A team of university Italian teachers at an Australian university has been able to obtain enduring benefits from CALL, through projects that last, and indeed grow and develop over time. The projects have focused on supporting students in effective use of out-of-class time once they reach an intermediate level of proficiency. This paper analyses the team’s 15 years of CALL experience by first examining the opportunities and constraints of the changing technological context—with rapid developments in both the types of tools available and the students’ relationships to them—and then seeking to identify aspects of the team members’ role as agents in that context that have allowed the projects to be successful despite the challenges. While we acknowledge that a certain level of skills, ability to work as a team and institutional support have been essential, we stress that the key to the success lies in three key principles that shape the team’s approach, namely: tailoring, integration and an iterative development process. Recommendations follow on strategies and techniques that we believe will assist in the sustainability of CALL over the long term in a university setting.

Introduction

As a culture we are susceptible to the lure of the latest technology, and our expectations of what might be achieved are often at odds with the realities. Such reactions to new technologies have been captured in Gartner’s Hype Cycle model (http://www.gartner.com/), which articulates five distinct categories or stages that occur in the emergence of any new technology, namely: Technology trigger; Peak of inflated expectations; Trough of disillusionment; Slope of enlightenment, and; Plateau of productivity. This trajectory provides a sense of how unrealistic initial expectations can quickly lead to disappointment, and the realization that it is only through extended use and systematic evaluation over time that a more reasoned assessment of the technology may be arrived at; unfortunately, this is time that typically we do not have, as yet another new technology makes its presence felt (Buckingham, 2007; Lanham, 2006; Levy, 2007a).

While Gartner’s model emerged in the commercial world, it is, we believe, reflected in the educational world, although perhaps with a certain time lag, a much reduced selection of technologies than those included by Gartner, and certain differences that relate to differences in the goals and context between business and education. With respect to emerging technologies, the educational literature often reflects the broader environment in that a particular technology or group of technologies or application is initially broadcast as having the potential to revolutionise education. There is also a corresponding tendency to undervalue or underrate what has worked successfully before, simply because it does not follow the latest trend. The technology trigger and peak of inflated expectations can also generate one-off projects to investigate the value or potential of a particular application or technology, through a development project or a research study. Often, however, by the time that project or study is completed, newer technologies have arrived. In the educational literature, it is quite common therefore to see widespread discussion of a technology or application at one point in time followed by a complete absence of discussion two or three years later (the trough of disillusionment), by which time a new technology or suite of technologies is attracting all the attention. At the same time, when new technologies have proved themselves in an educational context, pressures to upgrade the necessary hardware—with decisions often taken out of the hands of teachers themselves—can lead to a situation where it is not possible to sustain good materials simply because the hardware to operate them has been superseded or replaced. Two significant implications that tend to follow from this set of circumstances are: the unwillingness of teachers to engage with a technology because no sooner will they have acquired the necessary skills and expertise than the technology will be replaced; and the challenge for educational administrators who fear the costs of continually upgrading hardware and software when the benefits appear to be transitory.
In the CALL domain we see many of these broader trends reflected (Levy, 2007b; Levy & Stockwell, 2006). In particular, CALL has abounded with one-off projects, both in terms of materials development and research studies (Stockwell, 2007), and this is clearly evident in the literature where research projects are reported (Levy, 2000, 2002). For many years now there have been calls for more emphasis to be placed on the need to build on and learn from past experience, and attention to what we refer to as sustainability in CALL. For example, Levy (1997, p. xi) noted over ten years ago, “the CALL community needs to build upon what has gone before rather than be led purely by the capabilities of the latest technological innovation.” Of course, there have been numerous evaluation projects in CALL, but there has been little discussion of CALL development in the long term over a range of different projects within one particular context.

In this paper we respond to such calls, by presenting an analysis of the experience with CALL of a team of Italian teachers over a 15 year period. We first examine the opportunities and constraints of the changing technological context and then seek to identify aspects of the team members’ role as agents in that context that have allowed the projects to be successful despite the challenges.

The Italian CALL experience at Griffith

The setting

The CALL experience analysed in this paper is that of a team of three teachers of Italian in an Australian university and their collaborators,1—hereafter referred to as ‘the team’—, over a period of 15 years from 1994 to 2008. Their Italian programme is aimed at students achieving a high-intermediate level of proficiency in all four macro-skills, even if they start as complete beginners.2 A range of authentic material is used, from various media and in various genres, with the third-year courses all content-based, intertwining the study of language and culture; the current offering is “Italy through the News”, “Italy through the Cinema”, “Italy through Food” and “Italian Literature and Society”. Work in these courses draws on elements of a number of disciplines such as textual analysis, linguistics, sociolinguistics, film studies and cultural studies. Students therefore develop their ability to use Italian for academic purposes as well as their general proficiency.

The three Italian teachers engaged in CALL projects have been members of the Italian staff at the university since 1991 and have been responsible for the evolution of the Italian programme since 1996. Working as a team in the design, preparation and delivery of the courses, they subscribe to a shared view of the programme as characterised by a student-centred teaching approach that seeks to promote not only development of linguistic and cultural competence but personal language-learning strategies, with the aim of developing students as independent, reflective—and therefore lifelong—learners (Miceli & Visocnik Murray, 2005; Oxford, 2003). They draw greatly on communicative language teaching strategies and techniques—working with authentic material and making extensive use of small-group activities oriented towards communication for meaningful purposes—but with a strong focus on form in attention to the way grammatical structures serve to convey meaning.

