

Design principles for integrating authentic activities in an online community of foreign language learners

Mariolina Pais Marden

University of Wollongong, Australia

Jan Herrington

Murdoch University, Australia

Actively encouraging foreign language learners to establish a meaningful connection with the target language culture—by engaging in authentic activities with other learners and native speakers in real-world communicative contexts—is a critical goal of foreign language education. This paper describes a design-based research study that investigated how students of Italian at an Australian university engaged with and responded to a web-based learning environment which integrated authentic learning tasks to facilitate social interaction and meaningful collaborative language practice with native speakers of the target language. The findings suggest that the use of the critical elements of authentic activities actively supported student learning across different domains. A major outcome of this research was the development of a set of design principles and guidelines for the design and development of authentic foreign language learning environments that could inform and guide other language educators within their specific educational context.

Introduction

One of the main challenges of learning a foreign language in a classroom context is the lack of opportunities to interact with its native speakers in real-world situations (Nunan & Richards, 2014). There is also a tendency to focus on the development of grammatical competence and to rely on de-contextualised textbook-based tasks and situations as a resource for communicative practice, rather than on meaningful and purposeful language use in authentic contexts (Littlewood, 2011; Ellis, 2016; Long, 2015; Richards, 2015). Despite the variety of innovative assessment techniques available to language instructors, it is also often easier and more time-efficient to rely on traditional, non-authentic and decontextualised methods of assessment, such as grammar tests and quizzes, to evaluate students' level of linguistic and cultural competence. Although these types of assessment tasks can be efficient and convenient for the language instructor who needs to quickly test students' linguistic proficiency, their narrow focus on the production of correct linguistic form does not reflect students' ability to use the language in meaningful, authentic context and limits even further students' opportunities to engage in activities that are authentic and purposeful (Ellis, 2016; Norris & Ortega, 2013; Ozverir, Herrington & Osam, 2016).

In recent years, the need to address these issues has become paramount. Actively encouraging learners to establish a connection between the linguistic structures and forms that they learn in class and the types of goal-oriented situations that are typical of real-world target language communicative contexts have led researchers to explore the possibility of applying and integrating Vygotsky's sociocultural theory (SCT) into second language acquisition contexts (Lantolf, Poehner & Swain, 2018; van Lier, 2013).

Vygotsky's sociocultural theory applied to second language acquisition (SLA), with its emphasis on the social and cultural context of second language learning, and on participating in collaborative and meaningful interaction with more advanced speakers of the target language, complements and aligns well with the concept of situated and authentic learning, which focuses on learning in authentic settings.

This paper describes a research study that investigated how foreign language students responded to a web-based learning environment which integrated authentic tasks as a basis for social interaction and collaborative language practice with native speakers of the target language. The pedagogical approach employed in the learning environment integrated core aspects of Vygotsky's sociocultural theory (Lantolf, Thorne & Poehner, 2015) and a situated and authentic learning framework to develop authentic tasks (Herrington, Reeves & Oliver, 2010) in order to provide opportunities for meaningful foreign language development. A set of design principles and guidelines was developed to support the development of similar authentic language learning environments in a range of foreign language educational contexts.

Literature review

Vygotsky's sociocultural theory applied to second language acquisition

Vygotsky's sociocultural perspective applied to second language acquisition (SLA) emphasises the integrated nature of the structural aspects of language and second language acquisition, and the social and cultural context in which second language learning naturally occurs (Lantolf, 2013; Swain, Kinneer & Steinman, 2015; van Lier, 2013). Vygotsky's sociocultural perspective applied to SLA views the social environment and the interactions and collaborative dialogue that take place in the second language as the main source of cognitive and linguistic development. (Donato, 2016; Ellis, 2016; van Compernelle, 2015).

