

## DEFINING A CALL ACTIVITY

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**Abstract:** The objective of this paper is to explain CALL (Computer-Assisted Language Learning) through Activity Theory (AT). First, a summary of AT is presented, based on the ideas of Leontiev and Engström. It is shown how the subject appropriates the object through the mediation of a tool and the relationship with the other members of the community in which he or she is inserted. The basic principles which guide AT are also described, emphasizing its hierarchical levels. Secondly, an attempt is made to demonstrate how AT can be applied to a CALL activity. The conclusion is that AT, considering that it includes both synchronic and diachronic aspects of the problem under investigation, has the capability of integrating the different perspectives and explain many of the conflicts of an essentially interdisciplinary and theoretically fragmented area, as is the case of CALL.

**Keywords:** activity theory; learning; computer; CALL.

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### 1 INTRODUCTION

The main purpose of this paper is to define a CALL (Computer-Assisted Language Learning) activity as a minimal unit of investigation, describing the different components that make up its structure, the historical cultural principles on which the definition is based, and the developmental processes to which it is subjected, how they relate to each other and to the environment in which the activity is situated. The theoretical framework is adapted from the tenets of Activity Theory as proposed by Leontiev (1978) and Engeström (1999).

The justification for this effort is the need for a sound theory to inform CALL. What has been offered so far, according to many specialists in the area, is criticized for its many negative aspects, creating a digital divide in CALL, with more “have-nots” than “haves:”

- We don't have a “reliable conceptual framework” (LEVY, 1997, p. 3);
- We don't have recognition as an area of research (KEEGAN, 1990, p. 51);

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- We don't have a unifying theory (HOLMBERG, 1982; KELLY, 1990; SMITH, 1980)

What we do have is fragmented knowledge, each fragment concerned with a different aspect of CALL. I don't think this is bad per se, but it becomes problematic when offered as an explanation for the whole field. Even unifying attempts, such as Ahmed (1985), Farrington (1986), Higgins (1988), and, to a certain extent, Warschauer (1997), emphasize a dichotomical view of CALL: on one hand, the computer as tutor, somehow replacing the teacher and controlling the student; on the other hand, the computer as tool, allowing the student to control the machine.

I will try to demonstrate in my paper how AT can be used not only to bring a new perspective to CALL but also how it can be used to incorporate these opposing views as well, and all its fragments, into a unified and seamless theoretical framework.

## **2 EXPLAINING ACTIVITY THEORY**

According to Kuutti (1996), AT is a philosophical and cross-disciplinary framework for studying different forms of human practices as developmental processes. For my purpose here, I will explain AT as an attempt to analyze how people learn, considering the whole context involved in the process. I will focus on three aspects which are usually discussed when AT is considered: (1) structure, (2) basic principles and (3) hierarchical levels.

### **2.1 Structure**

Let's suppose, for explanatory purposes, that it is possible to break down an activity into its elements, a task which should be approached with caution, having in mind that an activity is the fundamental unit of analysis in AT and, as such, resistant to segmentation. I cannot explain AT, however, unless I do this segmentation, describe each component, and then proceed step by step into the whole structure. I feel it will look artificial and contrived in the beginning, but I hope it will become more realistic and truthful to the theory as we get to the end.

Let's begin with an important pair of elements in AT, putting them side by

side: the concepts of subject and object (Figure 1). On one hand, we have the student or the subject; on the other, the content or the object that motivates the student into action. The object, in terms of learning can be any content to be learned, from very specific to very general, in the cognitive, affective or psychomotor domain. Examples of objects may include: making sense of text written in the foreign language (cognitive domain); producing a sound that does not exist in the mother tongue (psychomotor domain); collecting poems from the Internet (affective domain).



**Figure 1 – The behavioristic relationship between subject and object.**

The object is something that is outside the subject and the important question here is how the subject appropriates the object; in other words, how the object is internalized. In the behavioristic paradigm, the appropriation occurred directly, as an unmediated response to a stimulus. The student was exposed to a model and encouraged to imitate this model. If the model was a sentence, for example, the student was asked to repeat the sentence, as soon and as often as possible and necessary, until a habit was formed.

