

# Computer-mediated communication in Chinese as a second language learning: needs analysis of adolescent learners of Chinese at beginner level in Ireland

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**Abstract.** Ireland’s new strategy for foreign language education, *Languages Connect*, identifies the establishment of Mandarin Chinese as a curricular language as a key goal for the coming years. Within the curriculum specification for Mandarin at Junior Cycle (ages 12-15), “using digital technology is identified as a core component: the student uses technology and digital media to learn, communicate, work and think collaboratively and creatively” (NCCA, 2016, p. 6). While the introduction of Chinese courses in Ireland faces a number of challenges (e.g. a shortage of communication opportunities and appropriate learning resources), it also provides a unique opportunity to generate innovative solutions to these challenges through technology, specifically Computer-Mediated Communication (CMC). This paper outlines the overarching goal and Design-Based Research (DBR) methodology for this research project as well as the results of the initial learner needs analysis conducted at a post-primary school in Ireland. Participants in the needs analysis workshop consisted of 19 students aged 12-15 who are learning Chinese, and their teacher. The results of the needs analysis with students and their Chinese language teacher identified opportunities for meaningful communication, particularly with Chinese native speakers, and more learning about Chinese culture as the key needs to address within the broader research project, needs that could be addressed using CMC tools.

**Keywords:** CMC, DBR, needs analysis, Chinese as L2 learning/teaching.

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## 1. Introduction

CMC is widely promoted in practice and has become one of the most important research subfields in computer assisted language learning since the 1990's. [Herring \(1996\)](#) defined CMC as “communication that take[s] place between human beings via the instrumentality of computers” (p. 1). There is a large body of research examining synchronous and asynchronous CMC in a range of language learning contexts ([Blake, 2017](#); [Goertler, 2009](#); [Luo & Yang, 2018](#)).

Through reviewing the current state of the art in CMC for Chinese as L2 language learning, the authors found that the number of previous research focused on post-primary contexts was limited compared with university level or primary level.

The launch of Languages Connect stresses that Chinese language learning has an important place at the national education level in Ireland. This project is the first of its kind in the Irish post-primary context for developing Chinese as a curricular language in Ireland today.

The overall objective of the broader research project is to draw on the most recent advances in CMC and task-based language teaching to design a collaborative task-based environment that optimises opportunities for adolescent learners of Chinese in Ireland to use their developing language resources meaningfully and to develop their intercultural awareness. To address this goal, the learning environment will be structured around communicative collaborative tasks that require Irish young learners at Chinese beginner level (12-15 years old) and Chinese native adolescents with the same age range to create Chinese language resources, such as videos, about a culturally relevant topic.

As a part of the first author's doctoral research, this short paper presents the methodology applied and the findings from adolescent learner needs analysis through focus group workshops.

## 2. Method

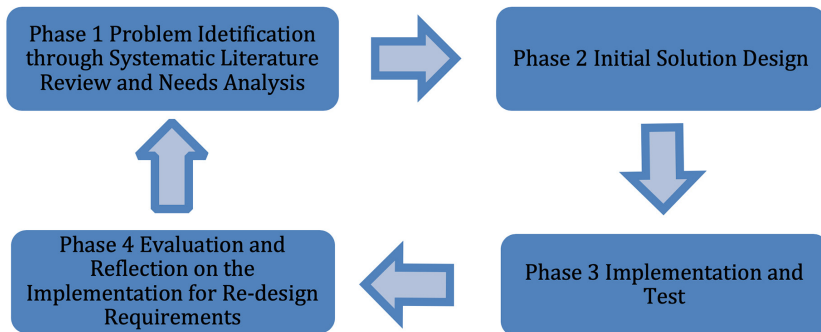
### 2.1. DBR approach

The project takes a DBR approach, an iterative, contextually grounded approach which emphasises collaboration between researchers and stakeholders in the

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educational context to solve real-classroom issues (Wang & Hannafin, 2005). DBR progresses in cycles of problem identification, solution design, implementation, and reflection to determine for re-design requirements, as in Figure 1. The overall project will include two DBR cycles with an initial Cycle 1 and a larger scale Cycle 2 where the implementation phase is designed as a quasi-experimental study. This paper presents the initial needs analysis phase of Cycle 1.

Figure 1. DBR cycle structure



## 2.2. DBR Cycle 1 Phase 1 student needs analysis workshop

The first phase of DBR research involves clearly identifying the problem space for the study in collaboration with stakeholders. In this study, Cycle 1 Phase 1 is composed of a systematic literature review of the literature on CMC for Chinese L2 learning and a needs analysis with adolescent learners and their teacher. The needs analysis was conducted in a post-primary school in Dublin where Mandarin Chinese is currently taught at Junior Cycle. The participants were an opportunistic sample of 19 students (Male 12, Female 7, age 12-15) and one Chinese teacher. The study was granted ethical approval and informed consent was obtained from all participants and the parents of the under 18 student participants prior to data collection.

