Addressing Cultural and Native Language Interference in Second Language Acquisition

DANIÈLE ALLARD
Université de Sherbrooke, Canada

JACQUELINE BOURDEAU
TÉLUQ-Université du Québec à Montréal, Canada

RIICHIRO MIZOGUCHI
Osaka University, Japan

ABSTRACT
This paper addresses the problem of cultural and native language interference in second/foreign language acquisition. More specifically, it examines issues of interference that can be traced to a student’s native language and that also have a cultural component. To this effect, an understanding of what actually comprises both interference and culture is required. The concepts we consequently identify result in an ontology that can be interpreted and used by both humans and computers to build interactive learning environments. We use an ontology as a conceptual foundation to build an instructional scenario, which is then supported by readily available technological tools. A specific example is described.

KEYWORDS
Interference, Cross-linguistic Influence, Culture, CALL, Ontology, Second/Foreign Language Acquisition

INTRODUCTION
This paper addresses the problem of cultural and native language interference in second/foreign language acquisition. More specifically, it examines issues of interference that can be traced to a student’s native language and that also have a cultural component. To this effect, an understanding of what actually comprises both interference and culture is required. The concepts we consequently identify result in an ontology that can be interpreted and used by both humans and computers to build interactive learning environments. The latter would require high-level programming expertise and long-term efforts with, as a result, a sophisticated intelligent tutoring system. We are currently focused on the former, which means we use this ontology as a conceptual foundation to build an instructional scenario, which is then supported by readily available technological tools. A specific example is described, that of second-person address in French by English-speaking learners.

In earlier stages of acquiring a second/foreign language (L2), learners are especially prone to making errors because of skill transfer stemming from knowledge of their native language (L1), or possibly another previously acquired language (a phenomenon also known as interference). If these errors are not adequately addressed, they can lead to the development of habits that run contrary to target language expectations, and potentially cause mutual misunderstanding.

We address the phenomenon of interference using instructional/learning scenarios that call for the use of readily available technology in an attempt to help overcome them. In our sce-
narios, we take not only linguistic aspects into consideration, but also related cultural factors, where relevant. This is because people communicate in relation to one another as well as to prior experience. In other words, their voice is not only individual, but also collective: they regularly express the social patterns and knowledge accepted within their native community (Kramsch, 1993). Language is thus imbued with culture. Our research addresses the situation of English-speaking Canadians learning French as a second language at the university level (undergraduate studies).

We first provide an overview of culture in relation to language teaching and learning. We then explain the phenomenon of L1 interference, relating it to culture, before outlining a cultural framework of analysis. A description of conceptual analysis and ontological modeling follows. Ontological modeling is a methodology for knowledge representation that enables the articulation of seemingly chaotic situations in a principled manner. It results in an ontology that can be read by both computers and humans; the latter do not have to be well versed in informatics to read it as a conceptual map and use the knowledge it conveys. The ontology can in turn guide the articulation of targeted instructional/learning scenarios, as well as the building of a knowledge base. We present our ontology, as well as how it is used to circumscribe interference and inspire the design of an instructional scenario, which we illustrate using a concrete example, that of the second-person pronoun in French (the use of tu/vous). This scenario is supported by readily available software. We conclude by pointing towards future research.

CULTURE IN LANGUAGE TEACHING AND LEARNING

Dubreil (2006) explains that, until the 1960s, culture in L2 education was essentially presented in the form of literature found in textbooks. Educators were gradually urged to move beyond what was considered Culture—with a big “C”—which manifested itself through a civilization’s accomplishments in literature, the fine arts, history, geography, politics, and other social institutions, and to embrace culture—with a small “c”—as expressed in lifestyles, or the patterns and habits of daily living.

In this new millennium, culture (regardless of capitalization) takes on more fluid definitions, as L2 education places increasing emphasis on learning a target language in communicative and meaningful contexts (Larsen-Freeman, 2000). It becomes expressed, embodied, and symbolized in linguistic interactions through which meaning is negotiated (Chapelle 1997; Kramsch 1998). It is increasingly concerned with human interaction, in an encounter of native and target cultures being juxtaposed, potentially compared, and reflected upon. Byram (1997) explains that someone who has developed intercultural competence is essentially a person who can establish relationships between different cultures, and is thus able to mediate or interpret each culture in terms of the other, for themselves and for other people. This also implies a critical and analytical understanding of parts of both one’s own culture and that of others. In other words, it involves developing a consciousness of one’s own perspective and of how one’s own thinking and understanding, is, to a large extent, culturally determined. As Dubreil (2006) suggests, the following definition seems to capture the current outlook in culture and L2 education: “Culture learning is the process of acquiring the culture-specific and culture-general knowledge, skills and attitudes for effective communication and interaction with individuals and other cultures. It is a dynamic, developmental, and ongoing process which engages the learner cognitively, behaviourally, and affectively” (Paige, Jorstad, Siaya, Klein, & Colby, 2000, p. 50). “Culture-specific” refers to a particular culture and “culture-general” refers to learning about any culture that is not the learner’s native culture.
According to the *National Standards for Language Learning*, published by the American Council on the Teaching of Foreign Languages (1999), cultural knowledge can be gained through examining cultural practices, products, and perspectives. Practices refer to daily-life behaviors and patterns of social interactions. Products refer to various cultural achievements; and perspectives refer to meanings, values, and ideas. The Council of Europe, through the Common European Framework of Reference for Languages (CEFR), has developed, among others, the Autobiography of Intercultural Encounters, which is a concrete response to the recommendations of the Council on Intercultural Dialogue (Council of Europe, 2009). The autobiography can be used in school curricula and focuses on a single event or experience with someone considered to be different from oneself, whether in the same or a different country (Byram, Barrett, Ipgravew, Jackson, & del Carmen Mendez-Garcia, 2009).