In AT the relationship is not direct but mediated by a tool (Figure 2). The tool can be any social artifact – either physical (such as books, tape recorders, television, computers, etc.) or psychological (such as language, learning strategies, commitment, etc.).



**Figure 2 – The relationship between subject and object mediated by tools.**

Tools can empower the subject to internalize the object in a more efficient way, sometimes making it faster and easier, sometimes materializing an object that would be inaccessible, otherwise. Through virtualization, provided by both physical and psychological tools, objects that are distant, either in space or in time can be brought close to the subject. Through language, for example, which

is a psychological tool, we can have access to knowledge produced by a philosopher who lived many years ago in a distant country. Through a flight simulator, which is a physical tool, a student can acquire at least some of the basic skills necessary to pilot a plane.

Aspects of the cognitive domain that are important for learning, such as the faculty of memory, can also be assisted by tools. A pencil, for example, can amplify the subject's memory, allowing for more data to be kept and retrieved.

A tool also has its limitations. According to Kuutti (1996), it imposes a perspective on the object and may hide some of its features. It should be obvious that if we learn a living language only by reading printed material, we will certainly lose many of its phonological features, including pitch, stress, and mainly intonational patterns – no matter how complete the written description of the spoken language may be.

Obviously tools cannot be discarded, since there is no other way to have access to the object. Different learning styles may lead us to prefer some tools over the others, and sometimes we may be allowed to choose; but we are not allowed not to accept any tool.

As tools evolve, we are usually compelled to upgrade our tools if we want to “keep up with the competition”. We may prefer to use a typewriter to produce our texts, but it would probably be more cost-effective to use a computer, in spite of the time and effort necessary to become proficient in the use of the new instrument. A tool, in fact, may place a high demand on the subject for acquiring the necessary skills to use it. It takes years of schooling, for example, to become a competent reader.

Learning how to use a tool has a deep impact on the subject. We not only change the tools we use, but we are also changed by them. A person who learns to read becomes a different person. Learning to drive cars, to pilot planes or to use computers not only affects the way we behave but also the way we think. We evolve with the tools we use and create.

AT makes a distinction between the object and the outcome (Figure 3). While, in terms of learning, the object can be defined as the content to be appropriated, to be internalized by the student, the outcome is the final product as really attained by the student. Obviously something may go wrong in the

process of transforming an object into an outcome, due to an inadequacy in some of the components that make up the activity or some other problem that may have affected the interaction between the components: maybe the selected tool was not appropriate to the object; maybe the subject was unable to use the tool competently, and so on. We have then a contradiction between the object and the outcome. Engeström (1991) cites as an example of inadequacy of tools the use of textbooks to explain the phases of the moon, traditionally leading the student to construct a two-dimensional representation of the phenomenon.



**Figure 3 – The outcome as a result of the activity.**

Consequently there may be a contradiction between the desired outcome and the outcome actually obtained by the student. The teacher, for example, may assign the student a reading task for the purpose of enjoyment and the student may experience it as a chore. Sometimes the teacher may ask the student a listening comprehension question, expecting the student to listen carefully to a recording, but the question is so obvious that the student answers it immediately, ignoring the recording. Reasoning skills, where students are sometimes expected to process information in every detail, may be performed superficially, with no attention at all to the aspects that the teacher deemed important. The literature in the area is filled with examples in which teachers expect students to do something and they do something else. The teacher's dream of the snow ball effect, in which his initial action may produce a chain reaction with the students, leading them to act by themselves after the first push, is not usually fulfilled. AT, for its emphasis on the whole context, may be helpful in realizing it.

