TASK BASED LEARNING: A COMPLEX PERSPECTIVE

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Abstract: This article aims to examine the design and theory behind task based learning (TBL) more specifically the task phase from the perspective of the complexity theory. By establishing points of contact between TBL and complexity theory, this article also aims to debate, from a theoretical point of view, whether or not the task phase can be characterized as a complex system using the ten characteristics proposed by Larsen-Freeman (1997). Such systems should be dynamic, complex, nonlinear, sensitive to initial conditions, unpredictable, chaotic, sensitive to feedback, open, adaptive and self-organizing.

Key words: Complexity theory; Complex systems; Task-based learning.

Resumo: Este artigo tem por objetivo analisar o projeto e teoria por trás da aprendizagem baseada em tarefas, mais especificamente, a fase de tarefa a partir da perspectiva da teoria da complexidade. Ao estabelecer pontos de contato entre a aprendizagem baseada em tarefas e a teoria da complexidade, este artigo também pretende debater, a partir de um ponto de vista teórico, se a fase de tarefa pode ou não ser caracterizada como um sistema complexo utilizando as dez características propostas por Larsen –Freeman (1997). Tais sistemas devem ser dinâmicos, complexos, não lineares, sensíveis às condições iniciai, imprevisíveis, caóticos, sensíveis ao *feedback*, abertos, adaptáveis e auto-organizativos.

Palavras-chave: teoria da complexidade ; sistemas complexos; a aprendizagem baseada em tarefa.

Introduction

Communicative language learning makes broad use of tasks in the classroom. Differently from more traditional activities such as drills, gap filling etc, tasks are neither linear nor predictable. These features by themselves lead us to believe that tasks can be analysed using the same theory used for other nonlinear systems such as the weather. This article will examine the design and theory supporting Task-Based Learning (TBL), more specifically the task phase, under the perspective of the complexity theory. By using the ten characteristics of a complex system proposed by Larsen-Freeman (1997), this article aims to debate, from a theoretical point of view, whether or not the task phase can be characterized as

one. It also aims to point to future research, as TBL and complexity theory seem to have many points in common making it a new area of investigation.

A new perspective

In 1997, Diane Larsen-Freeman published an intriguing article called "Chaos/Complexity Science and Second Language Acquisition" (LARSEN-FREEMAN, 1997). In this article, the author argues there are many similarities between chaos/complexity theory and second language acquisition. Based on such reflection, this article aims to analyse the structure and theory on which Task Based Learning (TBL) is based under the perspective of the Complexity Theory. TBL is a communicative approach to learning English as a second language and, according to Willis, J. (1996), this approach is made up of five steps: pre-task, task, planning, report and language focus. In such a broad research universe, this article establishes the relationship between the Complexity Theory and the task phase introduced by Willis, J (1996).

This article aims to discuss whether or not the task phase can be characterized as a complex adaptive system by satisfying the characteristics of these systems as they are dynamics, chaotic, complex, nonlinear, unpredictable, sensitive to initial conditions, open, self organizing, sensitive to feedback and adaptive.

The need for a theory

In the beginning of the 1990s, a new communicative approach for teaching English as a second language came into the market. This new approach to teaching, called Task-Based Learning, was based on three conditions for learning a language:

a) exposure to the language;

b) opportunities to use the language;

c) motivation.

Besides these three conditions, there was a fourth one named "focus on form". This approach to teaching postulated nonlinearity to language, arguing that during its main stage – the task - any language aspect could emerge. This approach was also grounded on a lexical approach based on the 2500 most common words of the English language according to the Centre of Corpus Research from the Birmingham University-England. Such approach, in its most purist manner, did not find its space in the market, being criticized by various researchers and teachers due to its implementation problems (ELLIS 2009), and including those who were enthusiasts with the idea at the time, were forced to adapt the approach to their needs and teaching realities (LOPES 2004).