Language education thus acknowledges the crucial importance of culture in relation to language learning. With the advent of technology, computer-mediated communication has allowed for unprecedented contact with other cultures that are actively being explored in computer-assisted language learning (CALL) (Liaw, 2007; Lomicka, 2006). However, while it is recognized that standards exist, that experiments are conducted, that system prototypes are built, that discussion is active, and that intercultural competence is defined, a lack of clarity as to what is actually meant by teaching/learning language in conjunction with culture nevertheless seems to remain. In other words, the active inclusion of culture in the curriculum, as well as how to accomplish this, is an issue that in many respects remains unresolved (Dubreil, 2006; Liaw, 2007; Lomicka, 2006; O'Dowd, 2003).

**INTERFERENCE**

According to Lomicka, “the act of knowing the other and the other’s culture is inextricably linked to language competence. Both the ability to communicate by the appropriate use of language and by the awareness of the specific meanings, along with the values and connotations of language are involved in this act” (2006, p. 212). That is, as she further explains, awareness of meanings, connotations, and values can be approached through a cyclical process that Liddicoat (2003) describes in terms of input, noticing, reflection, and output. “Noticing” is especially important in intercultural learning, along with reflection and discussion.

Our current research narrows the focus, concentrating on L1 interference. The goal is to help learners overcome learning difficulties caused by such interference, which, if not addressed, may eventually lead to the fossilization of language patterns (ZhaoHong, 2004). Interference is also called language transfer or cross-linguistic influence, though these terms refer to a broader phenomenon and are often used interchangeably. As Odlin (2005) explains, transfer suggests a practice in which some kind of influence is essential for it to happen. In simple terms, it is a process in which the learner tends to assume that the system of L2 is more or less the same as his L1, until he discovers that it is not (Ringbom, 1987). In other words, one’s native language (or another previously acquired language) influences the language being studied, with the result being one of transfer. Such influence may be called positive when it facilitates the learning of a skill, given similarities between two languages, or negative when a skill transferred from the L1 results in production that is different from target language expectations (Noor, 1994). We use interference as the term for negative transfer.

The notion of language transfer initially appeared in the middle of the last century as a result of comparing learner production between L1 and L2, especially in terms of grammar, and was rooted in a behavioristic theory of language learning. When using the L2, students were considered to develop “habits” stemming from knowledge of their L1. While such
habits could sometimes prove positive and support L2 acquisition in areas where the languages present essentially identical features (positive transfer), they could also lead to errors that could be traced back to the mother tongue (negative transfer, or interference) (Lott, 1983). Some twenty years later, researchers reacted to this theory and began to consider L2 and L1 as two independent learning processes, explaining errors in L2 in developmental terms—not unlike those made by children acquiring L1—rather than resulting from the transfer of L1 patterns (Benson, 2002).

It is now generally accepted that cross-linguistic influence does occur, though the phenomenon is far more complex than initially believed. It is being examined under various lenses that include phonetics and phonology, speech perception, morphology, reading, pragmatics, syntactic structures, universal grammar, and orthography, as well as the sociology and history of language. Furthermore, attention is being placed not only on transfer from L1 to L2, but also L2 to L1, and even L3 in relation to L2 and L1 (Odlin, 2005). Researchers further address the extent to which transfer might occur (depending on setting, proficiency, speech style, or learner type), whether it is consciously performed or not, the reasons why it occurs, the impact of the learner’s perceived distance or proximity between two languages, and the various implications this may have for teaching (Benson, 2002).

In the more specific context of English syntax and morphology acquisition, Ferris (2002) explains that L2 English instructors may in fact find it beneficial to investigate similarities and differences between English and an L1, and to use this knowledge to assess students’ particular strengths and weaknesses in order to design feedback and instruction that address these specific needs. Our own research has been concerned with identifying and classifying instances of interference, and, where relevant, taking cultural factors into consideration. After having studied transfer into English as L2 with Japanese as L1, in a Japanese setting (Allard, Mizoguchi, & Bourdeau, 2005, 2006), we then studied transfer into French as L2 with English as L1, in a Canadian setting. We subsequently worked on designing learning scenarios to help overcome interference.

Research indicates that, generally speaking, if L1 and L2 are related, students acquire proficiency with more ease and less time than if they are unrelated, especially in the earlier stages of acquisition (Benson 2002; Ringbom 1987). In the same way, it seems that cultural similarities between L1 and L2 lessen the potential for what we could term “cultural interference,” which appears to take place at all levels of language production.

CULTURE

A vast amount of research on culture within and across various disciplines has thus far been conducted. In this world of unprecedented global communication and exchange, such research is increasingly relevant, and its realms of investigation and application are expanding. Different models, frameworks, concepts, and perspectives of culture can be found. The issue of cultural influence on instructional systems is further becoming prevalent (Dunn & Marinetti 2006; Young 2008), while how to address it is a relatively new field of research (Blanchard & Allard, 2010). With respect to CALL, little research has thus far been conducted on considering cultural variables or on incorporating culturally responsive teaching into the CALL context (Brander, 2005). In a survey of twenty-five years of CALL research in the CALICO Journal, Hubbard (2008) lists a number of language acquisition theories that have supported the journal’s published work, yet none explicitly refers to culture. Levy and Stockwell (2006) bring up the fact that the goals of language teaching and learning are changing, which is also reflected in an increasing focus on culture in language teaching. This is especially apparent in research on intercultural learning through
collaborative email exchange, as well as the *Cultura* project (Furstenberg, Levet, English, & Maillet, 2001), a web-based approach to introducing culture to language students.

