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THE NEW MILLENNIUM LEARNERS: A PROJECT IN PROGRESS

Purpose of this document

This document includes, firstly, an overview of the project, including its objectives, an outlook of the planning of future activities and the description of its main outputs and dissemination strategies. Secondly, it presents some achievements and outlines future directions.

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OVERVIEW OF THE NML PROJECT

Project background and objectives

New Millennium Learners (NML) is a broad concept that covers, firs of all, the young generations born after 1985 who may be described as having grown up in an environment surrounded by ICT that has is usually considered to be new by adult generations, ranging from computers and the Internet to cellular phones, video-consoles and mp3 players. This is why they are usually called digital natives, as opposed to digital immigrants. But, secondly, there is no doubt that a growing number of adults can be said to act also as NML for their lives are also extremely dependent on digital technologies.

There are clear indications that the use of ICT made by NML surpasses the path and the scope that can be usually granted at most schools and universities in OECD countries. Just to give an indication, more than 90% of all 15 year-olds in most OECD countries can access a computer connected to the Internet, 50% connect daily at home but only less than once a week in schools.

The relevance of NML phenomenon lies in the fact that they can also be seen as the emergence of an alternative approach to the knowledge society to the one usually supported by formal educations institutions, which relies more on a progressive adaptation of the traditional approaches to communication and knowledge management than on the severe breakthrough that NML practices seem to announce. While the first is more suited to the life rhythms and pace of evolution of educational institutions, the second would represent a true revolution which, as a matter of fact, will seriously contrast with the knowledge society designed not by true digital natives, but by adults. The critical issue is whether educators and policy makers should be paying more attention to NML or it should be taken for granted that they do not represent a serious challenge for the future, but just the expression of another, rather post-modern, generational conflict.

Accordingly, the objectives of the project are the following:

1. To synthesise research on issues related to the conceptualisation of NML and its social and educational implications from a multidisciplinary perspective.

2. To compare the penetration and extension of this phenomenon in OECD countries, as well as to analyse the factors that help to explain both cross-national and intra-national differences, paying particular attention to age, gender and socio-economic issues.

3. To generate empirical evidence on the effects of the emergence of NML on their cognitive/relational/communicational skills, their cultural patterns, lifestyles and values, their concepts of knowledge acquisition, usage and production, as well as their expectations regarding teaching and learning, and finally their educational performance.

4. To explore the implications of NML for educational systems and institutions and assess their relevance.

5. To identify innovative and successful educational practices and policy initiatives aimed at accommodating NML into the knowledge society, thus facilitating exchanges of innovative experiences and lessons among OECD countries.

6. To promote an exchange of views among the main stakeholders, and particularly pupils, teachers and parents.

7. To identify policy options for governments to consider in the light of the broad objective of building the knowledge society taking stock of what the young generations have already achieved, be that in or outside their classrooms.

Methodology and planning

Initially, the project will be carried out during 2007 and 2008 with a possible extension. Its overall development will be monitored by an International Advisory Committee, to be appointed by the OECD in 2007.

Three complementary strands are being proposed: an analytical strand, a set of empirical components, and a case study strand. Both the empirical components and the case studies strands are intended to feed the analytical work. The empirical components are designed to provide comparative evidence on NML and their views about education while the case study strand is intended to deal mainly with the educational responses aimed at better accommodating NML competences and attitudes to education systems.

Analytical strand

A first analytical strand will pilot and monitor the overall development of the activity. This will target the conceptualisation of the NML, the development of an appropriate empirical component and the case studies, and the analysis of the results obtained. This analytical strand will be comprised of:

- Detailed analysis of the 2003, 2006 and eventually 2009 PISA databases and INES upper secondary school survey on the school and out-of-school use of ICT, as well as other OECD databases on the availability of technological devices and services for out-of-school use.

- Systematic research and literature reviews intended to synthesise research findings on the conceptualisation or the implications of the emergence of NML on a national basis.

- A series of international workshops to explore key issues. A first expert meeting was held in Florence (Italy) on 5-6 March, 2007, under the auspices of the Italian government and INDIRE. Examples of future topics to explore are gender, technologies and learning; videogames and serious videogames; and technologies in teacher training.

- The creation of a knowledge network of experts and relevant stakeholders to engage in discussion about the issues involved in the activity.

The empirical strand

The empirical strand is aimed at gathering evidence regarding who NML are, what the factors explaining cross-country and intra-national differences are, and how far their views and practices regarding knowledge challenge those held traditionally by schools. The empirical strand will have three different components:

- An international survey on NML practices regarding ICT, in and outside classrooms. This survey is likely to become part of the next PISA round (2009).

- A qualitative research, carried out simultaneously in all the participating countries, on how NML deal with real-life problems involving communication skills and knowledge management, and the role they assign to ICT, in and outside classrooms.

- An open discussion board, for teachers, pupils and parents, on the topics arising from the examination of the results of the two components above.

