Language Teacher Education and the Challenges of Information and Communication Technologies (ICTs): Finnish Perspectives

Seppo Tella, Finland

"Languages are not just tools. They give every student a better chance to cope with multicultural communication in today's world."

Abstract

This article deals with three main topics. It starts with a brief introduction of the Finnish teacher education system. Second, it aims to locate foreign language education within this particular context and to argue in favour of languages as empowering mediators, especially when enhanced with information and communication technologies (ICTs). Third, it will try to throw light on the convergence of ICTs and foreign language methodology. The main emphasis is in a synthesis of learning experiences gained over the past few years in the Finnish context.

Key Words: teacher education; language education; information and communication technologies (ICTs); Finland.

1 Foreign Language Education Challenged by Information and Communication Technologies

When I defended my doctoral thesis in 1991 about the introduction of international communications networks and e-mail into Finnish senior secondary school education (Tella 1991), it was obvious that a didactic use of technology served little more than a sideline role in most language teachers' and teacher educators' minds, even if, even in Finland, information and communication technologies (ICTs) had been talked about for more than a decade by then. In fact, when the Finnish National Board of Education launched its first ICTs project in 1980, foreign language (FL) teachers were among the most enthusiastic. What then followed is a long path of success and failure, testing and retesting, disappointments but also empowering moments of something new emerging. Now it is easy to see that new media, ICTs, open and distance learning (ODL) and similar trends have started to play a major role in Finnish teacher education and, increasingly so, also in Finnish foreign language teaching.

Many FL teachers still believe they can do without modern technology. To some, ICTs are alien and uninviting. These hesitant attitudes towards combining foreign language education and ICTs are reflected in expressions like "an uneasy alliance" (Tella 1997). This hesitancy is understandable, as it reflects the poor quality of earlier computer-assisted language learning (CALL) software, mostly consisting of drill-and-practice activities, which seldom served language teaching any good and even less, as communicative methodology gained ground.

However, a major change took place in the mid-to-late 1980s, when information technology (such as word-processing) and communication technology (e-mail in particular) started to merge. Suddenly, language teachers found new media and applications that were more than simple rudimentary tools in the hands of a knowing teacher and student. The emergence of the Internet with different technological platforms, such as mailing lists, chat, videoconferencing, integrated distributed learning environments (IDLEs; groupware platforms) together with mobile telephony have set a steadily growing number of high-profile FL teachers and teacher educators thinking of the potential of these technological developments. These teachers also understand that ICTs are far from being isolated on the periphery of the curriculum; rather, they help language teachers to get to the point of what counts in language teaching and learning, namely cross-cultural communication. In addition, ICTs are already firmly anchored to the FL curriculum in terms of both content and competencies in many countries.

This article aims to highlight some of the research findings—and some of our own experiences—in order to help language teachers in other countries to reflect on the potential of information and communication technologies in foreign language teaching and teacher education.

2   Teacher Education in the Finnish Context

All teacher education has belonged to the universities since 1974, leading to a university degree corresponding to an MA degree. Pre-primary school (or kindergarten) teacher education was incorporated into universities in August 1995. Kindergarten teachers obtain a BA degree, but they can continue their studies in order to upgrade their BAs to MAs. In Finland, it is considered important that all teachers should have an academic degree.

Finnish subject teacher education is based on division of labour between the university subject departments and the specialised Departments of Teacher Education (DTE), belonging to the Faculties of Education. Classroom teacher education is usually organised completely in the Faculties of Education. The Finnish system is close to the German "research model", but includes some elements of the English "personality model" and the French "professional training model".