As Goodfellow and Hewling (2005) suggest, three main perspectives, while overlapping, imply different orientations to the conceptualization of culture in virtual learning environments. There is first the view that educational technologies constitute a colonizing influence in societies where “western” online education is marketed. As such, the bias towards “dominant” cultural value systems embodied in teaching methods and materials could be redressed. Second, there is a focus on cultural differences as a cause of miscommunication among participants in online learning. Third, while virtual learning environments are seen as social and cultural phenomena in their own right, they are also limited by the systems of cultural relations prevalent in the non-virtual world. They thus allow for the examination of processes of cultural construction and negotiation.

Our research is primarily concerned with the second perspective: cultural differences as a cause of miscommunication. While we use CALL to support the acquisition of L2, our students are not involved in collaborative learning environments in which participants from different cultural groups interact with one another using information technology, an area that CALL research has been increasingly examining (Furstenberg et al. 2001; Lomicka 2006). Rather, we seek to examine cultural variables that contribute to explaining the existence and/or use of certain language patterns, and also to explain why students in a given cultural group may, generally speaking, face difficulty acquiring L2 patterns given the influence of L1, itself a reflection of certain cultural values.

We bring up this point because there are models and theories of culture that are conceptualized to apply to national/ethnic groups of people along broad normative dimensions, while other cultural models, coupled with language teaching pedagogy, take into account the individual learner. This is because, among other reasons, the individual may differ from the norms of the culture(s) to which he or she belongs. Our research focuses on generally accepted language patterns from a syntactic and pragmatic point of view, with students at lower intermediate levels, or, to use the CEFR classification of language levels (Council of Europe, 2000), in the process of reaching B1. We have found that the models that describe and compare national groups to one another have in fact proven useful for the purposes of our research. Certainly, they have provided us with a vocabulary with which to identify, analyze, and compare cultural values.

Perhaps the two most frequently cited frameworks for describing and comparing national cultural characteristics on large scales are those elaborated by Hofstede (2001) and the GLOBE Study (House, Hanges, Javidan, Dorfman, & Gupta, 2004). Both of these were developed within organizations and identify nation-level dimensions of culture that allow for comparing countries in terms of scores on these dimensions. The dimensions themselves and their definitions present differences, as do the methodological approaches, yet together, they spur the field towards further understanding and growth (Smith, 2006). Since these studies are rooted in surveys conducted in business organizations, we have also considered the work of other researchers, such as Schwartz (1999), whose large-scale project (which also provides comparative scores between nations) is based on interviews with students and teachers. Schwartz’s rationale for analyzing the responses of people in education is that teachers play an explicit role in value socialization, are presumably key carriers of culture, and probably reflect the mid-range of prevailing value priorities in most societies.

We are still exploring models of culture and values in an effort to circumscribe a set of appropriate tools that will allow us to label, explain, and analyze cultural factors inherent in
cross-linguistic influence for use in CALL systems and applications (Allard, Bourdeau, & Mizoguchi, 2011).

We further acknowledge the difficulty of discussing culture without making certain generalizations: we are making statements of likelihood and potential, not of certainty. While we can address how people from a particular culture may behave in a given situation, we cannot predict how they will in fact behave (Storti, 1999). Generalizations, as well as limited exposure to another culture, can lead to stereotyping, which, in our attempt to help language students understand cultural underpinnings in various language acts, we do not wish to promote.

Understanding the “nature of culture” is a preliminary and necessary step prior to elaborating an instructional solution to a learning problem of this kind. This then allows us to conceptualize culture. Conceptualization, furthermore, is a fundamental step in designing a pedagogy-driven CALL environment (Colpaert, 2006).

**CONCEPTUAL ANALYSIS AND ONTOLOGICAL MODELING**

Language learning has long had content analysis and structuring as its instruments. We consider a recent modeling technology called ontological engineering that allows both humans and computers to understand a given phenomenon and to produce a conceptual analysis with which we can then work.

What is an ontology? Gruber’s definition is the following: “An ontology is a specification of a conceptualization” (Gruber, 1993) to be shared between humans and computers. In the case of learning environments, the ontology is the knowledge base that the software can interpret in order to govern the environment. As a result, the environment is said to have “intelligence,” as well as the capacity to adapt to the learner’s cognitive states (Hayashi, Bourdeau, & Mizoguchi, 2009).

An ontology aims to articulate a world of interest in a principled manner, making explicit the objects perceived in this world, as well as the relationships and the constraints between them. In other words, it is a declarative description of the fundamental understanding of this given world.

Interpreting and understanding an ontology initially requires some degree of practice. Developing an ontology is also a matter of deep reflection and discussion. We will attempt to explain some of the fundamental principles of ontology engineering in view of the specificities of the Hozo ontology editor (Mizoguchi, 2010; Mizoguchi, Sunagawa, Kozaki, & Kitamura, 2007) as we present our ontology (more detailed explanations can be found in Mizoguchi 2003, 2004a, 2004b). This said, ontology development in Hozo implies the specification of concepts to highlight (or to make explicit, or to explicate) the internal structure of the concepts in order to limit variations in understanding between individuals. To this effect, a concept can be decomposed into attributes and parts. For example, two of the attributes of a vehicle are to carry people and freight, while two of its parts are an engine and a body.

Conceptual analysis and ontological modeling has become the focus of our work. As a result, while analyzing interference and related cultural factors, we have been developing an ontology of cultural and L1 interference in second language acquisition (Allard et al., 2005, 2006; Allard et al., 2011). Our ontological engineering methodology has been developed by Mizoguchi Laboratory at Osaka University in Japan and is formalized using the Hozo ontology editor (Mizoguchi, 2010). Our ontology makes explicit areas of possible interference in
English L2 with Japanese as L1 and, more recently, French L2 with English as L1, in a Canadian context. Students from both language groups are aiming to attain a B1 proficiency level or higher. Our ontology further identifies cultural factors underlining such interferences, where relevant.