Subjects, tools and objects do not exist in emptiness, in a vacuum; they are situated in a context and have to be seen as such. This embedding in the surrounding environment is not protected by any shield, which makes us vulnerable to what happens around us, in a way that what is inside us reflects what is outside and vice-versa. Intelligence, cognition, and knowledge are not only individual attributes; they are distributed among the members of the community in which we

live. Consequently, we do not learn by ourselves alone: we learn in contact with other people, interacting with them; we learn in a community. Graphically we can represent this community as the basis of a pyramid. It is important to notice here that the subject is not suspended in space but supported by this foundation. Figure 4 shows how the pyramid is organized.

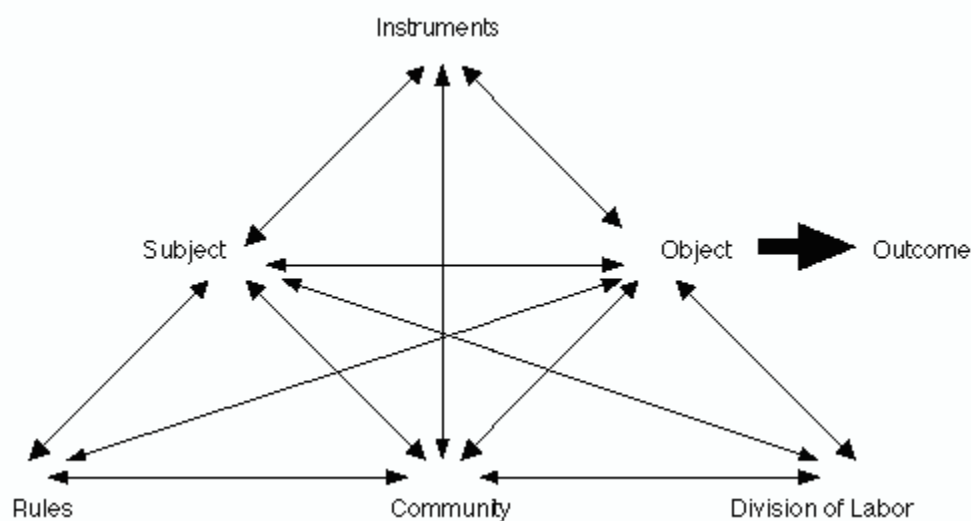


Figure 4 – Activity Theory in context.

The *community*, where the subject is inserted, is the immediate environment, including people and the social artifacts they use; it can be home, workplace, school, club or any discourse community. The community element sets the stage for the subjects to perform their actions. It emphasizes the collective aspect of AT, in which individual actions are seen as collective and social practices.

*Rules* can be defined as the norms which regulate the actions carried out by the subject. They are placed between the subject and the community and may be explicit such as printed laws, standards, policies, and statutes; or implicit such as cultural beliefs, values, power relations.

*Division of labor* is the component which allocates responsibility to the members of the community in relation to the object. In the discourse community of a school, it is responsible for defining the roles to be played by the people involved in the development of the activity, including students and teachers.

## 2.2 Basic principles

AT is not usually introduced as theory per se, but as a set of principles (KAPTELININ, 1996). The idea is to provide a conceptual background that can be used to formulate more specific theories and explain, from a social perspective, how people interact when they get together to arrive at a common goal. It is both a unifying approach, capable of offering conceptual integrity to fields that are undermined by theoretical fragmentation, as is the case of CALL, and capable of accounting for interdisciplinary areas of knowledge, as is also the case of CALL, a discipline bordering language, computer science, pedagogy, and others. A discussion of the principles should help clarify some of the components of the activity structure and reinforce the idea that an activity is not an isolated entity, but situated in a context. The principles discussed here include (1) *object-orientedness*, (2) *mediation*, (3) *development*, and (4) *internalization/externalization*. Other principles, included by some theorists, such as the (1) *unity of consciousness and activity* and the (2) *concept of context*, are skipped, not only for the sake of brevity but because they are diffuse in the other principles. *Hierarchical structure*, which some view as a principle, will be specifically discussed below as an essential feature of AT.