Overview of the CALL experience in this setting

The team did not set out to ‘implement CALL’ in the Italian programme, in the sense of having a general strategy or overall plan. Instead, their CALL experience consists of a series of significant projects they have conducted, each quite distinct from the others. Each of the projects involves an application of technology that is tailored to one of the courses and intended to serve a specific function (or group of functions) within that course. The four projects discussed in this paper are concerned with the following principal applications of technology and learning functions: Italia oggi (Italy Today), a videodisk-based facility for self-access

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1 One of the authors is one of the three Italian team members, the other is the key collaborator.
2 Most of the students start university with no prior knowledge of Italian and attend 350- 400 contact hours in the three years of the programme. They are expected to reach “basic vocational proficiency” in reading and listening, and between “basic social proficiency” and “basic vocational proficiency” in writing and speaking, on the proficiency scales widely used in Australia, the International Second Language Proficiency Ratings (Wylie & Ingram 1999).
work with television news material, with a particular focus on listening (Kennedy, Miceli & Visocnik Murray, 1994, 1995, 1996; Miceli & Kennedy 2000); CWIC or Contemporary Written Italian Corpus, a corpus of short written texts accompanied by a special-purpose search engine, for use as a reference resource while writing (Kennedy & Miceli, 2001, 2002, forthcoming; Miceli & Kennedy, 2002); the SMS project, in which bulk SMS facilities are used to send students regular short bursts of language, with a particular focus on supporting vocabulary learning (Levy & Kennedy, 2005; Kennedy & Levy, 2008); and La mensa (The Refectory), a class blog to support writing and reading practice (Miceli & Visocnik Murray, 2009).

From this brief introduction, and the summary of the projects’ characteristics in Table 1 (see Appendix), it will be clear that the goals and priorities in these projects have been varied. The projects have used different affordances of different technologies, embodied different models of the computer’s role (e.g., tutor, tool - Levy, 1997), and been pitched to respond to different phases of the programme. While each project has placed one or two specific macro-skills in the foreground, it has also cultivated or encouraged the application of other skills in some aspects of its use, as well as attention to grammar, vocabulary and culture. Two have involved the creation of artifacts (Italia oggi and CWIC), and the other two an application of generic tools (SMS and the blogging facility of Lotus Notes).

Against these differences, the principal common thread is that all the projects have been aimed at supporting the students in using out-of-class time effectively. In a university environment only a small proportion of the students’ weekly language practice time is spent in class: the expectation in our department is normally three contact hours plus seven hours of private practice per week, per course. In practical terms, the Italian team’s propensity for outside-class-CALL derives in part from the conviction that the short, precious class time needs to be exploited as far as possible for face-to-face communication in the language and that it is essential to provide useful guidance for the students on ways to make the most of outside-class practice time, in a context where most students have few opportunities for face-to-face contact with native speakers. In terms of pedagogical principles, supporting outside-class practice reflects the concern to support students’ development as independent, strategic learners.

Therefore, when computers are used in the Italian classroom, beyond the day-to-day use of PowerPoint and display of material from the Web, it is generally for training the students for the outside-class CALL work, or in discussion and troubleshooting in relation to that work. For three of the four projects discussed in this paper, only a small proportion of class time in the semester is needed for these purposes. The exception is the CWIC project, where an ‘apprenticeship’ in corpus use is a major component of a second-year course and conducted in a series of half-hour class activities spread throughout the semester.3

The second characteristic common to almost all the projects is that they have been designed for students at intermediate and high-intermediate levels of proficiency, for work with authentic material or for authentic communication purposes, and in conjunction with courses that have a fairly flexible, open curriculum. This reflects the situation of adult English-speaking learners of Italian: after the first year the target language can be used routinely to present material and concepts, whether in spoken or written form, and students are expected to communicate orally for various purposes, read newspapers and literary works, access films and popular culture in relatively unmediated fashion, and do creative and academic writing as well as writing for personal purposes. The exception, with respect to this common characteristic, is the second phase of the SMS project, tailored to the beginners’ course with its relatively fixed curriculum and concerned, to some extent, with delivery of course material.

There has been a considerable degree of chance in the spawning of these particular projects, from among the myriad possibilities worth pursuing, and on the basis of this experience we agree with Stockwell (2007) that the question of which comes first—technology or pedagogy—is a chicken-or-egg one. This set of projects is not the fruit of any systematic effort to identify the key areas of need in all Italian courses, prioritise them

3 In addition to these activities that are planned in classes by the teachers, there is the use that students decide to make of computers themselves: if classes are held in rooms with computers available, they tend to use them as necessary to look up dictionaries or for Internet searches during small-group activities, and for other study or personal purposes during the breaks. Some also use their own laptops in class for note taking during certain types of class work.
and work towards providing appropriate types of technology-based support for them. Nor has it been a matter of periodically analysing the potential of new technologies and devising ways of exploiting those facilities in ways suitable to the courses.

In terms of the birth of ideas, we can say that the projects lie on different points of the spectrum between the technologically-driven and pedagogically-driven. The most clear-cut case of identifying a gap in the programme and looking for a technology that might be applied to filling it is that of the La mensa blog project. In this instance, the departure point was the question of what form of writing practice and assessment to include in the new course “Italy through Food” so that it would be consistent with the interdisciplinary approach taken to the theme of food in Italian culture and also complement the already defined oral components of the course. The two team members responsible surmised that this might be the sort of thing a blog would lend itself to—at a time when we all knew little about blogs except that some students had blogs for social purposes (in their native language). They then investigated the literature on blogging in foreign language courses (see, for example, Ducate & Lomicka, 2008; Godwin-Jones, 2006) while developing their particular approach.

