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**Learner-Centred Approach to Project-Based  
Computer-Assisted Language Learning by 1.Tam Shu Sim & 2.Taher Bahrani**

## **Learner-Centred Approach to Project-Based Computer-Assisted Language Learning**

**Tam, S. S**  
**tamss@um.edu.my**

**TaherBahrani**  
**taherbahrani@yahoo.com**

**Faculty of Languages and Linguistics, University of Malaya, Malaysia**

### **Abstract**

Today's workplaces and communities have tougher requirements than ever before. Information and communications technology (ICT) and language skills are workplace demands. So, a language teacher could serve her/his learners by incorporating computers into her/his language classes. There are many ways one can do this. The approach that one adopts will depend greatly on a few factors. Among the most fundamental is the teacher's underlying belief of how knowledge is acquired, how a language is learnt or how a computer skill is mastered. Then, the teacher needs to consider the learning goals and other practical factors which include the technology and support systems. The authors believe firmly in a learner-centred and holistic approach that would enhance engaged learning. As a result, in this paper, they will share these elements which they incorporated into a project-based CALL course that they taught at the university.

**Key words:** ICT, CALL, language skills, Holistic approach



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**Introduction**

To justify the design and implementation of a project-based CALL course, we can begin by looking at the context of the 21<sup>st</sup> Century. This is the age of information and communications technology (ICT) where computers have infiltrated all aspects of our lives. What are the concerns of the stakeholders involved in education? For most university students, the availability and security of work would rank high on their list of priorities. The students' hopes would, of course, be that the courses they enrol in would prepare them adequately for professions with good salaries.

What about the industries? For employers, in general, who have to run businesses and be accountable at the end of the year to shareholders, a graduate with competencies ready for the industry is a safer and cheaper option. This would mean that his/her contribution is immediate while a graduate armed with his/her academic qualification offers only a potential to contribute and therefore, most likely needs further training (Phang, 2002). As a result, employers would prefer graduates who are already trained by their respective universities.

What are our government's concerns? Most importantly would be to reduce the number of unemployed graduates as it had cost the government almost RM8000/- per graduate in the Graduate Training Scheme (GTS) in 2001 (Azizan, 2002). The GTS included computer literacy and language skills in its syllabus as these have become a necessity in the workplace.



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What then, can be recommended to ensure that universities play a significant role in such a diverse and changing scenario of the 21<sup>st</sup> century? Moreover, what can be recommended to address the concerns expressed by different quarters of society directly involved in education? According to the results of a survey quoted in UNESCO (1998), most employers expect the graduate profile to be as follows:

- Be flexible
- Be able and willing to contribute to innovation and be creative
- Be able to cope with uncertainties
- Be interested in and prepared for life-long learning
- Have acquired social sensitivity and communicative skills
- Be able to work in teams
- Be willing to take on responsibilities
- Become entrepreneurial
- Prepare themselves for the internationalization of the labour market through an understanding of various cultures
- Be versatile in generic skills which cut across different disciplines and be literate in areas of knowledge which form the basis for various professional skills for example in new technologies.

UNESCO, 1998, p.16

A language educator's concerns would be her/his learners. One way to address the concerns of learners, industries and the government would be to integrate computers into the second language learning process. The pedagogic rationale for this computer-enhanced language learning approach is that it can create a more powerful and authentic language learning environment (Warschauer, 2000). One can create an environment that helps to develop multi-literacies catering to a



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much bigger audience and going beyond reading the printed texts and writing through one medium.

Before deciding on the approach to adopt, it is important to clarify your underlying belief in how knowledge is acquired, how language is learnt and how computer skill is mastered. Recent views of learning emphasize its social and situated nature regarding the construction of knowledge both as an interpersonal and intrapersonal process. Vygotsky's social constructivism explains that knowledge is socially and cognitively constructed by the individual based on his/her experiences and interactions with his/her environment (Vygotsky, 1962). Therefore, social interactions and meaning construction are important. Once the issues about the nature of learning are ascertained, it is then important to establish a clear vision of learning goals and then decide on what questions and processes to focus. Next, important practical concerns of the computer lab facilities and technical know-how need to be determined.

