ICT and new methodologies in language learning

Giuliana Dettori a, *, Valentina Lupi b

a Institute for Educational Technology - CNR, Via de marini 6 16149 Genoa – Italy
b Junior High School “Don Milani-Colombo, Salita Carbonara 51, 16125 Genoa – Italy

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Abstract

Focusing on the case of French, this paper analyses the situation of language learning software currently available. Despite the technological development, ICT resources do not contribute enough to implement effective language learning methodologies. Drill-and-practice exercises favouring the acquisition of grammatical and lexical structures are still very diffused, even though their impact on learning is limited. The analysis however shows that some more stimulating activities start being proposed, which suggests a positive evolution of the field in the near future.

Keywords: language learning; ICT; multimedia; Internet.

1. Introduction

ICT tools have been involved in the teaching and learning of foreign languages (L2) from the beginning of their use in education in the 70s. The behaviourist learning approach widely adopted in language leaning in those years appeared very much in agreement with the kind of software tools afforded by the technology of the time. This gave rise to the development of simple applications for individual use, that were expected to help the learner acquire a language by repeatedly solving grammatical and lexical exercises whose correct answer was given as feedback by the program.

Over the years, the research in language learning has repeatedly worked out more effective pedagogical approaches. The focus has shifted from the acquisition of grammatical and lexical structures to the use of language to communicate. Communication, in turn, has changed from being an aim in itself to be seen as a tool to develop socially meaningful activities. The current orientations widely rely on cognitivism (Chapelle, 2001) and on socio-cultural theory (Block, 2003) which is influenced by Vygotsky’s (1978) socio-constructivism. These are the roots of the (currently most favoured) co-actional (Puren, 2002) and task-based approaches (Ellis, 2003) which see working with other learners on meaningful tasks as the most effective way to learn a language.

This theoretical evolution has changed the way to view the support that technology can grant to the learning process. In this respect, Warschauer (1996), identifies 3 different periods in the so called “Computer Assisted
Language Learning” (CALL): behaviouristic CALL, where the computer is used as tool to carry out drill-and-practice exercises; communicative CALL, in which the computer is viewed as stimulus and as tutor that can help develop communication skills; integrative CALL, which makes use of multimedia to propose learning environments close to real, where different language-related competences (reading, writing, listening) can be integrated; in this context, learners interact with each other with the mediation of technological tools, rather than with the computer, working individually.

This conceptual evolution, however, does not appear to have been fully implemented in the school context. It is then natural to wonder if the development of ICT tools used to support language learning in school has actually followed the theoretical and methodological evolution of the field, since the kind of available software obviously contributes to shape the way ICT is used in school. This paper aims to help answer this question, by investigating the current situation of ICT materials for language learning, be they distributed on disc or on the Internet.

In order to circumscribe the investigation field and reason on concrete ground, we focus in particular on French learning. This represents a very good example on which to analyse the considered issue, for several reasons. Being its study less diffused than that of English, the offer of ICT-mediated educational material is not so wide not be possibly analysed in detail. The French speaking countries, moreover, have a long tradition of caring for their language and supporting its teaching and learning; this means that, despite the limited amount of prospective users, a wide variety of educational materials have been developed, covering a full range of possible activities. Finally, many materials are offered for free on the web, in order to incentive the study of this language; this facilitates their retrieval, access and analysis. This example, therefore, appears very paradigmatic, and can offer useful information also to people interested in the learning of other languages.

In the next sections we describe the current situation of the educational software for French learning. We conclude with our reflections on the outcomes of this analysis.

2. Multimedia available on disc

The multimedia educational materials for language learning developed in the past couple of decades were distributed mostly by means of discs (initially diskettes, then CDs and DVDs) and widely acquired by linguistic laboratories, libraries, and individual users. We carried out an investigation concerning such materials for French by consulting the Educational Software Library (BSD) set up by ITD CNR in Genoa (Italy), which, gathering over 3700 titles on all subjects and for all levels, constitutes a very representative collection of educational software published around the world (a catalogue of this collection, partially in English, is available online at http://www.sd2.itd.cnr.it). We also took in consideration a few other products for learning French that we have been able to find outside this library, hence analysing in total 132 products, issued by book publishers, universities and software producers.

