Applications

# FORTIC courses: a successful challenge or a missed opportunity?

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## Abstract

The paper deals with a massive online ICT in-service training programme for Italian schoolteachers — FORTIC, training on ICT — carried out in 2003/04. As is usually the case, FORTIC has proved both a successful challenge and a missed opportunity. For instance, thanks to FORTIC, online teacher training has become more widespread with as many as 190,000 teachers — more or less one fourth of the entire teaching population, at all school levels — trained in a relatively short time. Likewise, according to the results of an INVALSI — the body in charge of monitoring — questionnaire submitted to all participants, teacher access to the use of ICT in teaching practices has been improved. However, is it really so? Of course, it will take much longer and the use of more sophisticated tools to measure the real impact of ICT in teaching and learning practices. While a few features of FORTIC have been fully discussed and analysed, both by experts and laymen, other questions have been explored only superficially, if not completely overlooked. Thus, this paper sets out to discuss a few specific issues raised by FORTIC at a deeper level, in order to give as full an account as possible of the training experience and to better focus strengths and weaknesses.



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## 1. Introduction

Much has been said and written about FORTIC — a teacher training programme planned by the Ministry of Education and INDIRE (the agency in charge of its implementation) which started in 2003 and has just finished. The programme featured 3 different levels. Level A: *use of ICT in teaching and school management*; level B: *developing and co-ordinating the use of ICT and multimedia resources in teaching;* level C: *setting up and managing technology infrastructure in schools*. On the one hand, FORTIC results are quite well known (Cuppini, 2004), on the other hand no global evaluation of the programme has been attempted so far.

FORTIC was a really ambitious programme meant to cover all possible applications of ICT at school level (Fierli, 2004), so its impact and results would be particularly valuable for anyone dealing with teaching and training. In fact while some features of this programme have been fully discussed and analysed — see for instance the issues related to online tutors (Tanoni, 2004) — other questions have been only superficially explored, if not completely overlooked: first of all the learning model — *blended learning,* generally considered as *the* model for this type of training; secondly the communication tools provided by the online learning environment, which are bound to influence, either directly or indirectly, the relationships among participants; finally the way the programme was monitored.

An overall evaluation of this complex and multifaceted training experience can help to focus on strengths and ways to better cope with weaknesses in future training programmes already underway.

## 2. Successful challenge

Both the Italian Ministry of Education and INDIRE, consider FORTIC a complete success. More than one representative of both institutions has pointed this out on several occasions. Statistics seem to prove them right. Organising and implementing a training programme for about 200,000 people was challenging. Doing so in a relatively new way, ensuring co-operation between quite a few different institutions at the same time, was even harder. That is why the mere completion of FORTIC can be considered a successfully met challenge. Trainees seem to agree with MIUR and INDIRE, at least judging from the 53,000 feedback questionnaires filled in by participants for MONFORTIC (Monitoring FORTIC), the online platform purposely created by INVALSI (the national evaluation agency for education) to monitor the programme, more than 90% of which highlighted a high level of satisfaction, as shown in figure 1 and 2.

It seems that, with FORTIC, online teacher training has become quite commonplace for one fourth of all Italian teachers who can access ICT resources at home or at school, and are willing to use them for their professional development. In fact almost all the 190.000 teachers who enrolled in FORTIC were able to

