



iTEC

Designing the future
classroom

iTEC Scenario Development Process

Sue Cranmer and Carlo Perrotta, Futurelab
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<http://itec.eun.org>

ITEC SCENARIO DEVELOPMENT PROCESS

Audience

This paper is intended as a brief and straightforward account of the identification and analysis of trends in iTEC - and how these feed into the scenario development process - to provide an introduction for teachers, researchers and policymakers.

Introduction

Innovative Technologies for an Engaging Classroom (iTEC) is a large European project involving 27 partners in 18 countries. The project aims to bring together policy makers, researchers, technology suppliers and teachers in order to design and build learning and teaching scenarios for the future classroom.

The aim of the iTEC scenarios is to provide flexible frameworks to enable technology-enhanced learning activities that engage teachers and learners. Within iTEC, Work Package 2 (WP2 - led by Futurelab, UK) has responsibility for the development of the initial scenarios. Before being tested in classrooms around Europe, some of the scenarios undergo further refinement and are enriched with specific technological resources and tools during the five cycles of the project. In August 2011, cycles 1 and 2 of the scenario development process have been completed with planning for cycle 3 well underway and due to start September 2011. Completion of the project is scheduled for August 2014.

What are trends in iTEC?

Broadly speaking, a trend is a shift of some description which is happening now, in the present, and which can be documented and observed. Examples include an economic development, a shared belief, a change in social practices, a grassroots movement, a behavioural pattern emerging as the result of the introduction of new technologies, an actively pursued policy or strategy. The main objective of the trend analysis in iTEC is to review current developments that may have an impact on a range of plausible futures in formal and informal education across Europe and globally, emphasising the more practical and applicable aspects. The time-scale considered is five to ten years.

The broader theoretical principle behind the approach to trends' analysis is that, whilst the future is unknown, it is dependent upon current actions. Therefore, whilst accurate predictions are impossible, there are possible realistic alternatives that can be envisaged. These alternatives constitute the 'evidence' as they refer to events and developments that can be observed empirically as they unfold in the present. This approach has been explored by a number of authors and thinkers (Bussey and Inayatullah 2008; Bell 2005; Slaughter 2002).

How have trends been identified for iTEC?

The identification of trends method was developed through a collaborative process with iTEC partners and wider groups of stakeholders. In cycle 1, the first stage consisted of Futurelab researchers carrying out desk research. A range of sources were considered (see appendix 1). To ensure that a wider set of perspectives about trends was considered, partners assigned to WP2 (European Schoolnet, Promethean, Smart, Ministries of Education in Portugal and Italy Aalto University) were asked to also highlight trends in education and/or technology that they were particularly familiar with or interested in.

Having received responses from all WP2 partners, the next stage was for Futurelab to draw up a long list of descriptors. Researchers analysed the descriptors and clustered them into five themes.

- Changing roles of teachers and learners
- Curriculum and assessment
- Knowledge and skills
- Learning spaces
- Technology

The trends and drivers that were elicited through the process tended to produce trends which were quite general. After further reflection, the decision was taken to focus the trends to be identified in cycle 2 more specifically on teachers' concerns and realities to enable the scenarios to better respond to their situations and challenges. Therefore, the collaborative process with WP2 partners identified trends focused on two different areas:

- current economic and political issues of pressing relevance to education;
- realities of teachers in Europe.

WP2 partners worked collaboratively through meetings and on a shared online document to produce the list of short descriptors. The identified trends were then consolidated into one document by Futurelab researchers. An online meeting was held with other WP2 partners to agree the consolidation and ordering of the trends and drivers.

In both cycles 1 and 2, the trends which had been identified were surveyed online by iTEC partners and wider groups of stakeholders. In cycle 1, the survey was carried out according to desirability and timescale. The purpose of this was to reach a consensus across stakeholders and experts about which trends are seen to be desirable in combination with how well the trends reflect the current and emergent situations within the countries. The results of the ranking activity allowed for the identification of 20 top descriptors across the themes considered by stakeholders to be both desirable and relevant according to a timescale of within 5 to 10 years.

In cycle 2, the survey focused on two dimensions: for the political/economic trends, relevance of the trend on the stakeholders' country; anticipated impact of the trend on the stakeholders' country within the next five years. For the teachers' realities trends, questions focused again on two dimensions: relevance of the trend to stakeholders and their colleagues in education; anticipated impact of the trend on the stakeholders' professional life in the next five years. This change was necessary because it would have been inappropriate to ask stakeholders to rank the desirability of political/economic trends such as 'the financial crisis continues'. This method resulted in the identification of 29 top trends.

