds, videos, and animation.
In the last four decades, CALL materials have moved towards interactive multimedia presentations with sound animation and full motion video. It was not completely linear and the new version has not always replaced the old ones.

Technology in present-day pedagogy:

CALL materials have been learner's centered recently. Lots of changes have been seen in CALL in the 21st century. One of the great changes refers to the time when computer facilities were combined with many aspects of life, for example, mobile phones and televisions which have the applications to connect

to each other and some other opportunities in call delivery are presented by technology advances.

Since 1960s which computers found a way into the area of language teaching and learning the history can be divided into 3 main different stages:

1. **Behavioristic CALL**
2. **Communicative CALL**
3. **Integrative CALL**

Communicative CALL:

Focuses on computer-based activities and using forms than the forms themselves and also teaching grammar implicitly and encouraging students to generate original utterances.

Interactive call:

Seeks to integrate different skills and technology more fully into the process of language learning. In this way, students use various technological tools in their learning process.

The most probable one is perhaps the **behaviorist CALL** and would attract most agreement.

Bax (2003) believes that, it is necessary to reassess or rename the phase or completely revise the analysis because communicative CALL was never actually communicated in a significant way in the 1980s. As a result, these categories are better to be referred to approaches but not phases. The approaches should be called restricted CALL, open CALL, and integrated CALL.

Technology and CALL tasks

CALL tasks using a technology platform comprises of two types:

1. **Developed from software (e-mail)**
2. **Interaction between learner and the computer**

Another categorization of information communication technology in language teaching and learning has many various types of software applications:

1. Generic software applications including word processors like Microsoft Word presentation software like PowerPoint, email packages and web browsers. (multi-purpose programs not specifically for language learning)
2. CALL software applications including contents of specific or contents of three types. (application which are specifically for language learning and teaching)

Various ranges of call programmers

- Dedicated programs
- Authoring programs
- Single programs and whole suits of programs
- Primarily text based programs
- Overtly instructional testing programs
- Programs for making maximum use of graphics facilities as an additional motivating factor
- Programs adapting a learning by doing approaches and even the learning by programming approaches

Criteria for call material development

All of the above mentioned aspects should be considered in designing call materials in an integrative and coherent holistic approach. To have a more precise boundary of the criteria there are song descriptions which are:

- Language/ Language learning approach;
- Teachers and learner's roles;
- Learners training;
- Materials activities

Consequently, we can say that call materials should teach learners the way of setting acquisition goals, the way of acquiring, the means to reach the goals, and finally the way of evaluation, recognition, and orientation of their own process of learning. As a result, one of the most important factors for developing learner autonomy effectively refers to self-evaluation thereby if this factor is integrated into called materials learners will be aware of the way of their learning evolution and process.

Here are some of call materials and activities:

- They have varied formats
- They have flexibility in presentation length and duration
- They are interrelated and indexed
- They are related and relevant to learning goals
- They promote using various sources that enhance collaborative work
- They are contextualized in a particular framework

Problems in call material design

- They can only motivated students if they are challenging, perplexing, and interesting in themselves
- Classroom language teachers have serious doubts concerning the pedagogical to CALL value of coal programs
- The available hardware's nowadays is probably going through lots of changes for the near future
- Some materials which are based on computer lack a clearly specific scope and sequence.
- Lack of guidance on how to work with such computer-based materials.
- Lack of fund, expertise and authoring programs.
- Having a gap between the programmers and the CALL material authors
- Lack of ways to monitor and correct students' responses · In the computer based multimedia area, existing too many CALL materials is the new pedagogical problem

Designing better call materials and optimal use

For having better results and avoiding the above mentioned problems and weaknesses, the following issues should be taken into account:

Students should have reflected upon their learning in the learning process for achieving a better result. They should determine what time know and they don't know and what they want to know ability of doing the working process and also having the right designed materials in the learning process.

Another important point is that, although using computer based materials can be really effective and helpful, software programs cannot be much effective in

language teaching without human intervention. Beatty (2010) indicated that for young learners who lack motivation, the computer based materials should have a degree of excitement and novelty.

A good way is to get some help from teachers in creating the new software in the learning process.

Conclusion

We cannot have just one particular product for all types of learners with different situations, purposes, and ages. For having better material developments, some key factors should be considered as:

- Learners goals, levels of proficiency, and their needs
- Teachers' and learners' levels
- Individual differences
- Facilities, ease of access of the material
- Rules of learners and teachers
- Setting instructions and rules for optimal learning