The principle of *object-orientedness* specifies that our actions are consciously directed towards an object with the purpose of transforming it into an outcome. The object, in accordance with the Marxist philosophy of historical materialism, is seen as part of an objective reality, independent of the properties of the object, which may be not only physical, chemical or biological, but also social or cultural. Any artifact is, therefore, an object, including ideas and feelings such as the notion of identity, colonialism or universal brotherhood. They are all treated as objective reality.

The principle of *mediation* specifies that interaction between subject and object is mediated by a tool. Tools, in AT, can be analyzed in both a synchronic and diachronic way. Synchronically, we are concerned with the relationship between subject and object. We can see that a tool not only makes interaction possible, but also enhances it; the more advanced the tool the better the interaction.

A tool may work in close association with some of our organs and may be seen as an extension of them such as wheels, which amplify the power of our legs, making us move faster, or that of eyeglasses, which improve our eyesight.

The association between our internal organs and the external tools are so close that there are no boundaries between them, but total integration, usually referred to as the “notion of functional organs.” Artifact, in the words of Engeström (1999, p. 29) should be seen “as integral and inseparable components of human functioning” (ENGESTRÖM, 1999, p. 29).

From a synchronic perspective, we can argue that tools are responsible for the transmission of social knowledge. From a diachronic perspective, tools account for the accumulation of knowledge. We learn with the tools we use and use this knowledge to produce new tools, which, in turn, lead to more knowledge, and so on. For better or worse, we are the product of the tools we have constructed.

The tools we use affect the way we learn and ultimately the way we think. As Bruner puts it, in his prologue to the English edition of Volume 1 of *The Collected Works of L. S. Vygotsky*: “Through using tools, man changes himself and his culture”. (BRUNNER, 1987, p. 9). Elaborating on an idea of Francis Bacon he adds that we need more than our hands and our mind to learn and change; we also need the tools we have created.

The principle of *development* emphasizes the dynamic nature of an activity, which is continuously developing and re-developing because of changes that occur in the social and historical context in which the activity is situated. Any component of the activity – subject, object, tool, rules, etc. – can be affected by these societal changes and, in turn, affect the whole activity.

This ability to respond to modifications in context has two implications for research in my view. First, it allows for constant and fast update in the methodology used. Secondly, it implies that the researcher should have a clear view of the historical development in his field. In AT the researcher is not allowed to reinvent the wheel; knowing what has already been done is an integral part of the methodology.

The principle of *internalization/externalization* specifies that there is no boundary between what happens inside our minds and what happens outside. When an activity is performed by an individual it is externalized on objects that exist in the environment; a poem can be stored on the pages of a notebook; a song can be recorded on a disk, a smile can be preserved on a photograph, and so on. Objects are not only used to store activities, but may be



an essential component for the execution of the activity itself. There would not be any piano sonatas if there were no pianos.

The internal/external principle can also account for situations in which an activity is performed in the absence of an object. This may happen, for example, when a proficient artist composes a sonata in his mind only, without using a piano. This is possible because the subject, using his internalized knowledge, can simulate the act of playing the piano. More recently, studies in what is referred to as the simulation hypothesis (HESSLOW, 2002) have confirmed that simulation produces the same phenomena in the mind as the real experience.

There are moments when internal activities become external and vice-versa. A propitious moment for internalization may occur, for example, when the activity coincides with the individual's Zone of Proximal Development (ZPD).<sup>1</sup>

### 2.3 Hierarchical levels

An activity can also be analyzed from a hierarchical perspective. At the top we have the activity itself, which consists of a chain of actions, located at mid level, each of which consists of a chain of operations, located at the bottom (Figure 5).

Level	Oriented towards	Carried out by
Activity	Object/Motive	Community
Action	Goal	Individual or Group
Operation	Conditions	Routinised Human or Machine

Figure 5 – The hierarchical levels of an activity (HARRIS, 2004).

<sup>1</sup> ZPD is the distance between the learner's actual developmental level and the potential level, which can be actualized in collaboration with more capable peers.