After the effervescence of the proposal – and its partial rejection – it is possible today to assess, as one of the problems with this approach, the fact that at the time there was no, or at least it was not available to teachers, more suitable second language acquisition theory on which TBL could be based on. In other words, there was not a theory which postulated that language learning is unpredictable and dynamic and as a result teachers should be prepared to deal with these facts. This view is the starting point for what is presented in this article. One could come up with the best and most innovative approach to learning a second language. However, if this approach is not followed by a well-grounded theory for second language acquisition, this miraculous approach would have difficulties not only to sustain itself but also to have the recognition of its results in the academic world. Theoretical endorsement guarantees academic truth, that is, changes the everyday empiricism into linguistic science.

Which comes first, theory or practice?

According to Rajagopalan (2006), "it is past time that it was believed in a large scale that a theory is a precondition for any kind of practice. Quite the contrary, there is an emerging consensus that theoretical reflections which do no prove their applicability are worthless". In the end of the 1980s, an innovative series of books to teach English as a second language came to the market in which the authors – Jane and Dave Willis- brought TBL to the classrooms, which had already been proposed by Prabhu (1987). This series of books did not

see learning a second language as a linear system as the books used a nonlinear approach regarding teaching language items. As the books did not satisfy the linearity and predictability expected by most teachers, the series was not very successful and a few years later it was phased out from the market. However, the failure of this series was not due to lack of advertisement and promotion, as the authors travelled the world not only promoting the series and training teachers to use this new approach, but also launched books explaining TBL (WILLIS, 1996). In addition, there were other publications of books and articles in which more experienced teachers with TBL were trying to help newcomers into the approach to overcome its hurdles. (LOPES, 2004). It is possible today to look back and offer a likely reason for distrust: the lack of a second language acquisition theory which dealt with nonlinear and unpredictable systems. There were other attempts to resume the proposal via other series of books which incorporated tasks, such as Cutting Edge (CUNNINGHAM & MOOR, 1999) and Inside Out (KAY & JONES, 2001); However, linearity in the teaching of grammar items may be identified in both series. Yet, it was possible to perceive that these books were the answer from the publishing houses to the market: a mix of two approaches in order to satisfy those teachers who were not ready for an approach which did not take linearity to teaching grammar items into account but were somehow interested in using tasks in their classrooms as they seemed to be a new trend in teaching English as a second language.

The reflection made by Rajagopalan, and mentioned in the beginning of this section, makes us aware of the fact that theories which do not contemplate their applicability to practice are worthless; it can also be said that practices without theoretical basis may generate suspicion regarding its applicability. That is, theory and practice should walk hand in hand towards a collaborative development of new and more effective approaches to teaching. In Larsen-Freeman's seminal article (1997), the author sheds a theoretical light on the applicability of nonlinear and unpredictable tasks in the classroom. Although TBL may be considered innovative or even a threat (ELLIS, 2003), giving this approach a different theoretical support using the Complexity Theory will raise awareness of its practicality and

effectiveness in language teaching (WILLIAM, N.K. 2010). The challenge is now to relate the Complexity Theory and the Theory of Complex Adaptive Systems with TBL launched almost 10 years before.

Complexity Theory

The complexity theory is the theoretical basis for this article as there are many similarities between this theoretical approach and second language acquisition. According to Larsen-Freeman (1997) these similarities are:

a) complexity scientists study complex nonlinear systems;

b) they are interested in how disorder leads to order;

c) how complexity arises in nature;

d) for some scientists, the Complexity Theory is a science process rather than a state, of becoming rather than being (GLEICK, 1987 *apud* LARSEN-FREEMAN1997).

It may be said that the study of nonlinear, complex and dynamic systems is relevant to the area of second language acquisition.

In the book entitled "Complex Systems and Applied Linguistics", Larsen-Freeman & Cameron (2008) aim to present the Complexity Theory as a metaphorical bridge to readers and to contribute to the development of a complexity theoretical framework for Applied Linguistics. (LARSEN-FREEMAN & CAMERON, 2008). Some other authors, such as Kevin R. Gregg, in his review article entitled "Shallow draughts: Larsen-Freeman and Cameron on Complexity" (2010), criticized this metaphorical approach by saying that there is no point in carrying out a discussion at a metaphorical level. Metaphors are not the sort of thing one argues over. Assumptions and postulates do not follow from metaphors; nothing does. (GREGG, 2010). However, one may not forget Bowers' statement which postulates "you don't see something until you have the right metaphor to let you perceive it" (1990, p. 132).