What are scenarios in iTEC?

iTEC scenarios are short narrative descriptions of preferable learning contexts which are set within a model learning environment. The intention is to both inspire teachers and provide them with the tools and training to carry out new practices which facilitate more engaging classrooms. The scenarios take account of the different elements within the learning environment such as the activities and tasks (what happens in the scenario); environment (where the scenario is happening); roles (who is involved in the scenario); interactions between the other elements (how the scenario happens); and resources (what is required to support the scenario).

How do the trends feed into the iTEC scenarios?

The trends form a key building block on which to construct the scenarios. In the first two project cycles, Futurelab has organised and led scenario development workshops with participants from WP2, representatives from most of the other iTEC work packages and teachers. Participants co-constructed 20 short (mini) scenarios in groups based upon one or more of the top trends.

After the workshops to co-construct mini-scenarios, the short narrative descriptions were surveyed online by iTEC partners and other stakeholders. Respondents were asked to assess desirability and timescale (how long it would take for the content of the mini-scenarios to become common practice in schools without the influence of the iTEC intervention). Through this process 8-10 scenarios were selected for further development to be passed on to WP3 (Aalto University) for prototyping.

What are we doing to ensure that iTEC scenarios are "meaningful" for teachers?

The aim of the scenarios in iTEC is to help the project to develop innovative practices for future European classrooms that can be mainstreamed and taken to scale. The project was designed partly in response to other more 'blue sky' scenarios in which the classroom and school have disappeared and the scenarios are very detached from current realities (see for instance, IPTS 2001). In contrast, the iTEC scenarios are built upon current trends and drivers relating to pedagogical or technological shifts which directly feed into the scenarios. In this way, the scenarios are designed

to be in direct response to the realities and challenges facing teachers and schools in the next 5-10 years.

Nevertheless, this presents both opportunity and challenge. Anticipating an unknown future dependent upon current actions is demanding and as noted above, iTEC is seeking to identify possible realistic alternatives that could emerge and respond to these. Recognising the challenge, the iTEC scenario development process builds upon a range of established scenario development techniques and consensus building tools such as Delphi, and drawing on methods developed to support futures-facing prototype development such as the Beyond Current Horizons programme (www.beyondcurrenthorizons.org.uk). The Delphi method was developed by the RAND Corporation in 1953 as one of the first techniques created specifically to support forecasting.

The iTEC scenarios, therefore, are built upon trends and drivers that are affected and are affected by education to ensure that they are grounded in current realities. Ministries of Education from across Europe have been included in the processes to elicit and rank trends and scenarios to make certain that the scenarios being developed support them. They seek to address common issues some of which may already be part of the existing political agenda. Aligned with this approach, which is aimed at providing scenarios to respond to the challenges for Ministries of Education, the methods used also make sure that teacher's perspectives – the daily realities and the challenges they face – are also addressed. This is ensured through the involvement of teachers in the scenario development process in a number of ways. For instance, as noted above, the project is focused at the micro-level of teachers in classrooms working within the current context of established school systems. The iTEC scenarios are aimed at supporting teachers to take forward more innovative teaching practices which can help them to fulfil the demands and challenges of their work. The perspectives of teachers are elicited in a range of ways as follows:

- a review of literature was carried out to understand previous research into European teacher's attitudes to ICT;
- teachers from countries participating in the iTEC project were invited to take part in a survey about their current use and attitudes to digital technologies in their classrooms. The survey generated 1,231 completed responses from teachers across 24 European countries;
- teachers were invited to complete an online survey to indicate the desirability and timescale of the identified trends (cycle 1); the relevance of the trend to teachers and their colleagues in education and the anticipated impact of the trend on their professional life in the next five years (cycle 2);
- teachers were invited to complete an online survey ranking the desirability and timescale of the mini-scenarios (to be selected for development into full scenarios);
- teachers were invited to participate in the scenario development workshops in order to co-author the mini and detailed scenarios.

Recognising the importance of teacher's involvement in the scenario development process, further initiatives and methods are being designed to make certain that teacher's realities are addressed in future cycles to ensure that the scenarios respond adequately to the challenges they face in classrooms every day.

References

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See the list of selected sources for the iTEC trends here:

<http://itec.eun.org/web/quest/trends-sources>

<http://itec.eun.org>

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