#### **Selected review of CALL literature**

The development of computer-assisted language learning in ESL has grown worldwide. In the 1980s, the emphasis was on the development of basic drill and practice software (computer-assisted instruction). These software packages mainly concentrated on the learning of vocabulary items or discrete grammar points (Higgins, 1993). Then authoring programmes which allowed teachers and students greater flexibility in choosing materials to be used in the software came into the picture. The third significant advancement came about with the ability of computers to be linked together in networks i.e. local area networks (LAN). This situation enabled computers to be used in a similar situation as an audio lab with



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the teacher station operating remotely. With the expanding capabilities of the LAN which reaches long distance, computers were able to be linked worldwide. Consequently, linking ESL learners with native speakers and cross-cultural communication came into the picture of language education. The next significant innovation was compact disk technology with interactive capabilities which enabled large amounts of information to be stored in one disk and the ability to have quick access to information. The students could then interact with the software for personalized learning.

With the advancement of multimedia technology and the Internet, CALL now offers a more powerful and authentic learning environment since all the language skills (reading, writing, listening and speaking) can be integrated which is similar to any authentic communication in the real world (Warschauer, 2000). The students today use multimedia interactively and work on class projects. Thus, the development of CALL can be broadly categorized into three distinct phases: behaviouristic CALL, communicative CALL and integrative CALL (Warschauer, 1996). In other words, if one uses particular software for grammar or vocabulary building, the behaviouristic CALL is practised. If email or online chatting is the CALL element in the language course, then communicative CALL is being practised. On the other hand, if the computer, the Internet and other multimedia equipment are utilized in the course, then one practises integrative CALL.

After surveying the literature on second language learning, second language acquisition and learning theories, Egbert and Hanson-Smith(1999) identified eight conditions for a more optimal language learning environment. The conditions are listed in Table 1 below:



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Table 1: Conditions for Optimal Language Learning Environments

<ol style="list-style-type: none"> <li>1. Learners have opportunities to interact and negotiate meaning.</li> <li>2. Learners interact in the target language with an authentic audience.</li> <li>3. Learners are involved in authentic tasks.</li> <li>4. Learners are exposed to and encouraged to produce varied and creative language.</li> <li>5. Learners have enough time and feedback.</li> <li>6. Learners are guided to attend mindfully to the learning process.</li> <li>7. Learners work in an atmosphere with an ideal stress/anxiety level.</li> <li>8. Learner autonomy is supported.</li> </ol>
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Another very influential and informative source for some important indicators of engaged learning to be incorporated into the CALL course was from “Plugging In” (Jones et.al, 1995). The elements are listed in Table 2 below.

Table 2: Indicators of Engaged Learning

Variable	Indicator of Engaged Learning	Indicator Definition
Vision of Learning	Responsible for learning Strategic Energized by learning Collaborative	Learner involved in setting goals, choosing tasks; has big picture of learning and next steps in mind. Learner actively develops repertoire of thinking/learning strategies. Learner is not dependent on rewards from others; has a passion for learning. Learner develops new ideas and understanding in conversations and work with others.
Tasks	Authentic Challenging Multidisciplinary	Pertains to real world, may be addressed to personal interest. Difficult enough to be interesting but not totally frustrating, usually sustained. Involves integrating disciplines to solve problems and address issues
Assessment	Performance-based Generative Seamless and ongoing Equitable	Involving a performance or demonstration, usually for a real audience and useful purpose. Assessments having meaning for learner; maybe produce information, product or service. Assessment is part of instruction and vice versa; students learning during assessment. Assessment is culture fair.
Instructional Model	Interactive  Generative	Teacher or technology program responsive to student needs, requests (e.g. menu driven). Instruction oriented to constructing meaning; providing meaningful activities/experiences.
Learning Context	Collaborative	Instruction conceptualizes students as part of learning community;



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	Knowledge-building Empathetic	activities are collaborative. Learning experience set up to bring multiple perspectives to solve problems such that each perspective contributes to shared understanding for all; goes beyond brainstorming. Learning environment and experiences set up for valuing diversity, multiple perspectives, and strengths.
Grouping	Heterogeneous  Equitable  Flexible	Small groups with persons from different ability levels and backgrounds. Small groups organized so that over time all students have challenging learning tasks/experiences. Different groups organized for different instructional purposes so each person is a member of different groups; works with different people.
Teacher Roles	Facilitator  Guide  Co-learner/co-investigator	Engages in negotiation, stimulates and monitors discussion and project work but does not control. Helps students to construct their own meaning by modeling, mediating, explaining when needed, redirecting focus, providing options. Teacher considers self as learner; willing to take risks to explore areas outside his or her expertise; collaborates with other teachers and practicing professionals.
Student Roles	Explorer  Cognitive Apprentice Teacher Producer	Students have opportunities to explore new ideas/tools; push the development of ideas and research. Learning is situated in relationship with mentor who coaches students to develop ideas and skills that simulate the role of practicing professionals (i.e. engage in real research). Students encouraged to teach others in formal and informal contexts. Students develop products of real use to themselves and others.