The teacher needs analysis comprised a written teacher reflection and a semi-structured interview with open-ended questions which were structured around expectations for students, meaningful communication task design, and technology applied in the Chinese language class.

The student needs analysis was conducted in a workshop format to maximise discussion with three sections (see Figure 2): a think pair share activity on the most

important and interesting aspects of learning Chinese, a three step interview on their experiences to date of learning Chinese and a focus group interview.

Figure 2. Needs analysis workshop procedures



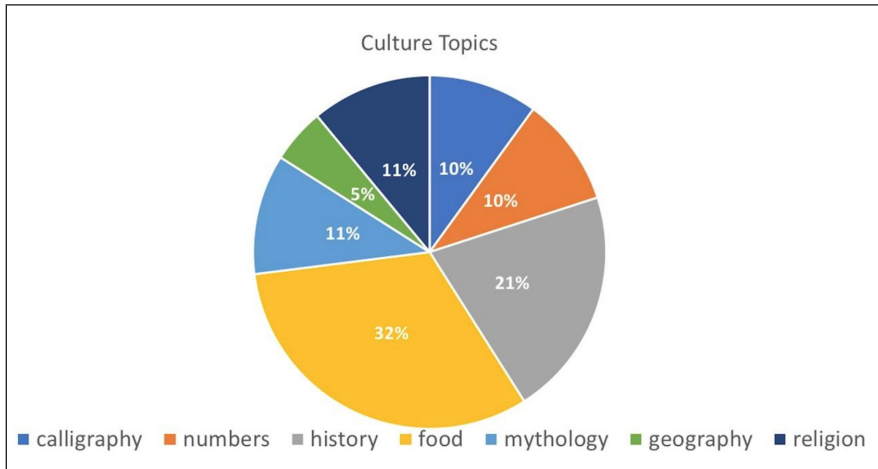
Through this focus group workshop, students shared their Chinese learning experience including their expectations and interests for Chinese language and culture learning as well as technologies which they currently use in their Chinese learning. The workshops were recorded and transcribed and artefacts such as think pair share sheets were gathered. A thematic analysis was conducted of the teacher and student data to identify shared needs and interests for further DBR Cycle 1 solution design phase.

### 3. Preliminary results and discussion

The needs analysis with the students and their teacher identified opportunities for meaningful communication as the stakeholders' key need. In this Irish post-primary context, the learners start as pure beginner learners and for almost all of them the only opportunity to use Chinese is in the class with their classmates/teacher. There are limited authentic Chinese language contexts and communication opportunities. Students indicated they were highly motivated to learn Chinese and they wanted to 'use' this new language for communicative purposes. In particular, they noted that they would like to have more opportunities to communicate with Chinese native speakers, perhaps with the support of technology. Their interest in engaging with China, through native speaker contact, was also reflected in their interest in Chinese culture. All students wrote in group notes that the Chinese culture was the part they wanted to explore most, with cultural topics of interest shown in [Figure 3](#).

As regards technology, the school regularly uses a range of technology and all students have a tablet as the main pedagogical resource. The students and teacher note they use MS Teams for school and class communication and sharing/submission of files. In addition to this, the teacher uses a range of technologies in the classroom including MS OneNote, MS Sway, Whiteboard, Youtube videos, and Audacity for recordings and gamified learning websites such as Quizlet, Gimkit, and Kahoot.

Figure 3. Culture topics



In the teacher interview, the teacher indicated that as regards language learning, technology is primarily used for developing student vocabulary and to model and showcase accurate and authentic oral language. However, the school context – where much of the school and classroom communication is mediated through technology with the use of MS Teams and OneNote – offers great potential to leverage this technology and offer opportunities for meaningful language use. As noted by [Levy and Stockwell \(2006\)](#), “any discussion of CMC needs to take into consideration the effects of the computer on the communication that occurs through it, as well as on the communication partners” (p. 84). In a context where CMC is the norm for school communication, CMC for language learning can build on the existing cross-linguistic digital communicative competence to support developing language competence.

#### 4. Conclusions

CMC tools provide learners with an authentic communicative environment. Currently, there is a research gap as to how CMC tools facilitate post-primary learners to learn Chinese as an L2. In order to bridge this gap, it is proposed that researchers and Chinese language instructors should start from understanding young learners’ needs. Moreover, the findings from the needs analysis indicate that: (1) meaningful communication with native speakers is the key need; and (2) exploring culture is a key interest. The upcoming phase of the study will involve

the researchers and teacher co-designing a CMC implementation to address these needs within the post-primary school context.

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