In order to help prevent language fossilization, or at least to prevent errors from becoming repetitive over a period of time, addressing interference strikes us as essential. Interference, when addressed by instructors, is often done in linguistic terms, without necessarily including cultural factors. Why then would we need an ontology to address interference with cultural underpinnings in L2 acquisition? In order to employ optimal strategies to prevent and correct interference among L2 learners, we need to understand what interference is. We have been looking for a way to analyze the phenomenon in depth and have found that ontological engineering could be instrumental for this purpose. Ontological engineering requires a systematic analysis of the semantics of a concept by: 1) specifying the position of a concept in a hierarchy of classes, 2) specifying its properties in terms of parts and attributes, and 3) specifying its relationships with other concepts. The resulting ontology sheds light on a phenomenon in such a way that the latter becomes clear and explicit. Furthermore, in the case of our research, the ontology becomes a valuable tool in that it helps us to develop new ideas for the purpose of addressing the problem of interference on the basis of the understanding we have gained of the phenomenon.

An ontology should contain all concepts relevant to the phenomenon, with the exception of fine-granular, domain-specific concepts (for example, those used in a specific teaching/learning scenario), and it should specify what they are, in addition to how they are used. To this effect, each concept is defined following guidelines of ontology building. More specifically, both static concepts (nouns, such as "book" and "learning objective") and dynamic concepts (verbs, such as "explain" and "feedback") are defined, as well as the dependencies between them. These definitions collectively specify how a system of concepts works together to constitute a complex system.

Without the support of ontological engineering, complex systems remain a black box. It is hard to explain why they work, or even if they work well. The ontological specification of a system of concepts and/or of a complex system helps to make hidden assumptions and underlying design philosophy explicit so that the system becomes transparent. Furthermore, ontology-based systems are easier to maintain and improve.

Let us now examine an excerpt of CLIO (Cultural and Linguistic Interference Ontology) in a systematic and progressive way: 1) under a root concept, Level 1 classes show the main concepts with their properties; 2) Level 2 classes are a decomposition of Level 1 concepts into sub-concepts, showing properties and relationships; and 3) Level 3 classes are a further level of decomposition.

Level 1 classes show the main concepts defining the root concept, indicating whether they are attributes of (a/o) or part of (p/o) the root concept. As previously mentioned, a/o represents an intrinsic characteristic of an entity, while p/o represents an essential component. For example, a bicycle has a given color and weight: color and weight are attributes. The wheel is one of its essential components: it is a part. Here, the root concept communication process is the starting point in our ontology illustration, and it should be understood that this concept relates to an upper class in the ontology, process, which is not shown here. Communication process is a kind of process and as such, it inherits the properties of the upper class process. Level 1 then comprises the following classes: 1) four classes inherited from process that characterize any process in general: time interval, location, and participants (here, subdivided into two humans, a speaker and a hearer); and
2) eight classes which more specifically characterize communication process: context, communication goal, way to communicate, content, form, communication exchange, representation, and content of understanding (Figure 1).

Figure 1
Level 1 Classes

This excerpt shows that a communication process takes place within a given time interval, in a given location, with participants (here, speaker, the fourth concept, and hearer, the eleventh concept; they are both human beings). Time interval and location are attributes of a general process, with speaker and hearer as participants therein. A communication process further involves a context. A speaker, in communicating, will 1) have a goal, 2) express him/herself in a certain way (for example in a face-to-face situation in contrast to email), 3) express a given content, 4) use a certain syntactical form, all within 5) a certain kind of dialogue/exchange. What the speaker expresses in terms of form and content is further labelled a representation. That is, what is expressed by the speaker “represents” what the speaker believes is an appropriate expression of his/her understanding of the content he/she wishes to convey, given his/her cultural profile. However, his/her representation could ultimately be misunderstood and interpreted as something entirely different from what was intended. The hearer will subsequently interpret the speaker's representation according to his/her own cultural filter, which then gives way to his/her own content of understanding.

Level 2 classes are a decomposition of Level 1 into further sub-concepts that also display properties (a/o and p/o), in addition to relations that link the concepts to one another. Different kinds of relations can exist. In the case of this particular ontology, we have defined the following relations: “same as,” “generate,” “receive,” and “interpret.” Relations are
indicated by the lines culminating in tiny squares found on the right hand side of Figures 2 and 3.

Let us now examine Level 2 classes. For example, the speaker and hearer have the same attributes: respectively, they have a native language and a cultural profile. This cultural profile includes the following: where one was born and brought up, age, cultural beliefs, attitudes and expectations in certain situations, for example, being polite to someone when being introduced for the first time.

A communication goal can be implicit/explicit. For example, a speaker asks a hearer whether he or she might want to go out for lunch. While this can be interpreted literally (explicitly), the implicit goal of the message could actually be to express a particular interest on the part of the speaker for the hearer. The way to communicate can be synchronous/asynchronous. It takes place within, for example, conversation, which is what we mean by a language way. The form expressed by the speaker can alert us to interference: is it present or absent? This process involves a communication dialogue/exchange in a given language, and in this process, meaning is negotiated. The representation (what the speaker expresses) has a certain form and content, which are exactly the “same as” (relation) the form and content found higher up in the ontology excerpt. Form and content now appear on a second level because they characterize the representation; they are also at the first level so that they may be analyzed separately in terms of essential components of the communication process.

The speaker relates to other concepts in terms of a “generate” relation: for instance, the speaker “generates” a representation. He/she also generates a form. The hearer, then, “receives” the speaker’s representation. Let us point out that the speaker does not necessarily “generate” content: the content he/she wishes to express is not always expressed in the way the speaker intends; it is, however, an inherent part of the speaker’s representation.
Figure 2
Level 2 Classes
Level 3 and 4 classes are the last levels shown in this particular excerpt. Rather than display the entire ontology excerpt, only the lower half is displayed.