All the materials found were produced in the past couple of decades, starting from 1992. If we consider more in detail the production years, we can remark that most of them were proposed in the second half of the past decade (in particular between 1996 and 1997, with 18 new products per year), a period when the increasing diffusion of CDs allowed a wide distribution of good-looking and composite multimedia, either as complement of some books or as self-standing learning materials. Another peak of new creations, though lower than the previous one, took place at the beginning of the current decade, when the diffusion of the open source approach gave impulse to new productions. Afterwards, the number of new products in the library decreases up to zero in the past couple of years. This is likely due to the fact that the development of web technologies has allowed the publication online of complex multimedia with improved interaction facilities, hence taking advantage of an easier and faster distribution means and of the possibility of frequent updates. This concerns not only the educational materials to learn French, but is a general trend.

The considered products are very unequally distributed among several types, as shown in Fig. 1. These include whole courses, grammatical and lexical exercises, presentation of the culture of francophone countries (mainly France and Canadian Québec) activities to stimulate written production (without correcting student’s work), environments for the creation of cartoons or short movies, materials for dyslexic learners, phonetic exercises, written and oral comprehension. We considered among the software tools suitable to support French learning also the environments for the creation of exercises, even though they are not specifically focused on French, because they allow teachers to set up their own exercises tailored according to their students’ needs.
Courses, which appear to be much more numerous than any other type, were mostly produced in the past decade; they have been progressively abandoned because the lack of interaction and support entailed by individual use strongly limited their effectiveness (Lupi, 2009). In recent years, on the other hand, the production was more oriented towards materials where the learner is required to play a somehow active and creative role, such as cartoon creation or simulations that imply written and oral comprehension. Mostly limited to the current decade is also the attention to particular aspects, like learning problems (French presents several difficulties for dyslexic people).

Grammar and lexical materials, however, are still produced also in recent years. These are usually drill-and-practice exercises, mostly decontextualized. The wide diffusion of this kind of materials is likely due to the fact that they are technically easier to realize than many other activities whose correction is difficult to automate, such as free linguistic production.

Within each of these types, the materials differ as concerns several aspects: definition of aims and contents; variety of activities; feedback provided; interaction with the software; playful interface stimulating learners’ interest and motivation; use of authentic documents; contextualization of the activities. All of them, however, share the fact to be designed for individual use, and hence scarcely suitable for group activities in classroom learning. Even though in the most recent productions we can find several attempts to give a more active role to the learner, they mostly remain oriented towards a transmissive, behaviourist approach. The evolution over the years of the materials of a same type mostly led to improve their technical aspects overlooking the pedagogical ones.

![Percentage distribution of types](image)

3. Multimedia available on the Internet

The recent development of web technologies has rapidly turned the web into a privileged place for language learning, thanks not only to the wide availability of real documents which offer meaningful examples of current language use, but also to the numerous web sites set up by a variety of agents, providing access to educational materials of various kinds, from simple collections of exercises to large sites with complex and diverse offer. In order to get help in the analysis these many proposals, we made use of FacileFLE, a portal developed by Lupi and Vicari (2008) which catalogues 75 web sites chosen among the most interesting ones (this represent about 3 quarters of all web sites currently offering educational materials for learning French). This portal, which is freely accessible at [http://www.farum.it/facilefle](http://www.farum.it/facilefle), allows the user to search for materials of his/her interest by specifying the linguistic level (A1-A2-B1-B2-C1-C2, following the Common European Framework of Reference for Languages), the linguistic competences addressed (comprehension, production or interaction, in written or oral form), and key words related to the content addressed; auxiliary information is also considered, like technical features, producer, web address, etc., so as to effectively help the user to make a choice. Despite this valid support, analysing the situation on the web is more complicated than analysing that in a software library: not only new materials appear frequently (due to the ease of web publication, also teachers and even students often put online their activity proposals), but they can also be erased, which makes even the most accurate analysis become obsolete in a short time. Moreover, while published software collections need to have a well defined character, web sites often suggest a range of different activities, often mixing different types or suggesting more than one item of the same type, with different content or addressing different competence levels, language skills or target users.
All together, we found over 200 activities proposed by the 75 considered web sites, belonging to 7 different types: 1) drill-and-practice exercises of grammatical and lexical nature; 2) educational games; 3) webquests; 4) courses or activities for specialty languages; 5) whole language courses; 6) simulations; 7) problem situations and pedagogical scenarios.