The choice for the Complexity Theory as a theoretical reference for this article is due to the fact that, unlike other classroom activities, tasks are nonlinear and unpredictable. These characteristics of tasks may be analysed through the same theory which is used for other nonlinear and dynamic systems, such as weather forecast and economy.

Task-Based Learning

According to Ellis (2003, p. 16) "a task is intended to result in language use that bears a resemblance, direct or indirect, to the way language is used in the real world." One important characteristic of TBL is the fact that students are free to choose the language to use in order to convey the meaning they want to and, in this way, achieve the aims of the proposed task. This demonstrates, at a first analysis, the nonlinearity and unpredictability of the system.

Most researchers in the area of second language acquisition agree that at least three conditions should be met in order to learn a second language. According to Willis (1996), these conditions are:

1) exposure to the target language;

2) opportunities to use the language to do things;

3) motivation to use the language.

Besides these three conditions, there is a fourth one which is desirable: instruction in the language with chances to focus on form. TBL provides students with opportunities to use the target language in a free and meaningful way and therefore fulfils the conditions for the learning mentioned earlier.

Task Based Learning is made up of three phases:

1) Pre-Task;

2) Task cycle (task/planning/report);

3) Language Focus (analysis and practice).

During the pre-task stage, the students are presented with the topic which will be discussed on the task. In this stage, the role of the teacher is to introduce the topic and give the students clear instructions on what is expected from them during the task cycle. The teacher may help students remember some linguistic items which may be useful for the task. The pre-task stage may also include a recording where students would listen to people carrying out the same task. This activity would provide students with a clear model of what is expected from them. Students may take notes and spend some time preparing for the following stage: the task cycle.

After being exposed to the language and to the proposed task, students move on to the next phase of the approach: the task cycle. This phase is made up of three stages: task, planning and report. During the first stage, students carry out the task in pairs or small groups using their own linguistic resources while the teacher monitors and offers motivation. In this phase, the teacher does not make any corrections. The aim of this phase is fluency not accuracy.

Following the task, students move on to the next stage: planning. During this stage, students prepare a short oral or written report, telling the class what was discussed during the task. Students then practice what they will say to the big group. While students plan the report, the teacher is available to clarify any language doubts they might have. Unlike the task phase, the planning phase aims at accuracy and due to this reason the role of the teacher is to provide help to students.

After the planning stage, students start the last phase of the task cycle: the report. During this stage, students report to the rest of the class their findings during the task. This report is preferably oral but it may also be written. The teacher chooses the order in which the students will present their reports and may give them feedback about the content of their reports. In this stage, the teacher may also play a recording of other people doing the same task so students can compare their performance with others or even with native speakers.

Finally, there is the language focus stage. In this phase, the teacher selects the items to practice based on the needs from the students and on what emerged during the task cycle (task/planning/report). Students carry out activities directed to increasing their self-esteem and make notes regarding relevant language.

This approach to teaching presents some relevant characteristics:

a) Students are free from language control. In all three stages, students are free to use any language resources they have instead of practicing a pre-selected item;

b) a natural context for using the language is created from the students' own experience with the language which is personalized and relevant to them;

c) by using this approach, students are exposed to a much more varied target language. They are exposed to a large variety of lexical items, idiomatic expressions as well as new language forms;

d) the language which is explored emerges from the students' needs. This need dictates what is taught during the class instead of leaving this decision to the teacher or to a book;

e) it is a strong communicative approach where the learners spend more time doing what the main objective of the language is: to communicate. It is an approach which is students-centred differently from other approaches which are teacher-centred.(ELLIS, 2003).

This approach offers the alternative to those students who leave the classroom unable to communicate in the second language which they are learning. Research about second language acquisition shows that people do not learn grammar one step at a time (WILLIS, 1996). Grammar is too complex and extensive to explain and practice each piece of it. Learners frequently avoid speaking, as they are worried about making grammar mistakes. Tasks provide students the chance to focus on the use of the language to create their own meanings, using words and expressions they remember and then refine and build their interlanguage as the task cycle progresses. At the moment students realize they can reach the objectives of the task, even with their limited knowledge of the target language, they gain

confidence, feel free, motivation increases and they learn more and become better communicators.