Figure 3
Level 3 and 4 Classes
In Figure 3, we have an interference/no interference concept. This concept is specified as part of the form of communication and is first decomposed as: content_2, interference manifestation. For example, an L1 speaker of English might overuse the French pronoun “tu,” the kind of interference we will explain below. This gives rise to a certain content_2, which, given interference, might be different from the intended content, and is thus labelled content_2. The interference can have a language-related reason and/or a culture-related reason. These are Level 3 classes. Under culture-related reason, which is the last level of generality we describe, we find specific reasons, such as politeness, respect, equality, and social hierarchy. These are elements defined by researchers of culture such as Hofstede (2001). These specific reasons would vary depending on specific situations and represent Level 4 classes.

Figure 3 also shows that at Level 3, the hearer and the speaker both possess (different) interpretation-generation rules, which depend on each human's personal cultural profile. Finally, a new three-part relation is introduced: “interpret.” The hearer interprets the speaker's representation (input) according to his/her personal interpretation-generation rules (rule), which results in a content of understanding (output).

This section presented an excerpt of CLIO, an ontology which is abstract and limited to general concepts. The concepts are used to approach and understand the phenomenon of interference by analyzing and specifying it. It can nevertheless be instantiated to a specific case or situation, which we now proceed to illustrate.

**USING THE ONTOLOGY TO CREATE AN INSTRUCTIONAL SCENARIO**

The ontology provides a framework for analyzing the nature of a learning difficulty and the subsequent development of an appropriate solution. To analyze a learning difficulty, we instantiate the abstract framework with the parameters of a specific situation (Table 1). As a result, a diagnosis of the difficulty can be obtained.

Table 1
Instantiation of the Ontology for a Specific Situation

<table>
<thead>
<tr>
<th>Abstract Classes</th>
<th>Instances</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Time interval</td>
<td>October, 31, 2010, lunch time</td>
</tr>
<tr>
<td>2. Location</td>
<td>Montreal, Quebec</td>
</tr>
<tr>
<td>3. Context</td>
<td>New encounter</td>
</tr>
<tr>
<td>4. Speaker</td>
<td>Tina</td>
</tr>
<tr>
<td>4.1. Native language</td>
<td>English</td>
</tr>
<tr>
<td>4.2. Cultural profile</td>
<td>Born in English Canada, adult, polite, respectful</td>
</tr>
<tr>
<td>4.2.1. Cultural interpretation rule</td>
<td>Use of “you” for individual second person address is polite in any case</td>
</tr>
<tr>
<td>5. Communication goal</td>
<td>To become acquainted</td>
</tr>
<tr>
<td>5.1. Explicitness</td>
<td>High</td>
</tr>
<tr>
<td>6. Way to communicate</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>6.1. Synchronous/Asynchronous</td>
<td>Synchronous</td>
</tr>
<tr>
<td>6.2. Language way</td>
<td>Conversation</td>
</tr>
<tr>
<td>7. Content</td>
<td>Self-introduction</td>
</tr>
<tr>
<td>8. Form</td>
<td>Informal</td>
</tr>
<tr>
<td>8.1. Interference</td>
<td>Yes</td>
</tr>
<tr>
<td>8.1.1. Manifestation</td>
<td>Overuse of the French pronoun “tu”</td>
</tr>
</tbody>
</table>
8.1.2. Linguistic reason

In English, only “you” is used for individual 2nd person address; in French, a discriminated use of “tu” and “vous” is made for individual 2nd person address.

8.1.3. Cultural reason

 Discriminated use is based on rules of politeness and mutual respect.

9. Exchange

Dialogue

9.1. Language of exchange

French

9.2. Meaning negotiation

Progressive

10. Representation

Polite self-introduction

10.1. Form

Informal (same as 8)

10.2. Content

Self-introduction (same as 7)

11. Hearer

Dany

11.1. Native language

French

11.2. Cultural profile

Born in French-speaking Quebec, adult, polite; discriminated use of “tu” and “vous” for individual 2nd person address

11.3. Cultural interpretation rules

Use of “tu” is impolite or disrespectful in this situation

12. Result of understanding (as interpreted by hearer)

Tina is being impolite and/or disrespectful to Dany

The diagnosis resulting from this analysis is the following: overuse of “tu” due to interference of English into French (linguistic and cultural reasons), and cultural interference is the main cause of the learning difficulty. In a situation in which Tina were a Spanish native speaker, for example, this type of interference would likely not take place. This is because in Spanish, as in French, second person address uses different pronouns. Spanish is in fact more complex than French in this regard, which makes the learning and acquisition of second person address in French, for native Spanish speakers, relatively straightforward.

Given our general pedagogical goal, which is to prevent such errors from happening repetitively and to correct them as early as possible, it is now possible to elaborate an instructional scenario based on our understanding of the learning difficulty and on the diagnosis that we have made. The main steps are as follows:

1. Develop awareness amongst students of proper vs. over-use of the French pronoun “tu”.
2. Illustrate via examples of proper and improper use in various situations, with explanations of the cultural dimension.
3. Practice.
4. Test proper use and understanding of the cultural dimension.

After having established the rationale for and the structure of the scenario, we now provide a detailed explanation of the development of the scenario, by applying good design principles for language learning. We also select appropriate (readily available) software tools to support it.