The application of the sociocultural framework to second language pedagogy has led to the development of more contextualised methodologies which focus on providing learners with opportunities for collaborative social interaction and dialogue with other members of the target language speaking community. More specifically, the application of the Vygotskian concept of *zone of proximal development* (ZPD) to second language pedagogy supports teaching practices which focus on creating increased opportunities for language practice with more advanced and proficient speakers of the target language. In SLA research the ZPD has been defined as:

The difference between the second language (L2) learner's development level as determined by independent language use, and the higher level of potential development as determined by how language is used in collaboration with a more capable interlocutor (Ohta, 1995, p. 96).

This definition implies that the linguistic skills that second language learners can develop with the assistance of a teacher or a more proficient target language user exceed what they can achieve independently (Ohta, 2005). Therefore, in order to assist learners develop

their language skills and advance through their ZPD, it is essential to engage them in cooperative interaction and collaboration with more proficient target language speakers such as teachers, peers and native speakers, who can model appropriate and correct target language use and assist learners to move beyond their own limitations (Fernández Dobao, 2016; Storch, 2017). Learners are not identified as passive recipients of the assistance provided by the expert, but rather as active agents who provide cues to the expert (Poehner, 2008) who can then mediate and assist them to advance their linguistic development (Lantolf, Poehner & Swain, 2018) and reach solutions (to second language-related problems) that they may not be able to reach if working individually (Storch, 2017).

Another significant pedagogical implication of the sociocultural framework involves the practice of task-based language teaching (TBLT), which involves integrating authentic and meaningful tasks that have real-world relevance as a basis for language practice in and outside the second language classroom (Bygate, 2016; Ellis, 2017; Long, 2015). As Bygate (2016) explained, the practice of TBLT is grounded in the educational principle of 'learning by doing' and involves integrating social, cognitive and professional dimensions around the selection and use of a variety of useful and interesting tasks. In order to provide a site for the ideal type of interactive learning process known to facilitate second language acquisition (Mackey, Ziegler & Bryfonski, 2016), these types of tasks need to be relevant to students' communicative needs (Long, 2015) and need to be sequenced according to increasing levels of complexity (Norris, 2009).

These research-based pedagogical approaches to SLA, with their focus on task-based collaborative social interaction and meaningful language practice with more competent target language speakers, provide a framework that can be integrated with a situated and authentic learning model to guide the design and development of authentic learning environments and interaction-based tasks and activities that facilitate foreign language development.

Situated learning and authentic tasks

The concept of *situated learning* or *situated cognition* (Brown, Collins & Duguid, 1989) describes the situated nature of learning and refers to the role of context in the learning of knowledge and skills. Brown et al. contended that meaningful learning can best occur if it is embedded in the social and physical context in which it will be used in the future. They proposed a 'cognitive apprenticeship' model which involved situating abstract tasks into authentic contexts enabling students to observe experts together with other learners with different levels of skills as they participate in authentic practices and social interaction.

Based on Herrington and Oliver's (2000) model of nine elements of authentic learning, Herrington et al. (2010) further developed a framework that focused specifically on the element of learning activities, which more deeply investigated the pedagogy and design of authentic tasks. Specifically, they outlined 10 defining characteristics of authentic tasks—such as real-world relevance, complexity, multiple perspectives and resources, opportunities for collaboration and reflection, integration and application across different

subject areas and integration with assessment—and suggested how they can be used as a guide for the design and implementation of a variety of learning environments. Herrington et al. (2010) have argued that a complex, well-designed authentic task and the activities that learners undertake to complete it, can become a significant component or even the central element, of an entire course of study.

Technology-mediated tasks

Several researchers and language educators have argued that learners' interaction and collaborative negotiation of meaning in the target language can be effectively supported by integrating various types of asynchronous and synchronous text-based computer-mediated communication (CMC) tools into the L2 classroom and curriculum (Martin, Parker & Deale, 2012; Petersen & Sachs, 2015). The benefits and advantages of embedding such tools into the language curriculum include the development of L2 linguistic skills, such as reading comprehension and written communication skills (Levy & Stockwell, 2013; Sauro, 2012), enhanced social and intercultural competence (Lee & Markey, 2014; Lewis & O'Dowd, 2016; Schenker, 2012), more equitable learner participation in online discussions (Blake, 2013), reduced communication anxiety, and increased learners' perception of control over the online discussions (Ziegler, 2016).