By contrast, the SMS project is an example of the initial orientation being curiosity about the potential of the technology rather than perception of a pedagogical need or gap in the programme. We were prompted by a conference presentation on an approach to using SMS for vocabulary presentation and practice (see Thornton & Houser, 2005) to consider how we could use SMS in our context to support vocabulary learning, and subsequently to wonder if we had been neglecting vocabulary learning in our programme and therefore to investigate possible approaches to pursue (in, for example, Nation, 2001 and Schmitt, 1997). Not surprisingly then, the two phases of the SMS project so far have used the same features of the technology but with different aims and different content, reflecting the aims and content of two different courses.

Indeed, in the genesis of ideas for all four projects, the importance of inspiration drawn from others’ work cannot be overstated, although the degree of imitation or inventiveness on the team’s part has varied. Keeping track of research literature and attending conferences have been essential in seeding the rationale for each project, and then in building on or refining it. For example, the CWIC project has drawn inspiration at various stages from the work of Johns (1991), Bernardini (2000), Chambers (2005) and Frankenberg-Garcia (2005), while the devising of the Italia oggi project was greatly influenced by Meskill (1991) and Rüschoff (1993).

Each project has had a substantial life span, encompassing considerable change over time—in response to the changing opportunities and constraints of the context and to the results of evaluation processes conducted with students. And it is on the basis of this enduring viability of the projects that we consider them successful.

To understand why these projects have been successful, in our terms, it is necessary to examine factors that have both contributed to the selection of these specific projects over the numerous other possibilities, and influenced their longevity and their development over time. Given that some of the team’s applications have lasted longer than might have been expected, it is useful to consider to what degree this is due to adaptation at crucial moments in order to ‘move with the times’ and to what degree, on the other hand, it is due to adopting an approach that allows an application to continue despite not apparently ‘moving with the times’.

In the next section we examine some major implications, both positive and negative, of the changing technological context within which the team has devised and developed the projects. Subsequently, we examine the factors that have shaped the projects in that context: the institutional support and, more importantly, the role played by the team members in exploiting that context, through their skills, teamwork and key decisions.

**Technological change and its implications**
The technological landscape has changed relentlessly during the 15 years since the Italian team began to devise *Italia oggi*. We identify two major trends of change in that period, both of which have implications for the choice of CALL projects and for their development over time.

First, new types of CALL applications have been made possible through technological innovation, especially in terms of vastly enhanced accessibility thanks to the Internet allowing standalone installations of applications to be replaced by Web-based versions. The new functionality opened up by an increasingly wide range of communication tools, many included under the label Web 2.0, has also led to new possibilities. With this new and enhanced functionality, the feasibility of new language-oriented projects has widened and improved, as the development of various types of generic tools and high-level software has meant that some tasks that were previously time consuming and/or required the services of specialist programmers can now be quickly and easily performed by a moderately-capable language teacher. For example, Learning Management Systems (LMSs) include tools for creating online quizzes in various formats using a fraction of the time and effort that went into obtaining a similar result with Hypercard for the worksheets of *Italia oggi* in the mid 1990s (though in terms of functionality, not aesthetic appeal!)

The second major trend has been the shift in the students’ relationships with technology. Nowadays, the students’ use of ICTs in their social lives and study lives means their attitudes have to be taken into account to a much greater extent than when the Italian team started in CALL fifteen years ago. In the early years of *Italia oggi*, the students were often impressed both technically and pedagogically with what we had created, and perceived us to be ahead of them in using technology. In those days, when one thought of CALL it was usually associated with ‘computer-based technology’ and the use of ‘hardware and software’, and few people used computers outside work. Nowadays, many young students assume that, as digital natives, they will be more at home than us with technology.

In the development and use of CALL environments, it is important to recognize the comparative advantage of having the vast majority of our students ICT-aware. Some students apply technologies that they use in other studies or everyday life to their language learning well before we start recommending them, and share their skills with us and other students, thus contributing to developing everyone’s computer literacy. This has been the case, for example, in the use of PowerPoint and online dictionaries, and the watching of films on the Internet (which reduced our work in providing copies of films we set for study and arranging a lending system). And some students, after taking up computer-mediated communication (CMC) technologies for communications in their private life, extend it to using them for extra Italian practice, of their own volition, contacting Italian friends and relatives or seeking out ‘pen’ friends specifically for language learning purposes. In addition to such student-initiated take-up of technology, we can now count on a certain minimum standard of computer literacy for all students, set by the university: they are expected to use email for university communications and online forms for various procedures, to access course outlines and materials from the LMS and to participate in online discussion forums. We can assume all students are familiar with these tools, as training for those who need it is provided by a central university body.