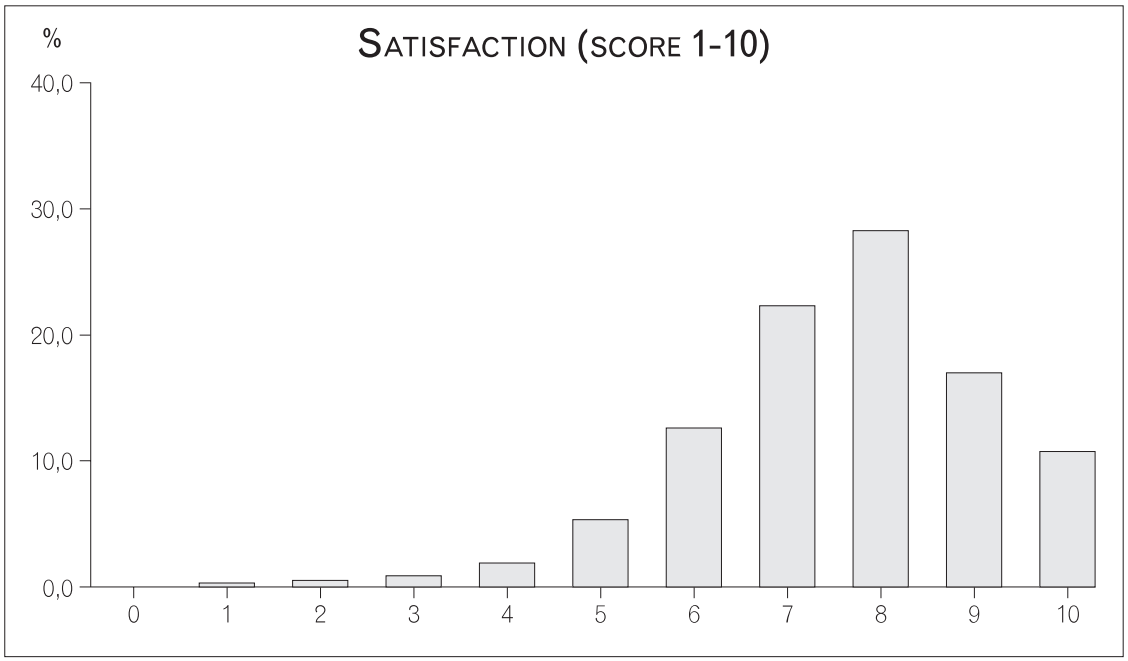


**Figure 1** Global feedback questionnaire Data refer to about 53.000 participants. 14 June 2004.

| *Number of occurences in each cluster* | | |
|---|---|---|
| Groups | Utterly unsatisfied | 3.750 |
| | Highly satisfied | 12.564 |
| | More than satisfied, particularly for local integration | 16.759 |
| | Particularly satisfied for the course atmosphere and interest | 11.943 |
| Valid | | 45.016 |
| Missing | | 3.575 |

**Figure 2** Number of participants who filled in the feedback questionnaire sorted according to level of satisfaction.

successfully complete the courses. Moreover, thanks to this massive training programme, one teacher in five has now acquired some basic ICT skills and is willing to try them out with students. In fact many teachers shared their teaching materials, lesson plans, web based projects etc. in FORTIC forums. Access to hardware resources, newly acquired ICT skills and sharing of experiences all suggest a clear innovative trend in teaching practices at all school levels. Whether it is really so, remains to be seen.

One more strength can be ascribed to FORTIC: creating a new professional profile, that of the online tutor, which is a real novelty in the career-less Italian school universe. The programme actually involved more than 10,000 tutors in its three levels. It seems that most tutors were up to their appointed role, which was not an easy one. In fact nearly 70% of trainees declared they had reached the goals of their course (see fig. 3). In addition, level B and C courses were meant to provide schools with two new professionals roles: promoter of teaching innovation and technology supporter. These professionals should be the key elements of ICT training at school level. Thus FORTIC prepared the ground for schools to organise their own ICT training courses.


**Figure 3** Feedback questionnaire. Achievement of goals.

## 3. Missed opportunity

But *all that glitters is not gold*. On the one hand the statistics referred to above are from 53,000 trainees out of 190,000. Though a fairly meaningful sample from a statistic point of view, it amounts to less than one third of the entire group. What about the remaining 130–140,000? Either trainees were unable to fill in their feedback questionnaires or they didn't want to. In the first case they didn't know they were expected to provide feedback, highlighting ineffective communication. In the second case they weren't willing to, showing little interest for the training experience.

On the other hand, it is hardly conceivable that this sort of massive national training programmes will be carried out on a regular basis, first and foremost for

lack of funds. Possibly rightly so. The hidden agenda of FORTIC was to enable schools to plan and implement their own ICT training courses. But will schools actually be able to do so? It seems highly unlikely, since funds for training are often short and the new professionals created by FORTIC have at present no official status, so they can neither plan nor decide.

