Chapter 46

The French Digital Kitchen:
Implementing Task–Based Language Teaching Beyond the Classroom

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ABSTRACT

This paper reports on the French Digital Kitchen, a design-based project which drew on digital sensor technology to take the principles of Task-Based Language Teaching (TBLT) out of the classroom and into the real-world environment of a kitchen. The project aimed to produce a situated language learning environment where learners could learn aspects of French language and cuisine whilst performing a real-world task. The article describes the blend of TBLT, human-computer interaction (HCI) and user-centred design (UCD) principles the authors adopted in constructing and trialling the kitchen, using multiple data sources. An example of a task cycle is then presented to illustrate (by using CA analysis of transcripts) how learners have used the resources of the kitchen to accomplish the task. The authors' findings show how the integration of the pedagogical and technological design enabled learners to notice and manipulate new vocabulary items.

INTRODUCTION

A significant challenge for the UK is how to employ digital technology to upgrade the skills of its workforce in a rapidly changing world. A specific challenge is how to improve the declining foreign language proficiency of the British workforce. The number of pupils gaining a qualification in a foreign language has decreased significantly, whilst a recent British Academy report discussed concerns

that the future of the UK's world-class research base might be threatened by the decline in foreign language learning. At the same time, the European Union has acknowledged that Europe faces specific challenges regarding increasing foreign language proficiency, an area which impacts the EU economy in areas such as social mobility between member states and the integration of migrants.

This article reports on the French Digital Kitchen, a French language learning project developed by human-computer interaction technologists and applied linguistics researchers at Newcastle University. Our project involved taking a normal kitchen and specifically adapting it for French language learning using the next generation of digital technology, namely activity recognition and sensor technology. We constructed a purpose-built kitchen that communicates with learners in French and gives them step-by-step instructions on how to prepare French cuisine and teaches aspects of French language.

There are a number of well-known problems relating to classroom foreign language teaching addressed by this project. These include, firstly, the universal problem of classroom language teaching, namely that students are rehearsing using the language, rather than actually using the language to carry out actions such as buying a train ticket; secondly, the difficulty of bringing the foreign culture to life in the classroom. In the digital kitchen environment, we intend that learners will be able to learn aspects of the language whilst performing a meaningful real-world task and will simultaneously experience the cultural aspect of learning to cook a foreign dish.

Our main focus is on how the situated nature of language instruction (timeliness and in context of the tasks) can be supported by technology. In broader terms, the project explores how technology can be used to perform real-world, culturally engaging tasks via the medium of a foreign language and also provides an example of how two rather different sets of skills may be acquired at the same time by use of appropriate technology.

The project involved a range of theoretical and practical issues in relation to language learning and human-computer interaction; the main issue on which this article focuses is how digital technology can be used to deliver task-based language learning in a real-world setting outside the classroom. The article firstly reviews the principles of TBLT and explains how the kitchen works. Next, we introduce the design principles on which the French digital kitchen was based, both in technological and pedagogical terms. After outlining the methodological framework, the study then uses observational data to illustrate how learners have used the kitchen within the 3-stage task cycle, presents the findings of the study and considers future directions for the project.

BACKGROUND: TASK-BASED LANGUAGE TEACHING

The pedagogical design of the French Digital Kitchen employs Task-Based Language Teaching (TBLT), a well-established approach to language learning which prompts learners to achieve a goal or complete a task (Skehan, 1998; 2003). Much like real-world tasks, such as asking for directions, TBLT seeks to develop students' language through providing a task and then using language to solve it. Some of the main features of TBLT are that: meaning is primary (language use rather than form); there is some communication problem to solve; a classroom task relates directly to real world activities; the assessment is done in terms of outcomes (Ellis, 2003). Willis (1996, p. 1) defines the aims of tasks as "to create a real purpose for language use and to provide a natural context for language study". It is generally assumed (Ellis, 2003, p. 263) that tasks are carried out in pairs or small groups in order to maximise interaction and autonomy. There has been a substantial programme of research in relation to TBLT, summarised in Skehan (2003). Ellis (2003, p. 320) suggests that "there is a clear psycholinguistic rationale (and

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