But what of the specific implications of the two trends identified above for our choice of CALL projects and their development over time, and indeed their life expectancy? First, in devising new projects we now need to pay attention to, and can take advantage of, the technologies many students already use. So, an important factor in the selection of ideas for projects in recent years has been our attention to applications that are responsive to the technological environment in which students live, work and study, on the grounds that this will help engage the students effectively. In the case of the SMS project in particular, we can speak of horizontal integration (Levy & Stockwell, 2006): taking advantage of the way the students already use a particular technology in their daily lives and piggy-backing onto it for language-learning purposes. This means, on one hand, that there is no need for basic technology training but, on the other, that we have to be careful to avoid impinging upon the students’ norms of use by invading their personal space. In the case of

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4 The personal pronouns ‘we’, ‘our’ and ‘us’, when used in discussion of any specific project in the remainder of this paper, refer to the team members involved in that project: Kennedy, Miceli and Visocnik Murray for *Italia oggi*; Miceli and Kennedy for *CWIC*; Levy and Kennedy for the SMS project; and Miceli and Visocnik Murray for *La mensa.*
There is again the advantage that students are familiar with blog technology as it is used for social purposes. Even though most do not use it themselves, they have some expectations of how it will work.

Related to this is the second area in which there are implications for the devising and enhancing of projects: the nature and significance of training (see Hubbard, 2004). While in general much less class time now needs to be dedicated to training in operating a CALL application than in the past, when many applications were sui generis, like Italia oggi, we have found that care needs to be taken, as there can be a great disparity between the more and the less technology-literate students in terms of the training they expect. The under-21s, the majority, tend to have a high degree of intuition for operating search engines and user interfaces generally, and can be impatient if class time is dedicated to this type of training, while the few older students may feel the need to explicitly learn how to operate an application, through detailed instruction and guided practice, and there is the risk they may feel left behind otherwise.

Furthermore, training is not always just ‘technical’ or ‘operational’, but also about the pedagogical purpose of an application and the recommended ways of using it, and if students are impatient of training it can be harder for us, these days, to form positive attitudes in relation to any resource we propose for language learning. By contrast, in the initial development of the early projects, Italia oggi and CWIC (which preceded the rise of the Web, CMC tools and ubiquitous texting), we were more technology-competent than the students, and most of them did not have preconceived ideas or expectations as to how the technology we introduced them to would be used for language learning. In those cases we were either using hardware that most students were not familiar with (videodisk player) or concepts they were not familiar with (searching in a text database and using Boolean operators). On one hand this meant we had to deal with some students’ fear and awe of the technology, but on the other we were in a position to influence all students’ expectations of how a multimedia workstation should work, or of how a search in a text database should work, in supporting their learning.

Now, increasingly, it has become more of a question of conveying the differences between using technologies for social purposes and using them for learning purposes, and, again, making the pedagogical purpose clear. In some ways facilitating this change of focus with technologies that are very familiar to students is more complex and much more of a challenge than the more basic familiarisation and technology training required in earlier times.

But undoubtedly the most important implications of the two trends identified above have to do with timeliness and outdatedness. The risk of CALL applications quickly appearing to be out-of-date, either because of technological development itself or changes in students’ attitudes, is always present in a CALL practitioner’s mind. It is quite legitimate for those interested in developing a CALL project to hesitate, pondering two questions: 1) Is it even worth embarking on a CALL project if the application may well quickly become, or appear to students to be, redundant or in need of updating? and 2) How can we decide when to embark on a project and when to wait for technological developments that will make its development potentially easier, quicker and cheaper?

With respect to the first of these questions, we have learnt that applications can actually last longer than one might expect, and that the pressure to adapt to technological change (whether coming from students or within ourselves) is not necessarily accompanied by compelling reasons to do so. Indeed, our experience of the rise of the Internet can be seen as illustrative of two very different possible scenarios in relation to the question of how technological change can force adaptation of a CALL application or bring its lifespan to an end. While the rise of the Internet has to be seen as a watershed in the story of CALL (as indeed for technology in general), it actually had a very different impact on our two existing projects at the time, Italia oggi and CWIC: while it provided a marvellous opportunity for an upgrade as far as CWIC was concerned, we did not see it as implying any adaptation of Italia oggi was warranted. It is worth looking closer at these two cases.

The rise of the Internet brought about greatly increased expectations on the students’ part, and therefore pressure on us to keep up, for several reasons. Students began to expect access to any computer-based
application or tool from their own computer, at home, rather than having to work at a workstation on campus. Furthermore, the Internet brought high quality graphics, and speedy and sophisticated search engines. Students became accustomed to certain norms for user interfaces, and developed high expectations in relation to the speed and efficiency of applications and the aesthetic qualities of user interfaces; many are now disparaging of any application whose graphics have been produced with what they consider old-fashioned tools.

For us it became imperative to convert CWIC to a Web platform, because we saw it as exactly the type of tool that could benefit from this. Until then it had been available only from computers in the university’s laboratories, where we had paid for each installation of the software used for accessing it. We envisaged CWIC as really coming into its own in a Web version, freely available from students’ desks, like their dictionary, and with a user interface that would look familiar and intuitive in place of the old system of drop-down menus and complicated array of commands and parameter settings (because the standalone software we had used had been developed by and for linguistic researchers). By putting CWIC alongside online dictionaries and grammar reference tools, we therefore felt we were placing it in its natural home.