Recent research into technology-mediated TBLT has also argued the unique benefits of embedding various types of technology in task-based language learning environments (Chapelle, 2014; Lai & Lee, 2011; Thomas, 2013), and discussed how tasks and task-based curricula can embrace the integration of technology, being both a medium for second language acquisition, and a way to enhance learners' interest and motivation and encourage sustained participation (Lai, Zhao & Wang, 2011; Nielson, 2014).

In the context of this project, a range of asynchronous and synchronous CMC tools were integrated into a foreign language course that had an authentic task as its central element, to support learners' TL interaction and collaboration with selected native speaker mentors, and enhance the learning of a variety of real-world skills in context. The research methodology of this study is discussed in the section that follows.

Research methodology

A study was conducted to investigate how a group of 16 intermediate and advanced level learners of Italian as a foreign language at an Australian university engaged with a web-based learning environment which integrated authentic tasks to support social interaction and collaborative language practice with native speakers of the target language. The research methodology for this study was conducted in four phases guided by the *design-based research* model proposed by Reeves (2006).

Phase 1: Analysis of the problem in collaboration with practitioners

The first phase of the research involved a comprehensive investigation of the problem area in practice, including an in-depth literature review and consultation with teacher-

practitioners who were familiar with some of the challenges and issues of teaching a foreign language at university. The main issues that concerned practitioners included the difficulties of engaging learners in meaningful and authentic interaction with native speakers of the target language, and of developing tasks that are engaging and relevant to students' interests and experiences. Each practitioner emphasised the importance of providing regular opportunities for collaborative interaction and participation in the types of authentic tasks that are likely to be found in real-world settings.

Phase 2: Development of solutions informed by existing design principles and technological innovations

The second phase involved developing theoretically sound solutions to the problems described in the first phase. A learning environment was designed and developed to enable learners to interact and collaborate with each other and a group of selected native speaker mentors through asynchronous and synchronous communication tools and resources of an online learning management system (LMS). Two authentic tasks were designed to incorporate the 10 defining characteristics of authentic tasks (cf. Herrington, et al., 2003, 2010) and seven native speaker mentors were recruited to support students in the process of completing the tasks. These mentors were university lecturers or tutors of Italian in Italy or Australia, Italian students who were completing a postgraduate teaching qualification, or Italian student interns visiting the university as part of a European funded mobility program. These participants were selected on the basis of their teaching experience and their enthusiasm and personality, as well as their ability to motivate and inspire students to learn in an online community. Prior to the start of the project, all participating mentors were provided with a list of guidelines developed to facilitate their mentoring experience and ensure that students would benefit from the interaction and scaffolded assistance.

Phase 3: Iterative cycles of testing and refinement of solutions in practice

In Phase 3, the learning environment was implemented in two six-week iterative cycles of testing and refinement of the solutions proposed in Phase 2. These successive iterative cycles were conducted over the course of one academic semester and the participants were 16 students, seven mentors and the class teacher. Data were collected through individual and focus group interviews of approximately 45-60 minutes each, students' messages and contributions to group discussion forums, synchronous chats, students' assessable project and learning portfolio, and the researcher's notes and observations.

Changes and adjustments to the design of the learning environment were made between the first and second iterations and related to issues such as the use of communication tools and resources within the LMS that supported the course, the number of students and mentors assigned to each of the individual collaborative groups, and the recruitment of additional native speaker participants to support students' interaction and collaboration. Data were analysed using techniques of qualitative analysis which involved the identification of dominant themes and coding into categories, and content analysis of participants' contributions to online discussions.

Phase 4: Reflection to produce design principles and enhanced solution implementation

In Phase 4, data were documented and reflected upon to produce a new set of design principles and guidelines that could be used by other language educators within their own specific educational contexts. A detailed description of the tasks and of the data analysis process is provided below.

