The Impact of Technology on Learning in the Use of World Wide Web On-campus

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“Computers are not intelligent machines that help stupid people. They are stupid machines that works only in the hands of intelligent people”.

“Il computer non e' una macchina intelligente che aiuta le persone stupide, e' una macchina stupida che funziona solo nelle mani delle persone intelligenti.”

(Umberto Eco)
WP6 Focus

Work Package 6 results of IMPACT Project focused on:

- Evaluating the impact of technology in traditional higher education courses with on-campus world wide web and in advanced technology equipped laboratories.
- The use of the Internet for supporting or substituting student’s study has been analysed.
For example, in Roma Tre University, the ‘Piazza Telematica’ building houses the largest single concentration of public access computers on campus. These facilities include computer classrooms and public-user labs; specialized multimedia equipements; printers and Web servers; and an extensive software library.
“Master di I Livello in Valutazione degli Apprendimenti”
“Master di II Livello in Valutazione dei Sistemi di Istruzione”
“Master di I Livello in Didattica Generale e Museale”
“Master di II Livello in Mediazione Culturale dei Musei: Aspetti didattici sperimentali e valutativi”

Face-to-face and ICT supported education: Undergraduate courses Educational Research and Measurement area (“Pedagogia Sperimentale”, “Istruzione a distanza”, “Ricerche comparative internazionali”)
Administration

- Questionnaire (likert scale) administrated both on paper and online

- Inform respondents on:
  - Purpose of the project
  - Project coordinator
  - Contact person and e-mail address
  - Guaranteed anonymity
Respondents

- **Main group** was constituted by 75 respondents from Roma Tre University and 75 from Plovdiv University;

  Selection criteria were:
  1) Students must had exposure to any kind of e-learning system through www oncampus
  2) Students may differ for degree of exposure to learning technology
  3) Students may be both part-time and full-time.

- **Comparison group** was composed by roughly 38 respondents coming each one from the remaining partners of project consortium: FernUniversität (Germany), Distance Education International and Ericsson Education Ireland (Ireland), Corvinno (Hungary).
To evaluate whether the impact is positive or not we ask the respondents their feelings concerning the use of technology related to:

- **The problem of access to learning for students with disabilities:**
  more than half of the respondents agreed that the technology is an effectively possibility to deal with this problem.

- **Contacts between students and teachers:**
  more than 20% is uncertain, more than 40% disagreed and more than 20% agreed.
Topics of interest

- **Frequency of communications between students and teachers:**
  more than half of respondents agreed that online communication increases amount of messages between students and teachers.

- **General impact of technology on learning:**
  only the 49% agreed or strongly agreed to this question, 20% is uncertain and 31% disagreed or totally disagreed.
Differences between MG and CG

Main group and Comparison group differ for the following aspects:

- **Level of education:** in general CG respondent has four or more years of post-secondary education meanwhile MG respondent has high school matriculation only.

- **Gender:** MG respondent is more probably a female than a male, the contrary in the control group.
Profile of typical respondent

- The age is in mean under 29 years, although in the CG it is slightly higher.
- The respondent had used frequently advanced technological in his professional life and more than once had to change his way of working because of technological developments.
- The profile of our respondents shows that we obtained a valid representation of population we intend to investigate for: age is up to 40 years in the 81.6% of cases, gender is equally distributed between male and female, and the ICT used for professional purposes is always present for the population engaged in e-learning activities.
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education.

- CG respondents are slightly more likely to strongly disagree with the statement than expected (21 actual as opposed to 16.5 expected, very small difference).
Online discussions do not reach the same level of effective communication as do face-to-face communications.

- This item is positively correlated (moderate intensity) with the item “Contacts between students and teachers can have the same intensity in online education as in face-to-face education” (rho = .490 Sig. = .000).

- Significance in difference in means between MG and CG.
Conclusions

- Respondents always held a fairly positive attitude towards the wide benefits that ICT can bring to learning and education.

- Respondents are mainly interested in the use of ICT for information exchange, such as ‘to communicate with the tutor’, for support more individualized learning programmes and the development of higher level thinking skills.

- It is observable that there is a significant difference in the judgement of respondents with or without experience in learning at world wide web on campus. Although at first sight it seems that CG receives the technology with more enthusiasm than MG, then they criticize the quality of online communication compared to traditional face-to-face communications.
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