But we did not see conversion of Italia oggi to a Web platform as urgent, and indeed the fact that we and the students continued to use it effectively in its pre-Internet form for some years makes it an example of an application having a much longer lifespan than a superficial analysis might lead one to expect. For one thing, we did not see Internet access to Italia oggi as necessary, because we had not designed it for frequent bursts of use, but for substantial sessions of one to two hours duration, once or twice a week. But in addition to that, we felt we had sound pedagogical reasons for not converting it. We were convinced of the value of having a dedicated workstation for Italia oggi, set up in a small quiet room with a booking system, and accompanied by a library of printed resources that included reference books and newspaper clippings related to the topics addressed in the Italia oggi units. And we considered it essential that students should work at it in pairs as far as possible, collaborating in carrying out the activities and talking in Italian. While our approach had been perfectly acceptable to students in the pre-Internet years—when the use of a dedicated workstation in a fixed location was consistent with their expectations that computers served specific work and study purposes, and not recreational and communications functions—the facility naturally started to look old-fashioned to increasing numbers of students as the Internet and new communications technologies came into everyday use. Its interface came to seem very plain, lacking images, animation and colour, and with just basic Hypercard-style buttons and radio buttons to click on. We addressed this through our training of students, by explaining and reiterating the pedagogical framework, and they continued to accept this and respond positively to the benefits of Italia oggi in course evaluation surveys.

In sum, in the case of Italia oggi, we opted not to adapt it in order to ‘move with the times’, but to rely on an approach that would allow it to last despite not apparently ‘moving with the times’. In CALL more broadly, this is what it means not to be technology-led, and to insist upon the primacy of the pedagogical purpose. In such circumstances, the quality of the training provided is absolutely fundamental to the students’ understanding of the pedagogical goals. Appropriate training also helps them to understand and accept the teacher’s motivation in continuing to use more established technologies; and, contrary to expectations perhaps, the students readily accept this.

With respect to the second question above, on the problem of knowing whether to embark on a project at a certain point in time or wait for technological advancements to make it cheaper or less time consuming, the CWIC project is illustrative. The costs and time involved in compiling and preparing the corpus were undoubtedly greater when it was compiled originally (1995-98) than it would be now, but there is no point our lamenting this: the important thing is that the corpus continues to be useful to us and our students a decade later, so we consider the money well spent. A 500,000 word collection of letters, emails and material from magazine columns including both personal writing on everyday topics and texts by professional writers such as journalists and film critics, it is designed to provide models of expert performances in several of the text types our students encounter and are required to produce, during and beyond their studies. Although there are now several Italian corpora available, the decision to custom-build a corpus tailored for our student body and their needs would still be justifiable if we started again today. However, the process of collecting
and preparing the texts could be done much more quickly and easily today. At the time, thanks to over $50,000 in grants, we and some paid assistants spent considerable time scanning texts from printed magazines and then editing the texts to deal with the errors produced by early optical character recognition software. Within a few years, the possibilities for collecting texts of the same kinds quickly and easily from the Web had expanded greatly. However, the work of locating and selecting texts on the basis of the criteria we set, and carefully proofreading/editing them, would still have been substantial. And anyway, this has to be weighed against the problem that such a specialised project would have less chance of attracting substantial funding these days, given the changes in the university’s priorities for supporting the use of technology in learning, towards standardised and centralised systems based on LMSs.

Factors in the genesis, development and longevity of the CALL projects

In this section we examine the key factors that have shaped the Italian projects in the context of technological change discussed above. We consider briefly the necessity of institutional support and then focus on the role played by the CALL practitioners concerned in exploiting the context, through their skills, teamwork and key decisions.

Institutional support

Funding and in-kind support from the university have been very significant to the initial development phase of all four projects, and the ongoing use of the CALL applications developed. The first two projects would not even have been embarked on without special funding for the development phase from the university and a national government teaching-innovation fund, amounting to about $10,000 and $45,000 respectively, for each. Indeed, neither would even have been contemplated were it not for the existence of the national fund to apply to. This is because these projects included the creation of artifacts (Italia oggi and CWIC), which entailed both a substantial amount of preparation of content and purchase of specialist hardware and/or software. For Italia oggi the creation of worksheet activities and their implementation in Hypercard was a major undertaking, although paying assistants for some of this work brought an important benefit as their ideas enriched the content greatly. The mastering and copying of videodisks was also a significant cost to that project. The later projects, the SMS project and La mensa, were facilitated by similar small internal grants, but might have been feasible without that funding. This was because the content-development component was manageable for the team members concerned—although not insignificant (inventing the SMS messages, and creating a wealth of material for the blog, respectively)—and generic software was used.

As far as the university’s in-kind support is concerned, a previous period of investment in language study has left us with good infrastructure and technical support. It is probably no coincidence that we began planning our first CALL project in 1994, when a special-purpose languages building was under construction and the creation of the School of Languages and Linguistics, bringing together Romance languages and Asian languages from different faculties, was in the air. For as long as we have been engaged in CALL projects, the characteristics of the institution’s support for CALL have met the relevant criteria recommended by Chambers and Bax (2006, pp. 477-478) as necessary for the normalisation of CALL (issues 1, 2 and 10). First, we have “CALL facilities not separated from normal teaching space”: the languages building houses both CALL-equipped classrooms and normal classrooms, a large well-equipped private practice lab, small private practice room, and studios, and has simple and effective booking systems for specialised equipment and facilities. Second, the layout of the two main CALL-equipped classrooms is “organized so as to allow for an easy move from CALL activities to non-CALL activities”: the chairs are arranged in a U around a central large table and the computers in an outer U around the three walls, easily reached by the students rolling their chairs but not a hindrance to pair work or collective class activities. Third, we have “provision of reliable technological support and encouragement”: the School of Languages has a full-time highly competent technician who supports teaching, students’ private-practice activity and access to the library of resources, and, where feasible, staff members’ teaching development and research projects.