Task description and analysis

The learning environment implemented in the study involved a scenario consisting of two authentic tasks designed according to the defining elements of authentic tasks (Herrington et al., 2010). The first task required students to plan and organise a four-week exchange trip to Australia for a group of visiting Italian university students, and the second, to plan and organise a four-week trip to Italy for all students in the class. Both tasks had to be carried out entirely in the target language and required students to work collaboratively to develop an itinerary and comprehensive travel guide that could take the form of a website, video segment, *PowerPoint* presentation, guidebook or brochure, or a combination of any of these options. At the start of each of the two iterations, students divided themselves into collaborative groups of three to five students and each of the groups was assigned to one native speaker mentor (to assist them during the collaborative process), according to the geographical areas of Australia and Italy that the groups decided to research. The collaboration took place both within each individual group and among the different groups in the class, and all participants interacted and shared their ideas and research using the University's LMS communication tools and resources (including email, multiple asynchronous discussion forums, and synchronous text communication via instant messaging and chat spaces).

Unlike traditional language-based assessment tasks which focus primarily on memorisation and the application of grammar rules and which are usually designed as separate assessments, the two tasks aimed to promote the learning of target language skills and the development of cultural knowledge and awareness in goal-oriented, realistic contexts that reflect the use of skills and knowledge in real-world situations (Lombardi, 2007; Ozverir, et al, 2016; Richards, 2015). These tasks required students to communicate and collaborate with their peers and mentors using the target language and a variety of authentic resources and material, over a sustained period of six weeks. The collaborative nature of the tasks encouraged students to negotiate roles and responsibilities, make choices, discuss issues and develop strategies to solve problems with the aim of completing an end-product to be shared among community members.

Techniques of qualitative analysis recommended by McCracken (1998), Morgan (1997), Miles, Huberman and Saldaña (2013) and Patton (2014), were used to analyse the data collected during the implementations of the learning environment. The process of coding and analysing the data involved a combination of the template organising approach described in Crabtree and Miller (1999) and Miles et al. (2013), and the constant comparative method (Glaser & Strauss, 1999). The template organising approach allowed

the researchers to determine early categories in the data based on the defining characteristics of authentic tasks identified from the literature, specifically: real-world relevance, ill-defined nature, complexity and sustained effort, multiple perspectives and resources, collaboration, reflection, integration and application across different subject areas, integration with assessment and development of polished products, competing solutions and diversity of outcomes. After developing the template, the constant comparative method was adopted to identify new emerging sub-categories and themes within each of the 10 established *a priori* categories. The process of coding the data is summarised in Table 1.

Table 1: Stages of analysis of data: Authentic tasks

Transcribing	Interview and observation data were transcribed for analysis.
Coding	Individual comments were coded according to <i>a priori</i> categories determined by the 10 defining characteristics of authentic tasks. Each category comprised a node.
Sub-coding	Each <i>a priori</i> category was investigated in more detail to reveal the themes and issues that emerged from the data. Sub-categories were determined and nominated as new nodes.
Ordering and displaying	Patterns and themes were determined within each category and sub-category, and observations were made. Data were organised into displays when appropriate.
Conclusion drawing	Conclusions about the meaning of data were made and written up
Verifying	Conclusions were verified and reviewed by reference back to the data.

Analysis of the data shed light on how the original defining elements that guided the design and implementation of the authentic tasks provided opportunities for student learning in the online community of foreign language learners of this study. The findings in relation to each of the final elements and the resulting design principles are described below.

Findings

One of the main outcomes of the design-based research approach is the development of design principles and recommendations to guide both theory and practice in specific educational contexts. In addition to the 10 *a priori* categories used to guide the data collection and analysis of this study, several sub-themes or sub-categories were identified and described for each of the original elements. The sub-themes that emerged were then used to determine whether the original elements could be retained or needed to be modified to align more appropriately with the specific task-based collaborative language learning environment of this study. As a result of the findings of this study, six of the 10 original elements were retained as described in the literature and four were merged and combined into two separate pairs. Each of the eight final defining elements and their impact on student learning, together with a new set of design principles to guide the development of similar task-based foreign language learning environments are presented below.