In education, new kinds of problems—or perhaps just challenges—are coming up. The Finnish educational system has tried to provide everybody with similar and equal starting points. This has been the fundamental principle of the Finnish 9-year-long basic education system since the 1970s. Finland used to have a very centralised national curriculum, but since 1985 there has been a strong tendency of decentralisation and deregulation. A major curricular reform was carried out in 1994. The new framework curriculum gives a general outline and some sublime aims of education, but leaves all teaching objectives, study methods and most content areas to local authorities to decide. With these decentralisation trends and school-based curricula, Finland has gradually been geared towards a more competitive society, in which schools compete against each other. They also look for profiles of their own, whether focusing on sports, arts, ICTs or media.

3 Foreign Language Teacher Education in Finland

In the Finnish school context, foreign language teaching is taken care of by either dedicated language specialists ("subject teachers") or, in lower grades in particular, by class teachers specialising in teaching a FL.

As Finnish represents a Fenno-Ugrian language that is not spoken widely outside Finland, it is only natural that foreign languages play an important role in the Finnish school system. At the moment, it is up to the municipalities to decide at which level pupils start their first foreign language. Very often this happens in grade 3, with children aged about nine. In addition to Swedish, the second national language, all pupils study at least one foreign language (and many study two) in basic education (grades 1–9, pupils aged 7–16). The majority starts with English, followed by Swedish. Small minorities start with Swedish, German or French (and very few with Russian), to be followed by English. In secondary education (grades 1–3, students aged 16–19), most students continue to study three foreign languages and some take a fourth one.

3.1 Foreign Languages—More than Tools

One of the contemporary myths in language education is a notorious claim that a foreign language is "just a tool". In the light of current foreign language didactics, this claim is clearly misleading and likely to jeopardise the potential embedded in foreign languages. What follows from this myth is that foreign languages are considered less important than the subject content and the classroom context that mediate the teaching/learning process.

We argue that this reductionist belief should be widened considerably (Tella 1999b). If only taken for tools, foreign languages are seen as exclusively technical means to higher-level educational ends, used to reassure novice users. Yet foreign languages can be much more than just tools. In parallel with Jonassen's reasoning (1995), we argue that foreign languages can be used as (i) tools but also as (ii) intellectual partners and as (iii) new educational contexts. Even deeper understanding can be reached, if we link these three interpretations to the cultural artefacts theory by Wartofsky (1979; also Tella & Mononen-Aaltonen 1998).

At the level of primary artefacts, foreign languages can be compared with axes, saws, hammers and other tools humankind has made extensive use of. In foreign language contexts, other kinds of tools should be equalled to language, namely dictionaries, thesauruses, spelling checkers, but also computers and even telecommunications networks. We argue that *this first level is a good starting point but it is certainly not enough.*

The secondary level is concerned *with intellectual partnership that foreign languages can give to the learners.* This level includes various representations both of primary artefacts and of modes of action using primary artefacts but also, more importantly, cultural models (social interaction, discourse, word meaning). At this level, the question is of articulating what learners already know: representing their prior knowledge, reflecting on what they have learned and how they came to know it, supporting the internal negotiation of meaning making; constructing personal representations of meaning, and

supporting mindful thinking. In Jonassen's terminology (1995, 62), intellectual partners not only extend but also *amplify* the capabilities of human beings. In teaching a foreign language this level is extremely important, as it forms the gateway to the cognitive levels of the learners.

The third level is concerned with new emerging educational contexts and learning environments. Our main argument is that *foreign languages can—and should—be used to create, establish and maintain these new environments that are beneficial and conducive to meaningful learning*. At this level, meaningful real-world problems, situations and contexts are replicated through foreign language, highlighting and representing the different beliefs, perspectives, opinions, views, arguments, claims and justifications of human beings. At this level, learners should be thought of as members of knowledge-building communities of learners, not "simple" learners or students. In this sense, foreign languages help constitute relatively autonomous "worlds" of their own, which establish social relations across different cultures.

Cultural aspects are important at all levels, regardless of the age of the students. Language is the fundamental condition of a culture, and culture is an integral part of the interaction between language and thought. Both transmit beliefs, values, perceptions and norms. Language expresses the thinking behind the culture as well as individual worldviews. A simple interpretation of language as a tool does not help in culture-specific situations, which call for a more sensitive analysis of the linguistic and paralinguistic cues embedded in the message.