**The project-based CALL course**

The above elements were incorporated into an elective course offered by the English Department of Faculty of Languages and Linguistics, University of Malaya. The course is entitled *Language and Computer Literacy*. This is a project-based CALL course where the approach is learner-centred and holistic.

Besides considering the eight conditions for optimal language learning environments mentioned in Table 1 and the Indicators of Engaged Learning found in Table 2, the cognitive, meta-cognitive, affective and social aspects that can facilitate a student's learning have been emphasized. From the information



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gathered from the review of literature and experience gained from the course, the following elements were been incorporated into the course. Very briefly the course objectives were to:

- help students develop their communicative skills in English
- enhance their ICT skills
- develop their interpersonal skills by having them work in groups
- develop autonomous learning in the context of project work

Therefore, the focus is on communicative competence not grammatical competence and on meaning rather than on form. Procedural knowledge is also emphasized besides declarative knowledge.

### *3.1 Respond to students' needs*

At the macro-level the teacher decided to focus on the following skills/type of tasks: presentation, group work, language and communication, ICT, and project work. At the micro level, the students decided on the content for their presentations (related to ICT), grouping, type of final project, and personal aspects to improve. The tool to enable the teacher to respond more efficiently to the learners needs was the weekly learning journals and mid-course evaluation.

### *3.2 Emphasis on process and product*

Process is as important as the product. This has been reflected in the course objectives, instructional design, learning context and assessment instruments.





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Hence, instead of expecting the students to deliver a presentation after a topic has been approved by the lecturer, the students were taken through the process of preparing for a presentation e.g. identifying suitable topics, sourcing and searching, summarizing information, being made aware of the important elements of an effective presentation and rehearsing. Similarly the production phases of the final project were closely facilitated. There were project meetings where each student was given an opportunity to chair the meeting and be the secretary and drafting schedules and timeline for the project. Focus on form was conducted during these tasks. They were also required to write official letters of permission to use equipment and invitation letters to lecturers to invite them to the launching of the project.

#### *3.3 Assessment concerns*

Next, an important matter to consider was the assessment for the course. Assessment drives learning but it has to be meaningful. The descriptors for a grade were given to enable the weak students to learn from their mistakes and the better students to know their strengths and enhance their potential. The students' thoughts on the assessment criteria were sought before finalizing the assessment instruments. The following was the course assessment:

- Group skills: participation and communication (20%)
- Presentation skills (20%)
- Project work: Focus on process at the individual level (15%), and focus on product at the group level (15%)
- Coursework: Test (10%), Assignments (20%)



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##### *3.4 Meaningful assignments and authentic tasks*

Meaningful assignments help to engage the learners in their learning. The assignments for the course included writing up the procedure for a specific, personally-selected ICT task (e.g. how to put music into your power-point presentation), review of websites (favourite and language learning websites), a proposal for a group project, a self-and-peer assessment report, and weekly learning journals.

As social constructivism believes in social interaction for gaining knowledge, individual as well as collaborative learning contexts were promoted. Individual tasks included website reviews and presentations of these websites; paired tasks included the procedure for an ICT task and demonstration of the procedure; and for group task, the final project was the challenge.

In the final project, in groups of 6 or 7, the students discussed, brainstormed, evaluated and finally selected a project for the course. An example of a project suggested and implemented by the students in the course was the development of a website for their English Language Club. In this project, the students were very involved in creating the website and the logo, writing movie/book reviews for a section of the website, describing some relevant links and finally adding all these to the website. Another group decided to produce a video clip which had tasks that included deciding on a relevant, interesting and feasible topic, script writing, storyboard writing, shooting, editing the video footage and enhancing it with music and text. The students were also given the option to showcase their projects to their department. They were also involved in organizing the showcase for the video and website presentations at the departmental level.



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### 3.5 *Meaningful feedback*

Feedback on the process was also considered to be important and continuous and regular feedback was given throughout the process. Close facilitation was also given during the production phases of the final project.

### **Concluding remarks**

The learners in the course had given very encouraging feedback. They felt that they had learnt a lot and the course was challenging and stimulating. They also thought that it was very different from a normal language class. However, the negative feedback was that there was a lot of work and subsequently, the number of assignments was reduced.

In conclusion, it is important to be reminded that chances for success in adopting a learner-centred and holistic approach are better when the classes are small i.e. a class size of not more than 12. It is also essential to upgrade the computer lab with some of the latest technology and availability of technical assistance is also a necessity for success.

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