Real-world relevance

The findings suggest that the real-world relevance of the tasks supported students' learning by motivating them to engage fully with the context of the task, which was perceived and accepted as real, and by encouraging them to establish a direct connection between their own personal experiences and interests and the new task. This was reflected in the following comment by one of the students (pseudonyms used):

I love travelling, so I really liked the idea of planning a trip and looking at all the places where I could go and all the things that I could do (Interview, Elise)

This integration of students' experiences and interests with the tasks also enabled them to actively construct new ideas and understanding by transferring their current or past knowledge and experiences to the new scenarios that were presented to them. Another significant benefit (related to the real-world nature of the tasks) was that it enabled students to be exposed to and gain an understanding of the target language as it is used in real-life situations and to apply the language structures and expressions learned in class or from the textbook to the wider context of authentic communication.

Further, the real-world nature of the tasks provided a context for developing a range of practical and transferable skills that students are likely to need and use in a variety of real-life situations. In order to complete the tasks, students were required to access and interpret current authentic information, such as transport timetables, prices, menus and weather, gathered from a variety of websites, plan and organise the various aspects of travel with a limited budget, solve practical problems and deal with unexpected difficulties and changes of plans. Students generally recognised the value of learning new practical skills that could be applied to real-life situations with real purposes. For example:

Apart from the language skills, we got to learn some more practical skills as well, like navigating our way through Italian websites and finding information about how to get around, where to stay and so on... I think all these skills can be pretty useful if some of us go and study or work in Italy next year because we're going to have to know how to do these sorts of things. (Interview, Elise)

As a result of these findings, four design principles to guide the development of authentic tasks that have *real world relevance* were derived (see Table 2):

Ill-defined nature and complexity

The ill-defined and unstructured nature of the tasks and the fact that they were complex and investigated over a sustained period of time enabled learners to explore complex scenarios that reflected the ambiguities typical of real-world situations, and encouraged them to identify and respond to the type of challenges that they are likely to encounter in real life. These aspects of the tasks motivated learners to develop their problem-solving skills by identifying the problems related to the tasks, and develop appropriate solutions and effective strategies to solve them, which included brainstorming, discussing possible

Table 2: Design principles: Real world relevance

Element of authentic tasks	Design principles
Real-world relevance	Design tasks which: <ul style="list-style-type: none"> • are set within a meaningful context and relate to the target language culture • are engaging and relevant to learners' personal interests and experiences • require learners to transfer prior knowledge and experiences to the tasks and to use and develop a variety of competencies and skills • require students to communicate with peers and native speaker participants in the target language

solutions within the groups, and developing appropriate action plans. One student commented:

It's not simply here is the problem, solve it, you have to go and work out what the problem is yourself and then try and find the best solution you can, which I think is a useful thing to do, because this is what you need to do in real life, things aren't always that clear and straightforward (Interview, Nicholas)

The idea that real-life scenarios are not always clear and straightforward, and that students should be confronted with issues and difficulties that reflect the complexity and ambiguity of the real world, has been highlighted in much of the situated learning literature (Brown, et al, 1989; Collins, 2006).

The ill-defined and complex nature of the tasks also encouraged students to develop valuable time management and organisational skills as they were required to organise their work and set themselves precise deadlines (in order to complete the different tasks on time), which fostered feelings of accomplishment and satisfaction as they arrived successfully at the end product.

It was kind of challenging but it was a positive experience after all... it forced us to think about a lot of different things, figure out what we had to do, who was doing what and when, and then do it... it certainly wasn't easy initially but we ended up finishing the work and producing a great itinerary. (Interview, Julie)

As a result of these findings, three design principles to guide the development of authentic tasks that are *ill-defined nature and complex* were derived (see Table 3).

Multiple perspectives and resources

In order to complete the assigned tasks, students were required to discuss their thoughts and opinions with other students in the class and with the native speaker mentors. Through this discussion students had access to the different perspectives of other generally commented positively about the opportunity to be exposed to ideas and points participants and were also able to contribute their own unique perspective. Students of view that were different from their own and to bring their own perspective to the discussion.