One way towards *a more modern interpretation of a FL might be found in the ways foreign language methodology has advanced* during the past 20 years. Some of the recent emphases are concerned with the nature of communication itself (authentic, genuine, real-time, dialogic and technology-facilitated, others with the learner's task (autonomy, collaboration, initiative-taking, responsibility-assuming, distributed expertise, shared cognition). There has been a drastic shift from a closed linguistic system towards an open system of knowledge and communication, underlining the importance of pragmatic, communicative and cross-cultural proficiency, intellectual challenges embedded in the use of language, and the trend towards authentic, genuine and immediate/online/real-time communication, enriched with mediated modes of communication.

The latest constructs deal with the paradigm shift in foreign language methodology, viz. *the pedagogical shift from a medium (= a tool) towards mediation* (cf. e.g., Widdowson 1990; Tella 1997, 36–37).

The medium concept implied that the message was conveyed through the language—the meaning of the communication act was linguistically encoded (a traditional structural view). In the mediation concept, the question is not what linguistic expressions communicate, but how people communicate by using linguistic expressions. The question, then, is about the pragmatics of language use, pragmatic features and problem-solving situations, an eclectic but critical methodological approach and in-depth understanding of other people and cultures, in addition to one's own.

One of the basic principles of the mediation concept is that the language is controlled by intake, not by input. This aspect reflects the belief in the learner's capacity to "take in" and to digest language material to a varying extent. In current pedagogical thinking, it is

central to allow FL learners and users to control the intake themselves. It should not be regulated by the textbook, the curriculum or, worse still, by the teacher. In this light, and especially if the learner is seen as an autonomous, self-regulating and self-directed learner, the teacher's role becomes more than that of a resource person. Additionally, the role of the language itself becomes more important than just a tool. *Language becomes an empowering mediator* between the teacher, the content matter and the culture represented by these two on the one hand, and the community of learners and the learning tasks on the other. In this process, the role of information and communication technologies may prove very valuable and beneficial.

4   Information and Communication Technologies

4.1   Finns' Interest in Technology

To have a good perspective to Finns' interest in technology, let us cite Señor Ganivet, a Spanish consul in Finland:

- "Finns seem to find it easy to adopt all new practical inventions fast and efficiently."
- "Bikes have become extremely popular."
- "The phone is almost as common as kitchenware."

The writer seems quite fascinated by the Finns' enthusiasm about new technology. What is noteworthy is that he wrote these words in the 1890s, more than 100 years ago.

Nothing much seems to have changed since Ganivet's time. Finns are still highly captivated by new technologies and can profit from Finland's sophisticated technological infrastructure, mobile telephony and emerging e-learning facilities. As an example, while only 2.4% of the world's population has ever accessed the Internet, the number of Internet access points in Finland exceeds that of the whole of South America and the Caribbean and is among the highest in the world. Mobile telephony is one of the areas that is opening up to educational solutions as well. Naturally, education should capitalise on this state of affairs.

4.2   Changes in Finnish Communication Culture

There are a lot of myths concerning Finland and her culture. One of the myths, originally created by the writer Bertolt Brecht, said that Finns are good at keeping quiet in two languages, Finnish and Swedish, both official languages in Finland. This myth has never really held true, and it is utterly out of date today. This myth, however, leads us directly to the present-day state of affairs regarding modern technology and communication.

One key to understanding the Finnish way of communication is to distinguish between high context and low context cultures. Finland belongs to the high context cultures, which traditionally respect silence, tolerate long pauses, follow the rules of sequential speaking and obey attentive listening when somebody else is speaking. Words are important and thus should not to be wasted unnecessarily. These principles have had an

enormous impact on ways Finnish people communicate with each other. When this kind of culture comes into contact with low context cultures, in which communication is mostly based on direct communication and on swift exchanges of ideas between people in the communication interaction, cultural misunderstandings and even clashes are likely to occur.