The ‘agents’ in this context: the skills, attitudes and decisions of the CALL practitioners involved
Having examined some of the opportunities and constraints thrown up by the context in which the Italian CALL projects have developed, and especially the pressures associated with rapid change, we can now turn to consider the role of the team members concerned. Within the context discussed above, what has been the significance of their skills and attitudes, and above all their strategic decisions, in the achievement of conducting viable CALL projects?

Complementary skills, shared interests and teamwork

In two main ways, who we are has been fundamental in the success of our projects. First, our interests and skills made us well-placed to start experimenting in CALL in 1994. Two members of the Italian team were completing a Masters in Foreign and Second Language Teaching, which included a major CALL component, while the third had had a previous career in commercial software design and programming and had been a guest tutor in a CALL course at an Italian university. These experiences probably made it possible for us to contemplate implementing CALL ideas that others might not, because they equipped us with the confidence to design and manage a project ourselves and to tackle both pedagogical and complex technical aspects ourselves, as well as valuable contacts with colleagues interested in sharing and discussing ideas.

Second, our ability to work as a team has been essential. Much of the success of the projects is due to the way the skills and attitudes of the individual staff concerned—the three Italian teachers and the chief collaborator (the second author)—have been productively combined. It is hard to imagine any of the projects being carried out by one of us alone, not only because of the sheer time and effort involved, but also because of the value of sharing skills and ideas in working out solutions. Clearly the essence of teamwork must have something to do with the personalities concerned; an ability to compromise and to take a long-term view of the equitable division of labour are probably important. But it is not just a matter of personalities: the stability of the teaching team in Italian has probably been essential, by allowing long-term planning and the development of a certain coherence and continuity in the Italian programme and consistency of goals and approaches. And much of what sustains the will to work as a team is the reality of shared interests—in teaching methodologies and CALL, and in our individual development as teachers—which again have evolved over time.

Decisions: the principles underlying our approach to the projects

Our skills and ability to work as a team to combine those skills have made it possible to take collective strategic decisions, and adopt a long-term perspective, which we see as having been crucial in determining the success of our projects. In this section we identify three key principles we have adopted in our approach to CALL projects that are the result of those decisions and that long-term perspective.

First, each application is tailored to our context: it is aimed at serving a specific function for our students in a specific course. Tailoring encompasses several aspects, including the content, the types of task, the training, and the aims of the evaluation processes. In the case of the CWIC project, for example, as noted above, we decided to create our own corpus so as to tailor its content to our students’ needs and interests. We did not consider the very few Italian corpora available at the time appropriate to our FL learners at intermediate to high-intermediate level. We designed CWIC to provide models of expert performances in several of the text types our students encounter and are required to produce, during and beyond their studies (including personal and business emails and letters, creative writing, informative pieces based on their own experience, commentaries, film reviews and short essays). And within each of the text types used, our selection of individual texts was aimed at including a range of topics that our students might find interesting or relevant, in texts likely to be comprehensible to them at the stage of the second-semester, second-year course in written Italian that we chose to introduce it in. We also tailored the types of task we set the students to do using the corpus and the training, developing over time what we call ‘apprenticeship’ in corpus use for enriching and correcting one’s text, in the context of a major autobiographical writing task. Again, when devising the blog project the team members concerned put considerable effort into making the character of the blog appropriate to the course it was embedded in (‘Italy through Food’). That is, they
created it around the theme of food, not only in the choice of images, links and text, but by using appropriate names like *La mensa* (the refectory) for the blog.

Second, we pursue integration of each CALL application as far as possible into the course we choose to tailor it to. For us, integration amounts to ensuring the CALL component becomes an essential part of the course it is designed for and is beneficial to all the students for a sustained period of time, not just an extra option that appeals until the novelty wears off, and is useful to only some of them. We see integration and tailoring as going hand in hand. The better tailored an application is, the more effectively it can be integrated into the course. Vice versa, if we want to force our students to use an application, then it makes sense to tailor it to their needs and interests as far as possible.

The integration process includes developing an effective approach to training the students, both technically/operationally and in the sense of conveying the pedagogical aims, and, where appropriate, linking the use of the application to assessment. Training and a link to assessment are aimed at ensuring that the students understand the purposes for which we have introduced the application and the ways we expect them to use it, and that they appreciate the importance and the value we place on it. Furthermore, on a pragmatic note, a link to assessment helps force students to take up the application seriously. In our experience, components of a course that are just recommended, not obligatory—whether they are technologically-based or not—are often completely neglected.

Integration can entail quite different things in different projects. For example integration of *Italia oggi* entailed all of the following: setting up the workstation in a small, dedicated room (with reference books to hand and newspaper material to support some worksheet activities, and with two comfortable chairs and plenty of desk space as well as the necessary equipment); establishing a booking system; briefing the technical staff in the languages building on how to support the students where necessary; providing the students with technical training in the operation; training them in the pedagogical aims and our recommendations for how to work with it; and linking outside-class practice with *Italia oggi* to in-class work and assessment. In the training we emphasised the importance of: a regular weekly session with *Italia oggi*; working in pairs and talking in Italian while working on the activities together; listening to a whole video item several times before starting the related worksheet activities; going through the three phases of a worksheet and their constituent activities in order; using the supporting resources provided; bringing questions and points for discussion to class. We recommended a minimum use of two hours of *Italia oggi* per week (preferably in 1 x 2hr session per week or 2 x 1hr sessions), to be treated as an essential extension of class time, and prescribed a set minimum schedule of completion for certain units, and some activities from worksheets to be handed in for assessment at specific points in the semester. This ensured all students had completed certain units before related discussion or other activities in class, and that they got regular useful practice for the exam at the end of semester which included comprehension of a news item.