Table 3: Design principles: Ill-defined nature and complexity

Element of authentic tasks	Design principles
Ill-defined nature and complexity of the activities	Design tasks which: <ul style="list-style-type: none"> • are presented in the form of scenarios allowing students to encounter open-ended complex problems and explore multiple paths towards solutions • provide opportunities for students to define the tasks and sub-tasks required to complete the activity and to determine courses of action to complete them • require a sustained period of time to be completed and encourage students to set and make themselves accountable for deadlines

Some people came up with ideas that were completely different from my own, and I came up with ideas that were different from everyone else's ideas. (Interview, Josie)

By accessing multiple resources, students learned to be proactive in identifying information that was relevant to the development of the tasks and in disregarding that which was irrelevant, and to actively define the direction and focus of the tasks. In line with the tenets of the situated learning model, students were able to construct their own knowledge such as:

I liked that we could look at different websites, read what was in the sites, and then decide what was important, what was useful for the project and ignore what was not useful... we could decide what direction we wanted to give to our specific section of the task. (Interview, Lara)

Finally, the opportunities to access multiple resources enabled learners to develop their target language reading comprehension skills and to be exposed to a variety of linguistic registers and communicative conventions that are typical of specific social and situational contexts.

The majority of the websites I found were in Italian, and there was no little thing to turn it into English... and all of the emails and postings in the forum were written in Italian, so I had to read and understand a lot of information in Italian... as I kept reading I came to understand more of the content... my comprehension skills improved a lot just by spending time reading and trying to figure out the information (Interview, Elise).

As a result of these findings, three design principles to guide the development of authentic tasks that enable access to *multiple perspectives and resources* were derived (Table 4).

Collaboration

In order to complete the tasks, students were required to form small collaborative groups of three to four students and to communicate and collaborate with each other through the online resources provided, and in face-to-face mode, both during and outside of the regular class time allocated to the project. The regular communicative practice and

Table 4: Design principles: Multiple perspectives and resources

Element of authentic tasks	Design principles
Multiple perspectives and resources	Design tasks which: <ul style="list-style-type: none"> • require students to access, contribute and integrate different perspectives and points of view • encourage students to clarify and express their thoughts and opinions and compare them to others • require students to access and obtain information from a variety of authentic resources in the target language

interpersonal interaction enabled by the collaboration contributed greatly to the development of learners' target language oral and written communication skills. For example:

My language skills improved a lot just because I practised talking and writing in Italian as much as I could. ... the collaboration and constant interaction with everyone in the class and with the mentors really helped me develop my ability to communicate more clearly.
(Interview with Nicholas)

In particular, the opportunity to collaborate with more competent or advanced peers allowed students to extend their skills beyond their regular level and progress through their zone of proximal development (ZPD):

It was great to have Julie and the other girls in my group because their Italian is very good. I learnt a lot through working with them, things like *penso che* with the subjunctive, that kind of structure, I didn't really know it, but they used it a lot, so I learned it and now I use it as well. (Interview, Caroline)

The collaborative nature of the tasks also enabled students to develop valuable teamwork skills as well as effective negotiation and mediation skills and encouraged them to learn from peers who were more competent in the use of technology, or had more developed organisational and time management skills.

As a result of these findings, three design principles to guide the development of authentic tasks that enable *collaboration* were derived (Table 5).

Table 5: Design principles: Collaboration

Element of authentic tasks	Design principles
Collaboration	Design tasks which: <ul style="list-style-type: none"> • require students to work in collaborative groups to support the collaborative construction of knowledge • encourage students to interact and collaborate with peers and native speakers in the target language • provide incentive structures for whole group achievement

Reflection

Reflection is a crucial component of the situated learning model and one of the defining elements of authentic activities. Students had the opportunity to reflect on their learning experience both individually, as they engaged in their own personal observations and evaluations about their work in their reflective portfolios and in the individual interviews, and collectively, as they discussed and exchanged ideas with the other participants during the collaborative work on the tasks and during the focus group interviews that took place at the end of the first iteration.