Finally, tutors were not always appropriately chosen, in fact about 10% of trainees were not happy with their experience (see fig. 4). How tutors are chosen and by whom still remain unanswered questions.

| Average level of satisfaction by genre | | | | | |
|---|---|---|---|---|---|
| Average | | *Trainees classification according to level of satisfaction* | | | |
| | | Utterly unsatisfied | Highly satisfied | Well satisfied, particularly for personalisation | Particularly satisfied for the course atmosphere and interest |
| | | % | % | % | % |
| Genre F | 52,36 | 8,1% | 28,7% | 37,2% | 26,0% |
| Genre M | 51,47 | 9,4% | 24,1% | 37,6% | 29,0% |
| Invalsi Monfortic 14 Jun 04 | | | | | |

**Figure 4** Feedback questionnaire. Average level of satisfaction by genre.

## 4. Model

The *Blended Learning Model* — that is, part of the learning carried out in an online environment, part onsite with the help of a tutor — is considered particularly suitable for mass training programmes such as FORTIC, since it offers the opportunity both to reach a large number of trainees and to maintain the high quality achieved with small groups (Tanoni, 2004), The online learning environment PuntoEdu — Educational Spot — planned and implemented by INDIRE was rich, open and flexible; it provided access to wide and varied online resources and allowed trainees to build up personalised learning experiences, while tutors, experts, forum moderators and technical staff guaranteed them support.

This model, though, does not provide all the tools typically used in web-enhanced training. Regular onsite meetings made both synchronous and asynchronous communication tools almost useless, in fact the only tools provided by PuntoEdu were forums and virtual classrooms, which were no more than restricted forums.

The lack of communication tools was not much of a drawback for Level A, since this was basically a self-learning course, not requiring a high level of interaction among participants. Level B courses, on the other hand, featured plenty of collaborative activities, being based on constructivist principles. So Level B

participants would certainly have benefited from as many communication tools as possible. In fact many tutors used free available online tools, as many messages in the tutor forum highlighted.

In conclusion, collaborative activities, considered a key element in FORTIC theoretical background were in practice only occasional features of the programme.

## 4.1 Materials

According to feedback statistics (see fig. 5), participants considered online learning materials interesting, suitable to their learning needs, at the right level of difficulty and usable for practical teaching purposes. This all-positive picture, though, is somewhat contradicted by comments posted to forums. In fact, many participants in courses A, most of whom were absolute beginners, complained that the materials were ill suited for their level. (Cupaiolo, 2004) also maintains that theoretical and technological materials greatly outnumbered pedagogically oriented ones.