Integration usually proceeds by stages. For example, in the SMS project we have not yet linked the messaging to assessment, as we have been concerned first to test the acceptability of communicating with students via their personal mobile phones and to ascertain appropriate frequencies and times for messages. We did not wish to link the messages to assessment until we had established an approach that students were happy with. However, integration into assessment is the aim of the next phase of the project in the future, because we see this as the benchmark of successful integration of any CALL innovation. Such complete integration tests how an innovation fares when it is no longer a novelty and must be taken seriously.

The third principle is that we envisage the life of each project as an iterative process of experimentation, evaluation and enhancement. Indeed, it is largely on the strength of the evaluations we have conducted with students that we claim our projects to be successful. These are of two types. First, there is a mandatory standard course evaluation survey of students at least every second year for each course and these, incorporating specific questions regarding the projects, allow us to systematically gain student feedback on the usefulness of the applications and on whether they like using them and find them easy to use. Then there are the more in-depth evaluation processes we conduct, tailored to the individual projects or phases in those projects. These are aimed at examining how exactly the students use the application when working
independently, and at identifying particular benefits and problems. This allows us to modify and enhance the applications and the training and/or other elements of our approach. For example, we have examined: students’ work at the Italia oggi workstation for evidence of learning strategies being employed; the types and methods of investigations students conduct with CWIC to solve lexi-co-grammatical questions; and the use they make of the SMSs received (carrying out any indicated task or resolving a given puzzle; looking something up; saving message and rereading later; and/or talking about with fellow students). The tools used for these evaluations are questionnaires, individual interviews, focus groups, observation of students at work with the applications, and retrospective reports by them.\(^5\) We tend to tailor the methods used in evaluation as well as the aims. We find that a light touch, with short questionnaires or class discussions, is required with first-year students, while focus groups and interviews are more appropriate with advanced students who do not see them as wasting their time. Given their extra experience of language learning and high motivation, they not only appreciate the value of their feedback but are more likely to have reflected more on their learning, and on what they have experienced in teaching, than most first-year students.

We have found student feedback very surprising at times. However much we think that what we do in a CALL innovation is consistent with the programme goals, course aims and content, the students’ proficiency and their needs and interests, their feedback sometimes highlights that they do not understand or appreciate what we have done, or do not find it meets their expectations. Some feedback has been very valuable in reminding us not to take for granted certain attitudes or experience among the students, and to make clearer what we are doing and why. For example, in the CWIC project, the evaluation of 2006 brought to light misconceptions about the relationship of CWIC to dictionaries and grammar books which we had not anticipated.

Sometimes our evaluations have led to considerable changes of direction within our projects. For example, at the start of our SMS project we were interested in SMS particularly for the purpose of repeatedly sending the same vocabulary in messages at increasing intervals, as a way of putting into practice theories of vocabulary learning that stress the value of increasingly spaced repetition (Nation, 2001). The students’ reactions against repeated messages, and their enthusiasm for certain types of content that we had not anticipated, caused us to drop the idea of repeating the messages and to experiment with a wider range of ways of dealing with vocabulary as well as various other types of content including grammar and course reminders. In the CWIC project we started out enthused by the ‘learner as researcher’ metaphor (Johns, 1991) for students at work with a corpus, but the results of our evaluations have highlighted difficulties the students encounter in the learner-as-researcher role and have led to a new approach to the apprenticeship and the functions we encourage the students to use the corpus for.

It will be clear from the above discussion that we take a long-term view of each project; the three fundamentals of tailoring, integration and an iterative process make this imperative. However, our experience tells us that, in return for the long-term investment we make in each project, we can expect benefits over a long term.

**Conclusion: lessons from this experience**

While the earlier discussion shows us to have been in a quite favourable position for tackling CALL projects, given our skills and interests and a certain degree of institutional support, we think there are nevertheless implications and lessons from our experience that may be useful to those in less propitious contexts. We can set out five specific recommendations.

First, we recommend treating any use of CALL in any teaching and learning context as a project, and within the project adhering to the three principles discussed above, of tailoring, integration and an iterative

\(^5\) We also consider as part of the process of experimentation and evaluation any basic testing of hardware and software functionality – as we consider it essential to ensure the robustness of each application before making it available to students – and, where indicated, piloting of a prototype.
development process. Envisaging something as a project implies treating it from the start as a substantial undertaking and taking a long-term view of it. We think that it has been crucial to our success that each project has been tailored to our context as a direct result of identifying a specific opportunity to apply specific technical capabilities in a specific way in our programme. As a result, the CALL application becomes fully integrated into a course, and is evaluated and enhanced over time.

Second, we see this approach as going hand in hand with a sense of complete ownership of each project, which has been essential for us. As university teachers we probably have a greater degree of autonomy and access to more resources than most school teachers, but we think it should be a part of the mentality of all teachers that any innovation—technology-based or not—is managed by the teacher within his/her context, and not simply submitted to. It is not just a matter of adapting the odd lesson plan to incorporate the use of prefabricated CALL tools or materials that the institution happens to make available. Effectively tailoring a project to one’s context requires being both free and prepared to make one’s own decisions.