The case studies

To enrich the analytical strand, the information gathered from the empirical components will be supplemented by a series of case studies undertaken to highlight educational innovations intended to benefit from NML ICT-related competences, needs and expectations and to integrate them into daily school life. These will focus, for instance, on:

- The adoption of typical NML technological devices and services other than computers for school activities.

- New models of school organisation and ICT management that focus, for instance, on ubiquitous learning.

- Innovative educational programmes and practices taking stock of how NML deal with personal communication and knowledge acquisition, management, production and sharing.

- How these innovations are being taken into account in teacher training institutions.

Outputs and Dissemination

The Activity will produce a range of outputs:

- Expert papers commissioned to bring a multidisciplinary perspective on NML.

- A series of international workshops to explore key issues such as the conceptualisation of NML, teachers' and pupils' conflicting views about ICT and education, and the futures of NML technological devices and services in education.

- Background reports and systematic research and literature reviews produced by participating countries on the state of the art of research on NML.

- A report on the evidence of the emergence of NML across OECD countries and its impact on school education drawing on the results of an international survey.

- A report on the results of the qualitative research on NML approach to knowledge management in and outside schools.

- Selected case studies of innovative practices in accommodating NML potential to educational activities.

- A final report with main conclusions focusing on international trends on NML, good educational practices, and policy recommendations.

To maximise impact, dissemination of findings will be an integral part of the project. This will involve:

- A NML website, which will include tools for gathering evidence on NML, as well as a blog and discussion boards.

- A NML e-newsletter for participating countries and other relevant stakeholders.

- Two international conferences to present key issues, one on the conceptualisation and the implications of NML (beginning 2008) and another on the educational responses to the NML challenge (beginning 2009).

- Active CERI participation in relevant meetings and conferences.

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PROJECT UPDATE: PROGRESS MADE, ONGOING ACTIVITIES AND FUTURE DEVELOPMENTS

This section summarizes the accomplishments of the NML Project, ongoing activities during the current biennium (2009-2010) and plans for a final phase.

Work done so far

A number of expert meetings have been run. The information about these and the corresponding background documents and papers are downloadable from www.oecd.org/edu/nml. Topics covered are:

- the definition of NML (Italy, 2007)

- videogames and education (Chili, 2007)

- gender, technology and education (Norway, 2008)

- technology use in initial teacher training (France, 2009)

In terms of publications, there are three under way:

- *Beyond textbooks: digital learning resources in the Nordic countries* (September 2009). A draft is already available at EDG.

- *Are New Millennium Learners getting their grades? Technology use and educational performance in PISA 2006* (September 2009). A draft is already available at EDG.

- *Connected minds: The effects of digital media on learners minds* (January 2010). A draft will be presented at the GB meeting in November 2009.

In addition, two working papers are underway:

- *Return to gender: gender, technology and education.*

- *Serious gaming: videogames and education.*

Ongoing activities

These activities will be conducted during the rest of the biennium (2009-2010).

Studies

- **Technology in initial teacher training.** This is a comparative study on the drivers and barriers in relation to the use of technology in initial teacher training. The aim is to come up with a mapping

exercise of policy initiatives, current practices and recommendations to countries. The study will be finalised in Q1 2010.

- **Technology and educational performance**. An update of the previous study drawing on PISA 2006 with the new data resulting from PISA 2009 data intended to investigate further the relationships between time and modes use of technology and educational performance of 15 year-olds.

Conferences and expert meetings

- **First international conference on the New Millennium Learners (Brussels, September 21-23 2009)** aimed at disseminating the results of the work done so far.

- **The school of the future, today (Brazil, November 2009).** A two-day expert meeting with the objective of discussing how education systems collect and assess data about successful technology-based innovations in schools, and how the resulting information is disseminated and shared.

- **Netbooks in education (Vienna, Q1 2010).** A three-day conference intended to explore how countries which are undergoing massive operations of dissemination of (low-cost) netbooks are planning for assessing their educational impact, and to use this as an additional opportunity to better frame realistic educational expectations about technology. Jointly organized with the World Bank and the Interamerican Development Bank.

- **Second international conference on the New Millennium Learners (Istanbul, Q3 2010)**, aimed at updating the research base on the effects of digital media on learners.

Future plans

- **Indicators of Technology in education.** Joint work with the European Commission aimed at creating a system of indicators to monitor access, use and practices regarding technology in education. This work is exploratory and shall be shared with INES.

- **Learning from learners voices.** This is intended to investigate into 15 year-olds views and concerns about technology in education *vis à vis* their daily experiences. It will draw on two different and complementary approaches: an international survey to national representative samples and an international call to produce short video excerpts on the topic, to be uploaded to a dedicated YouTube site. A first outline will be presented at the Governing Board meeting in November 2009. A feasibility study will be developed during 2010.

- **Research on technology-based innovations.** A comparative analysis on how education systems monitor and research ongoing technology-based innovations in schools, how they asses their results and incorporate the resulting knowledge into the policy process as to scale up best practices and to inform teachers practices.