ADDRESSING L1 INTERFERENCE USING TECHNOLOGY

While the main purpose of an ontology is to become a component of an Intelligent Tutoring System, this is hardly affordable in most teaching institutions. We therefore considered how the ontology could be exploited in a different way, to design instruction using more affordable and available tools, either stand-alone or web-based. This approach was developed by Tremblay (2009) to design instruction for teacher training in lexicology, with
French as the first language. She designed and validated a teaching module based on the conceptual analysis of lexicology, and the ontology was formalized by the LEXITATION project team (Observatoire, 2009) using Protégé (Stanford Center, 2010), an open source ontology editor and knowledge-base framework.

The choice and use of software and the design of a CALL task should first and foremost be driven by pedagogical goals. This was our priority. Focusing on CALL task appropriateness, Chapelle (2001) lists six criteria based on research findings in second language acquisition: 1) language learning potential (highest priority), 2) learner fit (opportunity for engagement with language), 3) meaning focus (learner’s attention is directed toward the meaning of the language), 4) authenticity (of interest to learners outside of the classroom), 5) positive impact, and 6) practicality.

The technology we use presents no difficulty in terms of access or use for students. Designing and/or selecting the CALL material can be very time-consuming and needs to go through various revision processes; once it is for the most part created and documented, it appears to contribute to efficiency in learning the language (learning goals are accomplished in less time), and it is both practical and authentic. Determining whether it is, in fact, more effective than other traditional means—students learn the language better—would require testing and formal evaluation. We have not yet conducted a formal evaluation; informal comments, however, have been positive.

We did not use newer types of CALL activities such as blogs, wikis, or web quests. With the exception of a chat activity, our CALL activities were designed either to be presented to a class as a whole, or to be performed individually. A study (Peters, Weinberg, & Sarma, 2009) that involved five Canadian universities has, in fact, recently shown that students (enrolled in French-as-a-second-language courses) seem to prefer computer-assisted activities that are performed individually to newer collaborative-type activities, finding them more useful. The study also shows that students find computer-assisted activities useful in general, especially those considered more traditional, such as listening, grammar, and vocabulary exercises. The infamous “drill and kill” does not seem to be an issue; rather, drills are indeed considered useful. Furthermore, students tend to prefer activities that are less mediated (without a didactic filter, such as listening to music or videos), as well as those based on authentic materials or everyday life activities. The study also points out that, when choosing technological activities for language classes, teachers should keep in mind that the activities that are liked the most are often those that are judged to be the most useful for language learning.

Egbert (2005, pp. 11-13) provides the following guidelines for using technology in the classroom:

1. Use technology to support the pedagogical goals of the class and the curriculum.
2. Make the technology accessible to all learners.
3. Use the technology as a tool (to support learning).
4. Use technology effectively (enabling the students to learn language better or faster using the technology).
5. Use technology efficiently (accomplish learning goals with less time and work for teachers and learners).

Following Egbert’s principles, we have been addressing instances of interference using readily accessible software and web applications that we make available within course websites created with an institutional authoring system.
The software we have used is: 1) Microsoft Word and PowerPoint, 2) the chat tools in the Blackboard Learning System, HotPotatoes (Half-Baked Software, 2009) and, to a lesser extent, 3) WordChamp (Language Learning Network, n.d.), and 4) Camtasia Studio (TechSmith, 2001). PowerPoint and Word are generally installed on institutional and home computers and are accessible to teachers and students alike. The chat function was available through the institution’s learning management system (Blackboard Learning System), and students enrolled in the same class could easily chat online. HotPotatoes, which allows teachers to create six types of exercises (for example: gap-fill, short answer, multiple choice), can be freely downloaded from the Internet (Half-Baked Software, 2009). WordChamp, used via the Internet, has a free web-reader function; that is, after having signed up for free access, students reading electronic documents can gloss over words and have access to translations of the word into the language of their choice, where possible. We otherwise used material that was freely available on the Internet to build our learning scenarios. One commercial product we used in a limited fashion was Camtasia Studio, a screen-recording software. We strove to use the tools that were available to us to their fullest potential in order to achieve sound pedagogical processes and outcomes, what Felix (2003) refers to as best practice.

EXAMPLE: ENGLISH SPEAKERS LEARNING FRENCH

An example of addressing interference, which was designed for a second-year French-as-a-second-language conversation class at a Canadian, English-language university, follows. The vast majority of the students were born and raised in English Canada, and those who were not were also highly proficient in the English language. Because of this homogeneity, we were able to consider possible interference issues as stemming from English as L1 into French as L2. Students attended classes on a weekly basis and while they were assigned a textbook, CALL tasks and applications supported the curriculum.

Our example discusses the use of tu/vous (these both translate as you) in an intermediate-level conversation class. Our pedagogical approach involved language use in conjunction with authentic materials and communicative activities, favoured critical reflection in terms of cultural issues, and required students to perform targeted practice activities and exercises designed to raise awareness about their use of the L2 in an attempt to prevent L1 interference.

The Pragmatics of Second-Person Address: The Use of tu/vous in French

One of the authors had just begun teaching French as a second language in an English Canadian university. In a third-year French course, a guest speaker, the retired president of a large corporation, had been invited. Questions for the guest had been prepared, and a student in the class had been chosen to be the interviewer. This student, obviously nervous, welcomed the guest with what was meant as a cheerful greeting: “Salut Monsieur, comment vas-tu aujourd’hui?” (loosely translated as: “Hey there Sir, how’s it going today?”). What surprised this author was that a student in third year (in a four-year program), who was proficient in the language, was not aware of the fact that her address was clearly inappropriate; this was elucidated in the course of a discussion with the student at the end of the class. As a result, teaching and practicing second-person address forms in French became a part of the second-year conversation class curriculum this author taught.