Activities are long-term formations, oriented to an object or motive. They consist of actions and are carried out by a community, situated in a given context. Actions are directed at specific conscious goals; they are subordinated to activities, consist of a chain of operations, and are carried out by an individual or a group. Operations are realized below the level of consciousness and determined by the existing conditions of the activity. They are carried out automatically by human routines or even by a machine.

The relationship between levels is extremely dynamic and subject to continuous changes. An action, for example, through constant practice and repetition, may lose its conscious property and move down to the level of an automatic operation. The most frequently quoted example in the literature is that of learning how to drive a car: what is conscious action in the beginning, like the action of shifting gears, becomes automatic with practice, and goes down to the level of operation.

### **3 A CALL ACTIVITY**

If AT did not exist we would have to invent it to explain CALL. Although it is a cross-disciplinary area of study, AT fits so smoothly with social practices in CALL that can be taken practically “as is.” This is what I intend to demonstrate briefly on this section, defining what could be described as a CALL activity, considering its components, underlying principles and hierarchical levels.

A CALL activity is then a basic unit of study. Structurally, it involves all the elements that make up an activity. Any variation in any of the components would determine the rise of a new activity. If the object is designing a web course, we have one activity; if it is answering a comprehension test, we have another, and so on. This would also be true of the subject, mediating tool, rules, community, etc. Consequently, when we describe a CALL activity we are dealing with just one possibility, from a set of hundreds, if not thousands, of other possibilities – which sometimes makes it difficult to draw a line between what belongs to CALL and what does not; as may be the case, for example, between CALL and distance learning. The acronym itself may be misleading, considering that the activity is not only “computer-assisted”, but also, and mainly, “computer-mediated”.

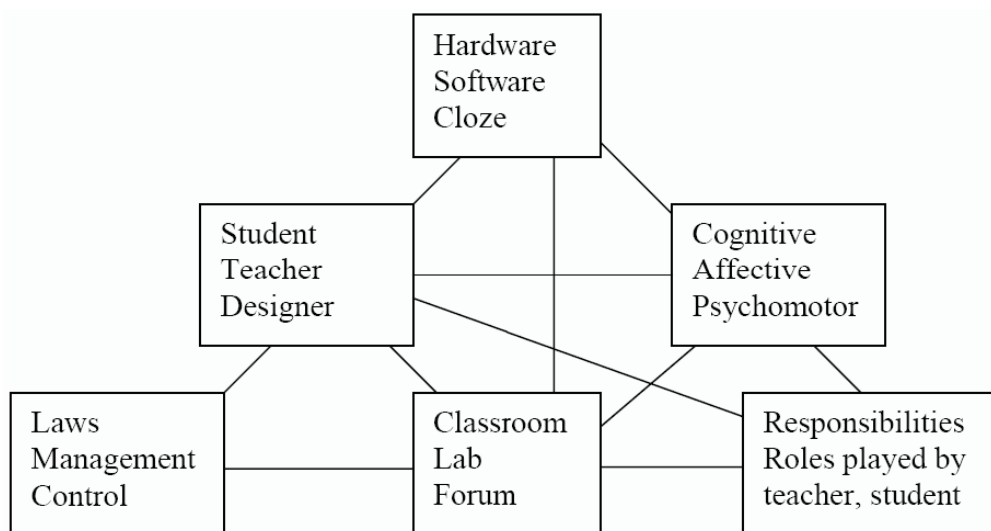


Figure 6 – The structure of a CALL activity.

Due to the dynamic nature of a CALL activity, many different configurations of the same components are also possible. What is an operation in one activity may move up to the level of an action in another, and vice-versa. Describing an activity should be seen as an attempt to freeze a moment in a sequence of continuous changes. What we see can be compared to contemplating a static frame on a celluloid film; we know that there are frames preceding the current frame and frames that follow it. When a student is answering a question on the computer, for example, this action has to be seen not only in relation to the other components of the activity, but also in relation to what has already happened. The components may determine if the student is on a chat, reading an e-mail, consulting a forum, doing a drill, etc. What has happened before may determine what expectation may be raised in terms of proficiency, chances of success or levels of assistance to be offered and so on.