What has this to do with modern technology? A lot in fact, because there is a striking contrast between traditional ways of communicating and present-day fast telematic communication. In Finland, cellular phones are everywhere, as she has more cellular phones per capita than any other country. And at present, Finns use these phones in cafés, on buses, trains and trams, when walking in the streets, everywhere. Sociologically, this is a most captivating situation, which has to be taken into account in cross-cultural communication and which could also be utilised in FL teaching and learning. Why have silent Finns suddenly started to talk so vigorously, incessantly and eagerly, even in public? One answer might be embedded in the changes that have taken place in communication technologies.

4.3   Major Changes in Information and Communication Technologies

4.3.1   From IT to ICTs

In Finland, as in many other information-rich and knowledge-intensive countries, a shift has taken place in emphasis from information technology (IT) to information and communication technologies (ICTs). This change is clearly reflected in the use of mobile telecommunications, for instance, but it is also noted in the use of terminology in Finnish schools and in universities, as the notion of communication is gaining wider currency.

Smart messaging is a concept that not only makes it possible to send short text messages (no more than 160 characters) in 2–3 seconds to a host of countries in the world, and at prices much lower than any traditional means of communication could afford. It is surprising how much you can express in 160 characters, by the way. The latest versions of smart messaging enable one to exceed that limit and to send electronic postcards and spreadsheets, music tones and logos through SMS (short messages services). At the moment, more and more people read their e-mails on their mobile phones, and certain telecommunications companies are planning bew e-learning services on the air.

4.3.2   From DE to ODL and to E-Learning

Distance education (DE) is also changing towards open and distance learning (ODL) and e-learning. Instead of simply delivering teaching to remote places through telecommunications, ODL and e-learning emphasise wider access to learning resources. They also underline the importance of the learner's own responsibility for his or her learning process. In teacher education, these developments have not remained without notice and response. One of our solutions is represented by the Media Education Cen-

tre[1] of the University of Helsinki Department of Teacher Education, whose major responsibilities lie in the field of research and development in modern media.

4.3.3 From CBE to NBE

Another shift that has taken place recently is the one from CBE (computer-based education) and CALL (computer-assisted language learning) towards NBE (network-based education), in which a lot of new ideas turn up and call for our intense attention. For example, NBE implies the emergence of groupware platforms (such as WebCT), shared expertise, and cultivation of different types of specialities, which may be seen as a characteristic dialogic feature to empower individuals. These technological platforms are ideal to be used in FL education, as they combine discussion forums and the ways of exchanging and publishing shared documents and graphics.

4.4 From Diaspora to Convergence

One of the most surprising features witnessed over the past 15 years is the fact that FL methodology and ICTs have gradually converged towards each other. In fact, it is only fair to consider some of the latest developments as belonging to both at the same time (cf. Table 1). When becoming cognisant of this convergence, more and more language educators have started thinking of ICTs in a more positive light. Let me point out some of these developments.

Table 1. Some Common Features Between FL Methodology and ICTs (based on Tella 1999a, 105; slightly updated).

FL Methodology	ICTs
From a closed system of language towards an open system of knowledge	From automatic data-processing (ADP; "machine-driven") towards pedagogical applications ("user-driven")
From structuralism towards functionalism, experientialism and interactionalism	From ADP-based programming to computer-assisted learning (CAL) and to computers as tools (e.g., word-processing, e-mail attachments)
From mistakes and errors (taken for negative things) to thinking positively of errors as adding to one's learning process: teamwork but also self-directed learning	Towards an open, multimedia-based, networked, dialogic, co-operative and communal learning environment, with an emphasis on distributed expertise
To communicative competence	To media literacy
To pragmatic, communicative, cross-cultural proficiency • From form to content • Structures submitted to contexts relevant to communication situations • Meaningful to learners for different communication purposes	From monologic communication to dialogic and telelogic communication by means of computer-mediated communication (CMC) From closed (drill and practice -type) exercises to using real-life communications networks (e.g., the Internet; integrated dis-