TBL provides students with natural exposure to the target language (input), opportunities to use the language (fearless of making mistakes), express what they really want to (output), focusing on the development of their own interlanguage as they go through the task cycle, analyse and practice language forms.

According to Willis (1996), other approaches such as Presentation/Practice/Production (PPP), offer a very simplified approach to the acquisition of a second language. This approach is based on the idea that language may be presented in blocks, adding each block one class after another. However, research in the area of second language acquisition shows that the language students will learn cannot be predicted and ultimately a broad exposure to the target language is the best option to ensure that students learn the language effectively (KRASHEN, 1982). Restricting students to isolated pieces of the target language is not natural.

Tasks in language teaching

According to Ellis (2003, p.27), researchers, teachers and material writers have been quick to recognize the value of tasks. However, they have differed considerably in their use. Some researches have simply incorporated tasks into traditional approaches to teaching. Others have treated tasks as a teaching unit on their own and have designed entire courses around them. Theses two ways of using tasks can be classified respectively as task supported language teaching and task-based language teaching. In both cases, tasks are employed to make language teaching more communicative. Thus, tasks are an important feature of communicative language learning.

Language teaching based on tasks is considered a strong version of communicative language teaching as it provides the basis for an entire language curriculum. (ELLIS, 2003, p.30). Moreover, according to Ellis (2003, p.30), a strong version of communicative language teaching can be realized in a variety of ways, not only by tasks. However, tasks can work as a

useful device for planning a communicative curriculum, particularly in contexts where there are few opportunities for more authentic communicative experiences such as in many foreign language classrooms. Ellis (2003, p.30) argues that one of the positive points of an approach based on tasks is that it appears to bring down barriers between the syllabus, i.e. what is to be taught, and methodology, i.e. a statement on how to teach. A curriculum based on tasks encompasses "an integrated set of processes including, among other things, the specification of both what and how to teach" (NUNAN, 1989 *apud* ELLIS 2003, p.31). In fact, it could be argued that 'a methodology becomes the central tenet of task-based pedagogy' (KUMARAVADIVELU, 1993 *apud* ELLIS, 2003, p.31), as there is no attempt to specify what the learners will learn, only how they will learn.

The task phase under the perspective of the Complex Adaptive Systems.

This section is about the task phase, which is the focus of this paper. The objective is to describe in details the task as a complex adaptive system and describe the role of the teacher in this phase.

Based on the theoretical approach mentioned earlier in this article, two groups of students with the same age range – between 20 e 25 years old – were observed while they carried out the proposed tasks in a classroom where English was taught as a foreign language. These students were divided into two groups: group 1 and group 2. Group 1 was made up of four and group 2 of ten students. However, the students who were of group 1 were also part of group 2.

It was decided to analyse one group of four and one group of ten students in order to verify the existence of the characteristics of a complex adaptive system not only in a small group but also in a larger one and to establish if these characteristics are more frequent in one group than in the other.

As this is an ethnographic study, the teacher was part of the research and played his role during the task. Based on a qualitative research method, the data were collected by filming the classes during the task phase and were then analysed. Therefore, the aim was to verify the presence of the ten characteristics of a complex adaptive system which are dynamic, chaotic, complex, nonlinear, unpredictable, sensitive to the initial conditions, open, self organizing, sensitive to feedback and

adaptive while the students carried out the task as shown in table 1. Having done that, the tasks presenting a higher level of complexity may be identified when they are carried out by each different group and the differences in the way members of each group learn. One advantage of this method is the personalization of the teaching approach, that is, the recognition of the complexity which is present in the classroom, the different learning styles and the exploration of the students' knowledge.

Table 1: Data collection Instrument

	Group 1 - task phase	Group 2 - task phase
✓ dynamic		
✓ chaotic		
✓ complex		
✓ nonlinear		
✓ unpredictable		
✓ sensitive to the initial conditions		
✓ open		
✓ self organizing		
✓ sensitive to feedback		
✓ adaptive		

Source: Author.