The subject is usually a student, but, depending on the object of the activity, the subject can be a teacher, a designer or any other professional involved in any of the phases of the whole activity system. The subject must have a motive, or an object, to be driven into action; the object can be any relevant content, in any of the classical domains; including the cognitive domain (deduct meaning from context in a reading task on the screen, judge grammaticality in a true/false exercise, answer a comprehension question in a multiple-choice

test, describe a character in a story, summarize a passage, identify level of formality, etc.); affective domain (accept cultural differences in answering an e-mail, demonstrate interest on the subject discussed in a forum, write a literary appreciation of a novel in a blog, etc.); psychomotor domain (identify similar vowels in a minimal pair exercise by clicking on the appropriate square, produce phonemes that are easily confused to a level of proficiency that is accepted by a specific CALL program, coordinate eye and mouse movements in a game activity, read a text in the time limit required by a given exercise, etc.).

The instrument is another key element in a CALL activity and can be analyzed from different perspectives, including concept (e.g. what is a tool in CALL?), the relationship with traditional tools (e.g. what is the difference between a computer and a book?), the demands it makes on the user (e.g. what skills are needed to use a given program efficiently?). The concept of tool in CALL should not be limited to the computer itself, as if it were a standalone device. It is more productive to see the computer as an intersection point in a network of computers, extending beyond hardware, and incorporating all the different programs that may be used; mail, forum, chat, tutorial, etc., are all tools.

A tool in CALL cannot be confused with other tools. There are many differences between computer and paper, for example. Paper is bi-dimensional, in the sense of favoring the horizontal and the vertical axes; a map on paper, for example, may be as wide as the wall; a map on the computer can only be as wide as the computer screen, implying that we have to move the map around in the computer instead of moving our heads; or move to different layers in a hypertextual structure. What is static and bi-dimensional on a paper becomes moveable and tri-dimensional in a computer.

A tool in CALL may place different demands on its users, and should be seen from the perspective of these different users. It involves both the designer side, with an emphasis on usability, for example, and the student side, as the final user, who must acquire the necessary skills to use the tool adequately.

There seems to be a feeling in some areas that the tool, no matter how important it is, should be treated just as a tool, subordinated to the student, and not vice-versa. Some people might argue that the emphasis on the technological side should give way to an emphasis on the subject. In terms of AT, this argument is out of place. Subject, tool and object are equally important

and cannot be placed in any hierarchical order. If any of them is missing there is no activity; it is impossible for the subject to appropriate the object without the mediation of a tool.

An interesting question may rise if the computer is promoted from the status of a tool to the status of a tutor. Would the computer be still a tool, mediating the appropriation of the object by the subject or would the computer be a member of the community, playing the role of a teacher? It is difficult to answer because both teacher and computer may play the double role of both tool and tutor. When we say, for example, that a teacher mediates learning we assign him the role of a tool. On the other hand, the idea that cultural artifacts can produce learning by themselves, along with the concept of collective intelligence and distributed cognition, may also contribute to blur the difference between tool and tutor.

The community in a CALL activity may also have different formations. One activity may have more members than another, as is the case in a chat session when compared to a pair of students working in a cloze exercise. The rules that regulate interaction between members working in pairs in front of the screen are certainly different from those used in a discussion list; division of labor may assign different responsibilities to each member and so on.

The CALL activity is guided by some principles: it is oriented by an objective; it is mediated by a tool; it can be externalized and internalized; and it is essentially dynamic. As any other activity, it also has levels, which are hierarchically organized. Let's see these principles and levels in some detail:

A CALL activity is object-oriented. It should always be clear to the student for which purpose something is being done, a condition that is more difficult to be met when there is no explicit relationship between student's action and the object. There should be ways to guarantee that the relationship is shown to the student, if there is one, or that the activity is replaced, if no relationship is found. The necessary link between an individual action and the final collective objective of an activity is demonstrated by Leontiev in the hunting example:

When a member of a group performs his labor activity he also does it to satisfy one of his needs. A beater, for example, taking part in a primeval collective hunt,

was stimulated by a need for food or, perhaps, a need for clothing, which the skin of the dead animal would meet for him. At what, however, was his activity itself directly aimed? It may have been directed, for example, at frightening a herd of animals and sending them toward other hunters, hiding in ambush. That properly speaking, is what should be the result of the activity of this man. And the activity of this individual member of the hunt ends with that. The rest is completed by the other members. This result, i.e. the frightening of game, etc. understandably does not in itself, and may not, lead to satisfaction of the beater's need for food, or the skin of the animal. What the processes of his activity [[a.k.a. his actions]] were directed to did not, consequently, coincide with the motive of his activity; the two were divided from one another in this instance. Processes, the object and motive of which do not coincide with one another, we shall call '*actions*'. We can say, for example, that the beater's activity is the hunt, and the frightening of game his action. (LEONTYEV, 1981, p. 209-210)

A CALL activity is mediated by a tool. Although there is always a tool of one kind or another in any learning situation, the presence of a tool is more obvious in CALL, where it is even part of the acronym (computer-assisted). The words assisted and mediated can be associated respectively with the ideas of computer as tutor and computer as tool, which, as we have seen, is a long-standing issue in CALL. Promoting the computer from the role of a mediating tool to the role of a tutor would give it the status of a member of the community, which would generate a contradiction because computers are cultural artifacts and as such do not possess consciousness, as people do.

On the other hand, strictly human attributes such as intelligence and cognition are no longer seen as restricted to the individual but distributed in the community through cultural artifacts. Hubbard mentions that "any piece of courseware [...] carries with it a 'teacher in the machine', a projection of the personalities of the designers, programmers, materials developers" (1996, p. 21). In my own experience, I have already received many comments from my students telling me that when they received automatic feedback from the activities I had prepared they had the feeling they I was talking to them. It has also been found that people anthropomorphize computers, treating the machine as if it were a person (SCHAUMBURG, 2001; REEVES e NASS, 1996). Although these are interesting points for a research agenda in CALL, in my view, no matter how

much we may anthropomorphize computers, they are still mediating tools with a subject at the other end. We all know the feeling of sometimes reading a message from someone we know very well and have the impression that we hear his or her voice in the message; this should not turn the piece of paper into a person, however, but only emphasize its mediating power as a tool.

A CALL activity can be externalized and internalized. We externalize what is inside us through words and gestures. A resourceful machine such as a computer can store words, both written and spoken, and add images and animation to amplify our gestures. Externalization to an artifact is probably the easier part; the more complicated one occurs when the student has to internalize the content from the computer. Obviously there are conditions to be met, including a good command on the use of the instrument, level of development (ZPD), etc. The ability of the computer to analyze data and generate feedback should contribute to facilitate internalization by the student.

A CALL activity is dynamic. An activity saved in a computer changes continuously for two reasons. First, because computers change continuously, creating by this very change the requirement that the activities created for it have to be developed and re-developed. Secondly, development is not only required but also facilitated by the machine itself.

Finally, a CALL activity can also be described from a hierarchical perspective. At the operation level, below consciousness, we have, for example, the need for typing skills, eye-hand synchronization to move and click the mouse efficiently, and so on. In the middle, we have conscious action such as those performed by the students in answering a question, ordering segments in a paragraph, highlighting the main idea in a reading task, etc. At the highest level, we can include activities that are typical of the CALL tradition such as cloze, crossword puzzles, concentration games, etc.

Interaction and interchange between levels is common in a CALL activity. Acquiring a skill at the operation level, for example, is usually done consciously at the action level, involving an orientation period and practice, before it is automatized and moved down to the operation level.

#### 4 CONCLUSION

AT is a simple and visual way of explaining a complex learning experience as is the case with situated CALL. It offers both a synchronic and a diachronic perspective of the problem. Synchronically, we have not only a view of the components that make up the structure of the activity but also a demonstration of how these components relate and interact with one another. Diachronically, we can have an understanding of how the activity evolves, both collectively, from a philogenetical perspective, and individually, ontogenetically speaking.