Having the opportunity to reflect impacted positively on students' confidence in the value of their own ideas and in their ability to express them, leading to a deeper level of self-awareness and self-understanding about their own approaches and their own attitudes towards others. This higher level of critical awareness also prompted some of the students to change their approaches and attitudes and create a positive change to improve the outcome of the collaboration and benefit the whole group. One student acknowledged that the portfolio writing task and the focus group discussions encouraged her to reflect on some of the problems encountered during the collaborative work and on how she approached them:

It helped me to think about some of the issues that came up within our group and to reflect about the way I dealt with difficult situations... it also gave me the chance to come up with practical strategies to overcome some of those problems so that we could work more effectively as a group. (Interview, Chloe)

As a result of these findings, two design principles to guide the development of authentic tasks that enable *reflection* were derived (Table 6).

Table 6: Design principles: Reflection

Element of authentic tasks	Design principles
Reflection	Design tasks which: <ul style="list-style-type: none"> • encourage students to reflect on their learning experience both individually and collectively • encourage discussion within collaborative groups to enable collective reflection on learning

Integration with assessment and application across different subject areas

The integration of the tasks with the assessment allowed learners to be assessed on a wide range of skills in a way that reflected real-world assessment, and encouraged them to develop skills and abilities that transferred to the world beyond the context of the classroom and could be used and applied in the future. For example:

I realised that this type of assessment was much more holistic... it was good to be assessed on different skills because we could express ourselves in more than one way and show our strengths in different areas. (Interview, Chloe)

Another student pointed out that, as time progressed and she became more familiar with the tasks and their requirements, she appreciated the reasons for being assessed on different skills and acknowledged that this type of authentic assessment reflected the type of real-life tasks to be completed.

It took a bit of a shift in perspective because the assessment was different from what we were used to... as I got more into the tasks and I understood what was required, I appreciated why we were assessed in that way... it kind of made sense because this type of real-life assessment was linked to the tasks themselves. (Interview with Diana)

The fact that the tasks could be integrated and applied across different disciplines and were not limited to a single domain, enabled students to develop their awareness and broaden their knowledge about different subject areas. As well as developing their oral and written target language skill, students learned about the geography of Australia and Italy and about specific historical, artistic, cultural and religious aspects of the areas explored while working on the two tasks. Students also acknowledged the fact that there was integration between the tasks and other areas of study and appreciated the interconnection between their previously acquired knowledge the new learning experience.

As a result of these findings, four design principles to guide the development of authentic tasks that enable *integration with the assessment and application across different subject areas* were derived, together with possible impacts on student learning (Table 7).

Table 7: Design principles: Integration with assessment and application across different subject areas

Element of authentic tasks	Design principles
Integration with assessment and application across different subject areas	Design tasks which: <ul style="list-style-type: none"> • integrate authentic assessment of learning within the tasks rather than through discrete tests • assess students on a range of abilities and skills developed while completing the tasks (including language, research, organisational, teamwork, problem-solving, and oral presentation skills) • require learners to transfer previously acquired competencies and knowledge • can be integrated and applied across different disciplines and subject areas

Development of finished products

The fact that the final product of the activities was a finished and tangible product that could be useful and valuable in the future supported students' learning by motivating them to engage fully with the tasks, in an accomplished and professional manner. The relevance and potential usefulness of the finished products enabled learners to appreciate the integration between the tasks and their future experiences.

It felt good to create something tangible that could be useful one day if we go and visit some parts of Australia or Italy. (Interview, Tessa)

As a result of these findings, two design principles to guide the development of authentic tasks that enable the *development of finished products* were derived (Table 8).