Grammatical and lexical exercises are the most numerous group, offered by almost all the considered web sites. They follow the drill-and-practice tradition, letting the user work on lexical or grammatical elements of given sentences proposed without a context that could help make sense of them (and therefore help memorization and re-use of the linguistic content). In some cases, however, in order to overcome this limit, a context is proposed by extracting sentences to work on from cultural texts, such as songs or videos.

Also educational games are rather diffused (we found 24 web sites proposing them). These range from very simple games, such as a snake-and-ladders where the players can proceed only after correctly answering a grammatical question, to more complex ones with wider learning aims. Simple games often result to actually be grammar exercises disguised under a fun interface. Tackling learning tasks in a playful way aims to stimulate motivation, especially in young learners. This format however also presents the drawback that the considered linguistic aspects are presented out of context and without possibility of re-use. Moreover, a deep immersion in the game may distract the user from learning.

Webquests are open tasks whose solution requires the learner to find information on (usually suggested) web sites. We found 16 web sites proposing them. Being open tasks, they require the assistance of a teacher or tutor to evaluate the learners’ outcomes, unlike the above activities for which automatic checks can easily be provided. This kind of activity presents several advantages for L2 learning, namely the chance to use authentic web sites (i.e., not developed just for learning purposes) and to acquire some autonomy in carrying out work, as well as opportunities of contact with the culture of the target language countries.

We found 9 courses for specialty languages. These may be focused on the terminology used in specialized fields, like, e.g., economic aspects of tourism or art history, or on linguistic aspects, such as phonetics, lexicon, orthography. They differ from exercises because they propose several activities of various kinds, hence making an effort to provide a wide-angle acquaintance with the considered topic.

Whole courses aim to offer more complete resources than simple exercises. We found only 7 of them on the considered web sites, which is not surprising, as these are free materials and the development of a course usually requires quite some effort. Moreover, the commercial courses on CD that were so numerous in the past decade did not really prove to be very useful language learning tools, and this decreased the interest for this kind of demanding realizations. Internet courses have the advantage, with respect to those of the previous generation, to provide links to real documents and to be possibly enriched and updated with frequency.

Simulations propose a virtual world in which the student has to carry out some activities entailing the use of the language. The presence of a virtual world motivates the activity and provides a context for it, all features which are currently considered of great importance in language learning. We found these proposals in 7 web sites.

Pedagogical scenarios (sometimes called problem situations) consist in sequences of tasks that contribute to the achievement of a common aim and are to be solved in a communication-rich context. These activities appear to be very suitable to implement the new approaches to L2 learning, but we found only 2 of them on the web.

While educational materials distributed on disc usually cover different linguistic levels and skills, and often include activities suitable for different target users, materials on the web have a more granular structure, each addressing a particular language level or skill or group of users. A classification of the considered materials according to these 3 parameters is shown in Figure 2.

The distribution according to levels shows that the offer decreases as levels increase, with the exception of A1. This is not surprising, since more proficient students require more complex activities, which are more difficult to design and implement. Moreover it is expectable that a lower number of learners may be interested to activities related to the highest levels. It is also not surprising that the offer for level A1 is lower than for A2, as it is difficult to start the study of a language without the assistance of a teacher/tutor. As concerns the skills addressed, interaction and oral production are less frequently considered likely for the difficulty to implement such activities. Finally, the distribution according to target users clearly shows that most materials are conceived for users able to learn in autonomy; children, who most need teacher’s assistance, receive the least attention. This suggests that most of these activities have been designed for individual use rather than as tools to be integrated in classroom work.
4. Conclusions

The above analysis shows a deep similarity of the educational materials for French learning published on disc or on the Internet, even though the former were usually developed before the latter and are therefore of older conception. In both cases, most products are not designed for classroom work but rather for individual use. Drill-and-practice exercises still constitute the most frequent proposal. With such tools at disposal, it is not surprising, therefore, that the new pedagogical orientations for language learning do not appear fully applied in school, as the current offer of educational software for L2 is still widely bound to the behaviouristic approach.

Among web materials, however, we also find some new types, which propose compound, contextualized activities entailing learners collaborative involvement in tasks that make sense for them. This suggests that the situation is changing, even though apparently slowly; hence there is hope that in the near future the educational software for L2 will better support the application of an active and fruitful approach to learning, thus contributing to improve language learning in school.

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