We learn and change through the instruments we create. The computer in CALL is the tool of tools, a real tool box, carrying inside itself different instruments which allow us to do different things, including the adoption of a new identity, as is the case, for example, of the White Anglo-Saxon Protestant, assuming the identity of black lesbian in a chat session. This possibility and others should have an impact on language learning.

The association between AT and CALL could contribute not only to explain CALL but also create a new paradigm in language learning research, putting together the many loose ends of a fragmented area and offering a unifying theory.

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**Título:** Definindo uma atividade de CALL

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**Resumo:** O objetivo deste trabalho é explicar a aprendizagem de línguas mediada por computador através da Teoria da Atividade (TA). Faz-se inicialmente um resumo da TA, partindo das idéias de Leontiev e Engeström. Mostra-se como o sujeito se apropria do objeto pela mediação do instrumento e pelas relações que mantém com a comunidade na qual está inserido. Os princípios básicos que orientam a TA são também descritos, com destaque para a estrutura hierárquica dos níveis que compõem a atividade. Na segunda parte do texto, procura-se demonstrar como a TA pode ser aplicada a uma atividade mediada por computador. A conclusão é a de que a TA, na medida em que inclui aspectos sincrônicos e diacrônicos do problema pesquisado, é capaz de integrar as diferentes perspectivas e explicar os inúmeros conflitos de uma área essencialmente interdisciplinar e teoricamente fragmentada, como é o caso da aprendizagem de línguas mediada por computador.

**Palavras-chave:** teoria da atividade; aprendizagem; computador; CALL.

**Titre:** Définant une activité de CALL

**Auteur:** Vilson J. Leffa

**Résumé:** L'objectif de ce travail est celui d'expliquer l'apprentissage des langues moyenné par ordinateur à travers la Théorie de l'Activité (TA). Au départ, on fait un résumé de la TA, en partant des idées de Leontiev et d'Engeström. On montre comment le sujet s'empare de l'objet par la médiation de l'instrument et par les relations qu'il maintient avec la communauté dans laquelle il est inséré. Les principes de base qui orientent la TA sont aussi décrits, tout en détachant la structure hiérarchique des niveaux qui composent l'activité. Dans la deuxième partie du texte, on cherche à démontrer comment la TA peut être appliquée à une activité moyennée par l'ordinateur. La conclusion concerne le fait dont la TA, dans la mesure où elle inclut des aspects synchroniques et diachroniques du problème recherché, elle est capable d'intégrer les différentes perspectives et d'expliquer les innombrables conflits d'un domaine surtout interdisciplinaire et théoriquement fragmenté, comme c'est le cas de l'apprentissage des langues moyenné par l'ordinateur.

**Mots-clés:** théorie de l'activité; apprentissage; ordinateur; CALL.

**Título:** Definiendo una actividad de Call

**Autor:** Vilson J. Leffa

**Resumen:** El objetivo de este trabajo es explicar el aprendizaje de lenguas mediado por ordenador según la Teoría de la Actividad (TA). Primeramente se hace un resumen de la TA, partiendo de las ideas de Leontiev y Engeström. Se enseña cómo el sujeto se apropia del objeto por la mediación del instrumento y por las relaciones que mantiene con la comunidad en la que se encuentra inserto. Se describen aun los principios básicos que orientan la TA, enfatizando la estructura jerárquica de los niveles que componen la actividad. En la segunda parte del texto, se intenta demostrar cómo se puede aplicar la TA a una actividad mediada por ordenador. La conclusión es que la TA mientras incluye aspectos sincrónicos y diacrónicos del problema investigado, es capaz de integrar las distintas perspectivas y explicar los innumerables conflictos de una área esencialmente interdisciplinaria e teóricamente fragmentada, como es el caso del aprendizaje de lenguas mediada por ordenador.

**Palabras-clave:** teoría de la actividad; aprendizaje; ordenador; CALL.