Table 8: Design principles: Development of finished products

Element of authentic tasks	Design principles
Development of finished products	Design tasks which: <ul style="list-style-type: none"> • require students to develop a professional and polished product that is usable outside the context of the course • require students to develop a product that is shared and available to their group members

Competing solutions and diversity of outcomes

The openness of the tasks to multiple interpretations and a diversity of outcomes enabled students to be exposed to, and learn from, the unique ideas and interpretations of others and to express themselves creatively while developing the tasks, as reflected in the following comment:

Everyone read the tasks differently and everyone did things in a different way... I learned a lot from listening to the other groups' ideas, particularly those that were more innovative and alternative. (Interview, Nathan)

As a result of these findings, two design principles to guide the development of authentic tasks that enable *competing solutions and diversity of outcomes* were derived, together with possible impacts on student learning (Table 9).

Table 9: Design principles: Competing solutions and diversity of outcomes

Element of authentic tasks	Design principles
Competing solutions and diversity of outcome	Design tasks which: <ul style="list-style-type: none"> • do not require a single correct answer but allow a range and diversity of outcomes • are open to multiple interpretations and solutions and encourage students to be creative and learn from the ideas and unique interpretations of others

Discussion

The findings indicated that authentic tasks implemented in two iterations with university level students learning Italian as a foreign language appear to have provided valuable opportunities for learning. The real-world relevance of the tasks motivated learners to engage fully with the context of the tasks and enabled them to construct new ideas and understandings by transferring their past knowledge and experiences to the new scenarios.

The ill-defined and complex nature of the tasks enabled students to develop a range of practical skills that connect and are transferable to the world beyond the classroom, such

as problem solving, time management and organisational skills. The opportunity to access multiple resources and the different perspectives of other students and native speakers encouraged students to broaden their knowledge and understanding of the discipline area and to be open-minded and accepting about the different ideas and interpretations of others, as well as integrate them with their own unique ideas and perspectives.

The collaborative nature of the tasks promoted social relationships and motivation and supported the development of learners' target language skills and effective teamwork skills. The tasks encouraged students to engage in a process of individual and collective reflection which contributed to promote an action-oriented approach to the tasks and the development of critical thinking and a deeper level of self-awareness. Finally, the tasks encouraged students to express themselves creatively and to perform in a professional and immersive manner in order to complete a polished product that could be used and useful in real-life. A refined set of design principles was developed as a result of these findings, as described above.

A limitation of the study is that, due to the timeframe of the project, it was possible only to test and refine the learning environment in two successive implementations. Further implementations would have enabled the researcher to refine the learning environment by designing additional authentic tasks and testing specific language learning outcomes. Nevertheless, the findings of the two iterations are substantial, and further studies and implementations can build on the outcomes of this research.

Conclusion

This study has investigated how a group of university students of Italian as a foreign language engaged with and responded to a technology-supported learning environment which integrated authentic and meaningful tasks to enable collaborative language practice with other learners and native speakers of the target language. The authentic tasks implemented into the online learning environment in this study supported student learning in several ways, particularly in relation to the development of learners' target language skills and the integration and transfer of practical skills, such as problem solving, teamwork, time management and organisational skills. The tasks also had a positive impact on learners' motivation and commitment to their language learning development, and promoted a deeper approach to learning and the development of a greater level of critical awareness.

The authentic learning environment described in this study, and the design principles which emerged from its implementation, effectively support other language educators in the process of designing and developing authentic and meaningful language learning tasks within their own educational context.

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Dr Mariolina Pais Marden is a Lecturer in Italian at the University of Wollongong, Australia. Mariolina's research focuses on the use of ICT and authentic tasks in second language acquisition. Her PhD investigated the development and implementation of an online community of foreign language learners through the use of authentic collaborative tasks using design-based research.

Email: mpm@uow.edu.au

ORCID: <https://orcid.org/0000-0002-8354-6994>

Dr Jan Herrington is Emeritus Professor of Education at Murdoch University, Western Australia. Jan's research has focused on authentic learning, e-learning, mobile learning, online learning environments, and opportunities for Indigenous learning through technology. She is a former Fulbright Scholar.

Email: j.herrington@murdoch.edu.au

ORCID: <https://orcid.org/0000-0002-9960-4677>

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