The task phase contemplates one of the novelties observed by Larsen-Freeman about complexity theory and language development. The linguist argues that, by recognizing complex systems, one avoids reductionist solutions. This theory considers that the complex behaviour emerges from the interaction of many components. It is a bottom-up process, based on the contribution of every and each agent in the system, which are subjected to changes

along its existence. (LARSEN-FREEMAN, 2011, p.52). Moreover, according to Larsen-Freeman (2011), the complexity theory aims to explain systems which are nonlinear, complex, dynamic, open, adaptive and self-organized. It focuses, on one hand, on the intimate relationship between the emergence of structures but, on the other hand, on the process or changes.

Such characteristics may be identified during the task phase. When learners carry out the task in the privacy of their pairs, any language item may emerge and therefore it can avoid the reduction of language to the single structure the teacher meant to be practiced. This fact demonstrates, at a first glance, the nonlinearity and unpredictability of the task as a complex system. During the task phase, learners coadapt their subsystems, searching for an objective in common, which is the task completion. Learners are not engaged in learning phrases but in learning to adapt their behaviour to an environment much more complex (LARSEN-FREEMAN 2011, p.65). According to Larsen-Freeman (2011, p.54), while learners interact with one another, their language resources are dynamically altered as each one of them adapts to the other. This shows another characteristic of a complex system found during the task phase: the task is dynamic due to its coadaptations among the agents in the system.

Thelen e Smith (1994 *apud* LARSEN-FREEMAN, 2011, p.54) came up with the expression *soft-assembly,* which refers to the process involving the articulation of multiple components of the system, where each action is the response to the characteristic of a particular task. This means that the construction is flexible, as not only the elements under construction, but also the ways they are constructed may change at any moment during the task or from one task to the other. This is another characteristic of a complex system, which can be found during the task phase: the task is in a flexible construction state. For scientists in the complexity area, the process is more important than the result. This is the reason why the complexity theory can be used to analyse the learner's language development.

According to Willis (1996), the role of the teacher during this phase is of a monitor. Perhaps one of the most difficult activities for a teacher who is not used to TBL is not to teach

during the task phase. The teacher should relax and only monitor the development of the task from a distance. According to Willis (1996), the teacher should have self-control and courage to step away and let the learners carry out the task. At this point, another characteristic of a complex system can be identified: the system, at this moment, is sensitive to the initial conditions. If the teacher gives clear instructions to the learners and makes them understand what is expected from them, the system will take the course of stability with the task completion. If students are not able to understand the proposal, the system will take another course towards chaos. Chaos in an adaptive complex system is not necessarily something negative, quite the contrary; it is the emptiness from where language will emerge. It can be considered that students may learn different things during chaos, which they would not learn if the system were stable from the very beginning. Therefore, the system is considered sensitive to initial conditions and chaotic. Under this perspective, the teacher can be seen as disturbing the system (VETROMILLE-CASTRO, 2007, p.210). According to Vetromille-Castro (2007), the role as a disturber in this perspective encompasses the actions aiming at removing learners from a passive and stationary state leading them towards other elements of the system. (VETROMILLE-CASTRO, 2007, p.210-211). At the moment the teacher proposes the task, he or she disturbs the learner's system by provoking the interaction during the task once it is developed in pairs.

The task helps learners to develop fluency and communicative strategies. In order to achieve the objectives of the task, the main aim is to communicate rather than focus on accurate language forms. According to Willis (1996), the task phase is not sufficient to develop language as some problems may come up, such as:

> a) some learners use the mother tongue when things get difficult or when a group becomes impatient, showing that the system is unpredictable;
> b) some learners develop effective communicative strategies such as miming and gestures or only use isolated words, allowing the colleagues to provide more elaborate language, showing that the system is adaptive as it adapts to the conditions..

In accordance with Willis (1996), by using tasks, learners can become better communicators and learn new words and phrases with each other. However, the author questions how far the task influences the learner's language development and helps to internalize grammar and yet, in psycholinguistic terms, to what extend the output helps intake. According to Willis (1996), to avoid the risk of reaching fluency at the expenses of accuracy and to stimulate language development, another stage is necessary after the task. This risk is dealt with in the report phase in which learners try to bring together the fluency from the task with the accuracy from planning. For Larsen-Freeman (2011, p.56), the main idea behind the complex system theory is that, for changes to occur, stable patterns should become instable so that the learner's system self-organizes itself in a new way. The aim of the task phase is to make the learner's system instable so it can search for stability in the following phase of the task cycle.