Address pronouns in French are both tu (T) and vous (V), which both mean you in English. Generally, T is described as a singular address pronoun used in informal, friendly, or intimate situations, while V is not only used for the plural (Vpl), but also to express politeness and respect in the singular (Vsg). Van Compernolle (2010) elaborates on the pragmatics of the French second-person address. He explains how, historically, Vsg
emerged among royalty and was consequently associated with solidarity among the nobility and power over the lower classes. T was then used to show intimacy and solidarity in the lower classes. Over time, usage of T/V displayed a certain degree of instability in the history of the French language. Recent research shows how these pronouns actually play a role in shaping one’s social identity and interpersonal relationships. In other words, second-person address is a socially negotiated speech act, rather than simply being marked for intimacy or politeness with stable meaning across all contexts. For instance, as van Compernolle points out, there is nothing polite about using Vsg with an addressee who expects to be called T, as it can potentially draw an unnecessary social boundary. Conversely, a police officer using T with an immigrant worker likely does so as an assertion of power over his addressee, rather than out of friendliness. Briefly put, conventions for T/V vary across communities and social situations. As Williams and van Compernolle state (2007, p. 806): “There are no steadfast, immutable laws of usage or strict patterns of use . . . [because] variations exist due primarily to differences across time, place, social class, families, and individuals.” Certainly, differences exist between European and French Canadian contexts.

Despite variability and range of potential social meanings, two dimensions of T/V appear to remain constant (van Compernolle 2010, p. 448):

1. T/V choice is a manifestation of one’s social identity at the time of utterance. T/V choice reflects a speaker’s real or perceived relationship (e.g., intimacy or distance) with his or her interlocutor.

And of course, dimensions of identity and distance apply not only to the speaker but also to the recipient.

We have used readily accessible CALL applications to design a teaching/learning scenario whose goal is to overcome the possibility of interference — in this case, the overuse of T in French as the default singular form of you. Second-year French students in the institution where the scenario was developed are, for the most part, prone to such interference. The scenario is played out over a few classes during the session.

Description of the Teaching/Learning Scenario

This section describes the instructional scenario in detail, including the software tools that support it. We entitled the scenario “Developing Awareness of Second-Person Address Interference and Related Cultural Factors.” In addition to the software listed above, we refer students to the following websites: YouTube (Desjardins, 2009; Garou, 2003), Le Point du FLE (Lawless, 2010), Dailymotion (France 2, 2007), and Jobboom (Abesdris & Roux, 2006). All links and materials are made available on a course website created with the Blackboard Learning System.

We begin by asking students, from the first class onwards, to address the professor using V and “Monsieur/Madame”, both in person and when communicating through email. Experience has shown this practice to be a valuable exercise. To further spark awareness and promote discussion on second-person address, we begin by exposing students to authentic material. Since they are in second year, they have already been exposed to the different uses of T/V. Two love songs with accompanying video clips are chosen from YouTube. While listening to the lyrics, students have gap-fill exercises created with Hot Potatoes to complete. The lyrics are later provided online in a Word document. The songs, by Quebec singers, are: “Tu m’aimes-tu?” by Richard Desjardins (2009) (informal French Canadian for: Do you love me?) and “Je n’attendais que vous” (I had been waiting just for you) by Garou (2003). Students are asked to reflect on the following questions. If, in fact, these are both love songs, which suggests an intimate relationship, why does one singer use T and the other V? In studying the lyrics and listening to them, what comments can
they make on the language register? Can these be related to the clothing and demeanor of each singer, as well as the setting of the clip (background and geographical location)? In summary, what impressions are left on the hearer, and why, in terms of perceived relationship and cultural considerations?

In a subsequent class, students are asked to do an exercise on the use of T/V chosen from the website Le Point du FLE, a website that brings together, among others, numerous CALL tasks by different authors on various aspects of the French language. This particular exercise asks students to choose T or V to address twenty different people (and animals) (Lawless, 2010). Once finished, they are asked about their scores. Teacher-fronted conceptual instruction on the use of T/V using PowerPoint is given, focusing on the role pronoun choice plays in the construction of social relationships and identity (van Compernolle, 2010). Illustrations and sound recordings are embedded in the PowerPoint presentation, as well as two short testimonials that we had recorded. The first is from an English native speaker returning from France who explains how he interviewed for a position in Paris and did not even get to the end of the interview because he had been addressing his potential future boss with T, which, he was told, was simply unacceptable. The second is by the president of a Montreal company who comments on how a new employee, a native English-speaking Canadian, had addressed him with tu. He told her in no uncertain terms that until she had gained a few years of experience in the business, she was to address him with vous. Discussion and student questions ensue.

In yet another class, the topic of other types of address is introduced. This begins with listening to a two-minute clip aired in France and available on Dailymotion (France 2, 2007). Commentators express their surprise at the behavior of a talk show host in how she addresses her guests, immigrants and native French people differently. The immigrants are addressed by their first name and the French natives by their last. In other words, through her choice of address, the talk show host is belittling the immigrants, or asserting her superiority, as well as that of the native French guests. Discussion on forms of address and cultural issues is initiated.

In another class, students are asked to spend a few minutes chatting with one another in prescribed role-play situations. They first perform a role-play in which they write to each other using computer chat, which the teacher reviews and on which she subsequently comments. Other role-plays are performed orally. Situations include welcoming a guest speaker to the university, asking someone for directions, discussing work with a new boss, and planning a trip with a travel agent. Before doing the role-plays, students choose where and who they are, including age and profession. The last exercise in the scenario, given at a later time, is to read an article featured on Jobboom (Abesdris & Roux, 2006) that discusses how the Quebec school system has been reinforcing the use of V in recent years, along with comments on the French language and the use of T/V in professional settings.

The WordChamp website is a resource available via the class website (along with several other online resources such as dictionaries and French verb conjugation websites). An explanation on how to use WordChamp is provided through a brief video clip created with Camtasia Studio. The clip has a spoken commentary and the visuals show how to use WordChamp to obtain glosses of individual words. Students are asked to use WordChamp when reviewing the lyrics to the songs and to help them read the Jobboom article.