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[1] http://www.edu.helsinki.fi/media

• Intellectual challenges • Fictional uses of language	tributed learning environments (IDLEs))
To authentic, genuine and immediate/on-line/real-time communication, enhanced mediated communication	
To autonomous (self-directed) work on the one hand, to collaborative work on the other, initiative-taking, responsibility assuming	
Cross-cultural dialogic communication; mediation; educational multimedia	

At present, FL methodology and ICTs have a lot to share. Some of these joint features are concerned with the nature of communication (authentic, genuine, real-time), others with the learner's task (autonomy, collaboration, initiative, responsibility). Some other notions have also become important, such as focusing on the communicative character of the teaching–studying–learning paradigm. The last constructs (dialogic communication; mediation; educational multimedia) concern the relationships between the communicators and the impact of mediation on the communication process (Tella 1998).

5   In Conclusion

What have we learnt from prior experience? At least it seems obvious that present distinctions between work, education, and play will dissolve. New terms like 'edutainment' (education + entertainment) and 'infotainment' (information + entertainment) are sure signs of this development. Some of this might already have come true. Educators and software designers are realising that including immersive ludic (play-like) features is needed to make them more appealing to be used in educational settings.

Not every country should repeat the mistakes others have made earlier. A few examples arising from the Finnish experience may be quoted, albeit they are eclectic instances. Now if ever it should be understood properly that instead of computer rooms we should install new equipment into subject-based classrooms, but also realise that a growing amount of studying takes place outside of school and conventional classrooms. For training purposes, at least two teachers per school should be allowed to attend; otherwise every effort is wasted. Principals should be trained together with their teachers. Full connectivity to the Internet should be guaranteed with a fixed line (ISDN or preferably ADSL) or with cordless connections. All teachers and students should have access to all the services of the Internet at any time. Information technology (IT) is no longer enough and should be changed into ICTs, network-based education (NBE) or e-learning and integrated to the teaching of all school subjects. The principles of educational use of ICT should be incorporated into all teacher education programmes. The educational rationale should precede any consideration of introducing new technology into educational settings. On the whole, a firm and well-justified theoretical basis is needed so that teachers would understand how these new tools and services can be fully utilised in educational contexts.

Admittedly, the teacher will change from a 'sage on the stage' to a 'guide on the side', but this is not enough: the real question is the dual stance (Willis 1995, 14–15; Mononen-Aaltonen & Tella 2000). Then the teacher is still on the centre stage as an actor and as a moderator of all activities, but at the same time (s)he will be on the side,

observing and reviewing the teaching–learning process with an attentive eye. The teacher will be at once an actor and a critic. And so are the students: playing their part but also analysing their own studying process at the metacognitive level.

We started with a motto, contending that languages are much more than simple tools. At the same time, our motto implies that it might take time to master all ICTs at our disposal. Then, perhaps, it is wise to sit down and listen to other people's experiences and bear in mind that the context for human development is always a culture, never an isolated technology. If this is done, then we could really believe that integrating foreign language teacher education and the use of ICTs will be beneficial and lead to more "inclusive" language learning by providing all learners with lifelong learning opportunities.

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Note on the Contributor

Seppo Tella
Ph.D, Phil.Lic., Sworn Translator
 (Full) Professor of Foreign Language Education

Affiliation: Research Centre for Foreign Language Education, Department of Teacher Education, University of Helsinki, Finland

Address: Research Centre for Foreign Language Education, P.O. Box 9 (20, Siltavuorenpenger), FIN-00014 University of Helsinki, Finland

Tel. +358 9 191 29620, fax +358 9 191 29626
E-mail: seppo.tella@helsinki.fi
URL: http://www.helsinki.fi/~tella/