Table 2 summarizes the characteristics of a complex adaptive system found during the task phase in both classes.

Table 2: Data collection Instrument

	Group 1 - task phase	Group 2 - task phase
✓ dynamic	X	X
✓ chaotic	X	X
✓ complex		
✓ nonlinear	X	X
✓ unpredictable	X	X
✓ sensitive to the initial conditions	X	X
✓ open		

✓ self organizing		
✓ sensitive to feedback		
✓ adaptive	X	X

Source: Author.

Conclusions and Future Research

This paper aimed to debate whether or not the task phase, an important phase in Task Based Learning (a communicative approach to teaching English as a second language), can be classified as a complex system. In order to establish the task phase as a complex system, the ten characteristics of these systems proposed by Larsen-Freeman (1997) were used. The following characteristics were identified along this paper: the task phase can be nonlinear, unpredictable, chaotic, adaptive, complex and sensitive to initial conditions. Although six characteristics of complex systems were found, the other four were not identified. This fact points to future research where not only the task phase should be considered but also the whole task cycle (task-planning-report). Future research will determine whether the task cycle can also be characterized as a complex system or not.

References

BOWERS, R. **Mountains are not cones: what can we learn from chaos?** In: Linguistics, Language Teaching and Language Acquisition: The Interdependence of Theory, Practice and Research. Washington, D.C.: Georgetown University Press, 1990.

CUNNINGHAM, S.; MOOR, P. **Cutting Edge Intermediate Student's book.** Harlow: Longman, 1998.

ELLIS, R. **Task-based language learning and teaching**. Oxford: Oxford University Press 2003.
_____. Task-based language teaching: sorting out misunderstandings. **International Journal of Applied Linguistics,** v. 19, n.3, p.221-246, 2009

GREGG, K.R. Review article: Shallow draughts: Larsen-Freeman and Cameron on Complexity. **Second Language Research** 26(4), p. 549-560. 2010.

KAY, S.; JONES, V. **Inside Out Intermediate Student's book.** London: Macmillan Education, 2001.

KRASHEN, S.D. **Principles and Practice in Second Language Acquisition.** Oxford: Pergamon, 1982.

LARSEN-FREEMAN, D. Chaos/complexity science and second language acquisition. **Annual Review of Applied Linguistics**, n.15, p.141-165, June 1997.

LARSEN-FREEMAN, D. A. Complexity Theory Approach to Second Language Development/Acquisition. In: ATKINSON, D. (org.) *Alternative Approaches to Second Language Acquisition*. New York: Routledge, 2011
_____.; CAMERON,L. **Complex systems and applied linguistics.** Oxford: Oxford University Press, 2008.
.
LOPES. J. (2004). Introducing TBI for teaching English in Brazil: Learning how to leap the hurdles. In B. L. Leaver, & J. R. Willis (Eds.), **Task-based instructions in foreign language education:** Practice and programmes (p. 83-96). Washington, D.C.: Georgetown University Press.
PRABHU, N.S. **Second Language Pedagogy.** Oxford: University Press, 1987.

RAJAGOPALAN, K. Repensar o papel da lingüística aplicada. In: L.P. da Moita Lopes (org.) **Por uma lingüística aplicada indisciplinar**. São Paulo, Parábola, 2006, p.149-168. 2006.

VETROMILLE-CASTRO, R. A interação social e o benefício recíproco como elementos constituintes de um sistema complexo em ambientes virtuais de aprendizagem para professores de línguas. Tese de Doutorado em Informática na Educação – Universidade Federal do Rio Grande do Sul, UFRGS, Porto Alegre, 2007.

WILLIAM, N. K. Task-based language teaching and complexity theory. Nanzan Junior CollegeJournal v.12 n.37, p. 85-105, 2009.

WILLIS, J. **A Framework for task-based learning.** Harlow: Longman. 1996.