Third, we stress that it is not necessary to see rapid technological development as incompatible with a long-term approach to projects or as meaning we have to continually upgrade or convert to new platforms. Specifically, we believe it is important not to be deterred from starting a CALL project by fear that the speed of technological change will make an application quickly redundant. For in our experience, as discussed above, applications can have a longer life-span than might be expected. As long as an application is robust technically and can still be used effectively by students in their learning, then in general it should not matter that the hardware or software used, or the style of the user interface, becomes old-fashioned in the eyes of young students. The importance of training each cohort of students so that they appreciate the pedagogical benefits cannot be overemphasized.

While students may feel the need to upgrade their model of mobile phone each time new features become available, or a new ‘look’ for phone devices prevails in the market, they are not usually such slaves to fashion as to fail to understand that the old phone and its features still work for the purposes they were designed for. And this point can be conveyed to them in relation to CALL applications. However, we recognize that some technological advances are of such fundamental significance that it is wise to take advantage of them if possible. This was the case for the rise of the Internet, which made online access to applications possible in place of standalone mode. But even in that case, for us, the need to convert or not depended on the type of application: we considered it imperative for CWIC but not useful for Italia oggi.

A corollary of this is not to defer a project which is already feasible, in terms of funds and current technology, just on the grounds that it will become cheaper in the future. It is always going to be hard to predict what is coming and how soon it will be readily available to a mass market. Our experience has been one of being prepared to start a project if it was technically feasible and affordable at the time, and not worrying that it might be much cheaper a few years down the track. As discussed above, the usefulness of CWIC over several years has vindicated for us the decision to create it when we did, even though that product and process would have been much cheaper if it had commenced a few years later.

Fourth, we have learnt that it is important to be prepared for a project to develop and grow beyond the bounds of the original conception as a result of the iterative process of testing, piloting, evaluating and refining the application. Finally, and linked to the previous point: we see it as very important to strike a suitable balance between the research and teaching dimensions in a CALL project. On one hand, the research dimension is essential: a CALL project should be both informed by research—at least in the sense of extensive reading of relevant literature—and treated as an experiment, in the sense of being appropriately designed and inclusive of an evaluation phase. On the other hand, obtaining real teaching and learning outcomes is essential: if the intention is to enhance a teaching and learning context in an enduring way, then it is important not to simply carry out an experiment, report on it, and then leave it at that.

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References


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**Appendix**

**Table 1: Characteristics of the projects**

<table>
<thead>
<tr>
<th></th>
<th><em>Italia oggi</em></th>
<th>CWIC</th>
<th>SMS project phase I</th>
<th>SMS project phase II</th>
<th><em>La mensa</em></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Macro-skills (+ indicates secondary)</strong></td>
<td>listening + reading and writing + speaking when used in pairs</td>
<td>writing + reading</td>
<td>reading</td>
<td>reading</td>
<td>writing + reading</td>
</tr>
<tr>
<td><strong>Learning areas (+ indicates secondary)</strong></td>
<td>grammar (esp. accuracy and complexity) and vocabulary + discourse + culture</td>
<td>grammar (fluency, accuracy, complexity) and vocabulary + discourse</td>
<td>vocabulary culture + discourse</td>
<td>vocabulary and grammar (accuracy) + culture</td>
<td>grammar (fluency) culture</td>
</tr>
<tr>
<td><strong>Year</strong></td>
<td>III</td>
<td>II, III</td>
<td>III</td>
<td>I</td>
<td>III</td>
</tr>
<tr>
<td><strong>Host course</strong></td>
<td><em>Italy through the News</em></td>
<td>Written Italian</td>
<td><em>Italian Literature &amp; Society</em></td>
<td><em>Introductory Italian A</em></td>
<td><em>Italy through Food</em></td>
</tr>
<tr>
<td><strong>Technology</strong></td>
<td><em>Macintosh + Hypercard + videodisk player, for direct access to A/V material and presentation of online worksheets composed of quizzes in various formats and open questions</em></td>
<td>online corpus and custom-built search engine for concordancing functions (prior to 2001: standalone software <em>DBT Text Database Manager for Windows</em>)</td>
<td>commercial bulk SMS service for sending 160-character text messages to students’ mobile phones</td>
<td>commercial bulk SMS service for sending 160-character text messages to students’ mobile phones</td>
<td>blog function within <em>Lotus Notes</em></td>
</tr>
<tr>
<td><strong>Applied to</strong></td>
<td>a self-access facility for exploring the language and content of TV news items</td>
<td>reference resource while writing for personal and academic purposes</td>
<td>exploring vocabulary used in set novel; developing vocabulary learning strategies</td>
<td>learning beginners’ vocabulary and grammar; developing vocabulary learning strategies</td>
<td>writing for academic and personal purposes</td>
</tr>
<tr>
<td><strong>Artifact / generic</strong></td>
<td>artifact</td>
<td>artifact</td>
<td>generic</td>
<td>generic</td>
<td>generic</td>
</tr>
<tr>
<td><strong>Computer as...</strong></td>
<td>tutor</td>
<td>tool (text database manager and search engine)</td>
<td>tool (communications device)</td>
<td>tool (communications device)</td>
<td>tool (communications device and database manager)</td>
</tr>
<tr>
<td><strong>Life span</strong></td>
<td>1995-2005</td>
<td>1998 to present</td>
<td>2003 to present</td>
<td>2007 to present</td>
<td>2007 to present</td>
</tr>
</tbody>
</table>