This scenario has been tested in real settings with university students, who are native English speakers learning French as a second language. The title of the course is “Spoken French,” for which students can register after a full year (two semesters) of intermediate French. Groups consisted of approximately twenty-five students who met three hours a
week for the duration of one semester. The scenario has been tested and progressively fine-
tuned over four separate semesters, each time with new students. The students have all
previously learned French in high school; however, they still had not mastered the proper
use of tu. Our scenario was therefore particularly relevant and useful for them. Student
comments can be summarized by: 1) “I had never realized how important discriminating
between the use of tu and vous could be;” 2) “I am grateful that this situation has been
addressed”; 3) “Why has this not been insisted upon sooner in our learning process?” It
became clear to all the participants in the class, myself included, that they had overcome
this difficulty. Students were also confident in the long-lasting effect of this learning.

CONCLUSION

This paper has reported on how we have addressed the problem of cultural and native
language interference in second/foreign language acquisition by analyzing its underlying
concepts and formulating an ontology of the phenomenon. This ontology served as a
conceptual foundation for creating instructional scenarios, and simple software tools were
used to support the learning environment. An example was presented. In the near future,
the plan is to: 1) identify new learning difficulties; 2) create new instructional scenarios; 3)
conduct trials with university students and, based on the results, enrich our reflection and
improve our understanding of this phenomenon; and 4) collect data to validate our
approach.

In the longer term, our goal is to build an Intelligent Tutoring System that will help students
overcome their difficulties by understanding and interpreting them, based on the ontology.
This system will be considered a “culturally-aware” system (Blanchard & Allard 2010). The
pilot work described here paves the way to building such a system and takes us in a
research direction with a promising future.

REFERENCES

jobboom.com/marche-travail/tendances/2006/08/29/1784421.html

cultural factors using computer-assisted language learning. In E. Blanchard & D. Allard (Eds.),
Handbook of research on culturally-aware information technology: Perspectives and models
(pp. 582-598). Hershey PA: IGI Global.

linguistic influence in the L2 acquisition process.” In K. Bradford-Watts (Ed.), JALT 2005
conference proceedings (pp. 382-393). Tokyo: JALT.

Bradford-Watts (Ed.), JALT 2006 conference proceedings (pp. 784-793). Tokyo: JALT.

American Council on the Teaching of Foreign Languages (1999). National standards in foreign
language education project: Standards for foreign language learning in the 21st century.
Yonkers, NY.


Blanchard, E., & Allard, D. (Eds.) (2010). Handbook of research on culturally-aware technology:
Perspectives and models. Hershey PA: IGI.


Dubreil, S. (2006). Culture through CALL. In L. Ducate & N. Arnold (Eds.), Calling on CALL: From theory and research to new directions in foreign language teaching (pp. 237-268). San Marcos, TX: CALICO.


Lomicka, L. (2006). Understanding the other: Intercultural exchange and CMC. In L. Ducate & N. Arnold (Eds.), Calling on CALL: From theory and research to new directions in foreign language teaching (pp. 211-236). San Marcos, TX: CALICO.


**AUTHORS’ BIODATA**

Danièle Allard is an Assistant Professor in the Department of Humanities and Communications at the Université de Sherbrooke, Canada, where she teaches translation, literature, and professional writing. In recent years, her research has focused on computer-assisted language learning and knowledge engineering, with an interest in learning difficulties stemming from native language interference combined with cultural differences. She has also been involved in research on culturally aware information technology.

Jacqueline Bourdeau is a Full Professor at TÉLUQ-UQAM, Canada. She specializes in educational technology and has been actively involved in the design of learning environments based on knowledge engineering; she has also been involved in developing intelligent tutoring systems. She is a member of the executive committee of the learned society "Artificial Intelligence in Education." She directed the LICEF research center (2001-2003), a laboratory in which research on cognitive informatics and training environments is conducted. Additional information can be found at: www.licef.ca/bourdeau/.

Riichiro Mizoguchi received a Ph.D. from Osaka University in 1977 and is currently a Professor at the Institute of Scientific and Industrial Research, Osaka University. His research interests include knowledge-based systems, ontological engineering, and intelligent learning support systems. Dr. Mizoguchi was president of the International AI in ED Society and the Asia-Pacific Society for Computers in Education from 2001 to 2003, and
of the Japanese Society for Artificial Intelligence (JSAI) from 2006 to 2008. He has received several awards, including an honorable mention for the Pattern Recognition Society Award, the 10th Anniversary Paper Award, and the Best Paper Award of the JSAI in 1985, 1996, and 2006, respectively. He is currently vice-president of the Semantic Web Science Association (SWSA).

AUTHORS’ ADDRESSES

Danièle Allard
Département des lettres et communications
Université de Sherbrooke
2500 boul. de l’université
Sherbrooke (Québec)
Canada J1K 2R1
Tel.: (819) 821-8000, x 66227
Fax: (819) 821-7285
Email: daniele.allard@usherbrooke.ca

Jacqueline Bourdeau
Professeure, Technologie éducationnelle
Télé-université, UQAM
100, rue Sherbrooke Ouest
Montréal (Québec)
Canada H2X 3P2
Tel.: (514) 840-2747, x 2827
Fax: (514) 843-2151
Email: bourdeau@licef.ca

Riichiro Mizoguchi
Department of Knowledge Systems
The Institute of Scientific and Industrial Research (ISIR)
Osaka University
8-1 Mihogaoka
Ibaraki, Osaka
567-0047 Japan
Tel: +81-6-6879-8416
Fax: +81-6-6879-2123
Email: miz@ei.sanken.osaka-u.ac.jp