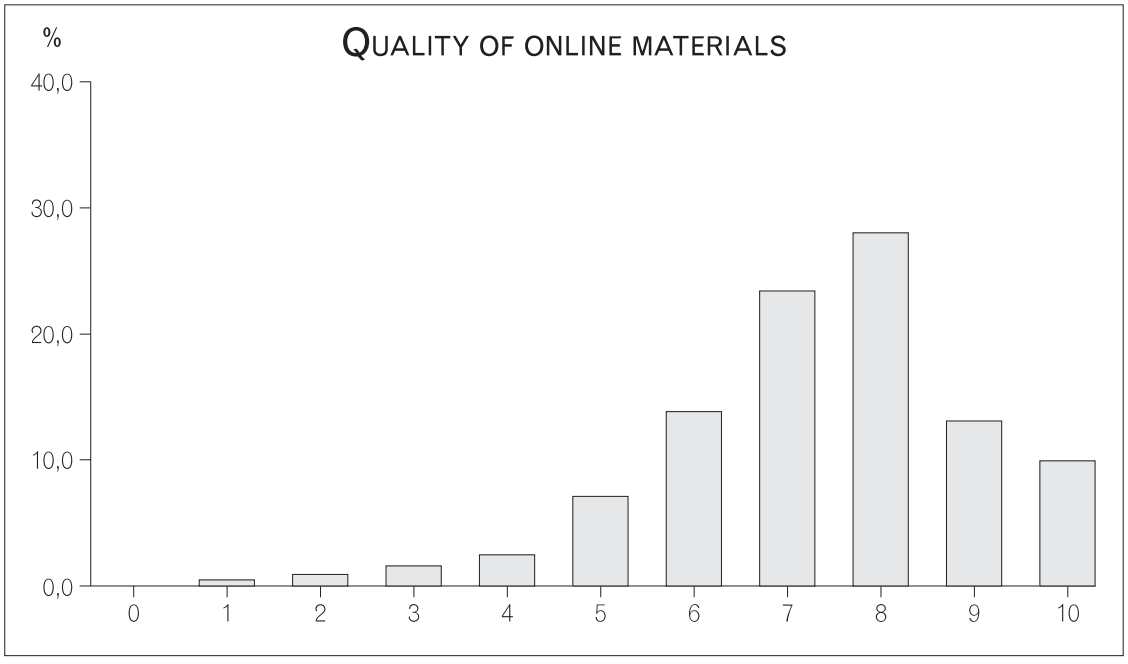


**Figure 5** Feedback questionnaire: quality of online materials.

Materials for Level B and C were prepared with more care. These courses, which should originally have preceded Level A ones, started much later, in order to allow materials to be revised, if not drafted from scratch, by university and subject experts. In-depth studies, case studies, lab activities, practical applications,

provided many examples of actual use of technology in teaching practices and allowed trainees to set up certain kind of co-operative activities.

## 4.2 Interactions

FORTIC forums proved highly efficient in dealing with a large number of messages, judging from the statistics related both to participation and postings. There were about 195,000 participants in Level A and, though the overall number of messages has not been calculated yet, a rough sum of the 6 forums would amount to about 500,000, with an average of 2 messages per participant. In level B there were more or less 15,000 participants, with roughly 95,000 postings in about 20 forums: an average of 6 postings per participant.

So participation seems quite high, both in level A and B. But if data is analysed more closely it reveals a much lower level of participation. In fact, a simple search on the forum data base shows that a few participants posted many messages — up to the record number of 8,000 — while most of them didn't post any at all. If we look at participation according to topic, we realise that the highest number of messages was often posted in cafés or free discussions. So active participants to forums were a minority.

Of course, rough statistics offer little information on the real degree of interaction. A more accurate evaluation, which cannot be carried out in this context, would feature a detailed analysis of message type, content, style and frequency. Qualitative evaluation of interactions has been attempted on a small scale, though. (Pedrelli, 2004) pointed out strengths and positive outcomes, while (Marcianò, 2004) focused on weaknesses and drawbacks. According to (Pedrelli, 2004) forums were powerful tools for participants, who used them to share experiences and ideas, to overcome the traditional isolation of teachers, establishing new contacts, even though more at a personal than a professional level. In fact, free discussion forums were the most popular ones and many messages were meant to establish and keep contact. If forums contributed to give trainees a voice, this was by no means their only function; in fact they also proved excellent tools for collaboration and professional development, particularly for Level B. Lots of spin-off initiatives originated from forums. Gran Caffè Scuola, just to quote one, http://www.grancaffescuola.it, is a web portal built up by a few Level B tutors and trainees to keep in touch after FORTIC. Forums also offered visibility to many multimedia projects produced by and for schools. So much so that the Ministry of Education backed e-didateca, http://www.e-didateca.it, a web portal featuring a catalogue of educational and teaching software and multimedia for schools.

Marcianò (2004) on the other hand, maintains that also for forums *all that glitters is not gold*. Analysing the message/thread ratio in level B forums (see fig. 6), he found that there were far too many threads and messages. Participants seemed

unable to use forums properly: they often started new threads instead of replying to existing ones; they did not read messages and asked the same questions over and over again; lots of messages were about trivial topics if not mere chit chat. In other words, participants seemed to be communicatively, if not technologically, illiterate. When browsing forums one felt confused and disoriented, if not utterly lost: it was hard to find one's way around so many messages, often randomly posted, without reading what had been written by other participants or paying attention to suggestions from moderators. In addition, lurking seemed much more widespread than active participation, in fact visits to messages were usually 4 or 6 times higher than replies. In conclusion if some participants used forums correctly and fruitfully, many others seemed in need of further practice on how to handle communication in a virtual environment.

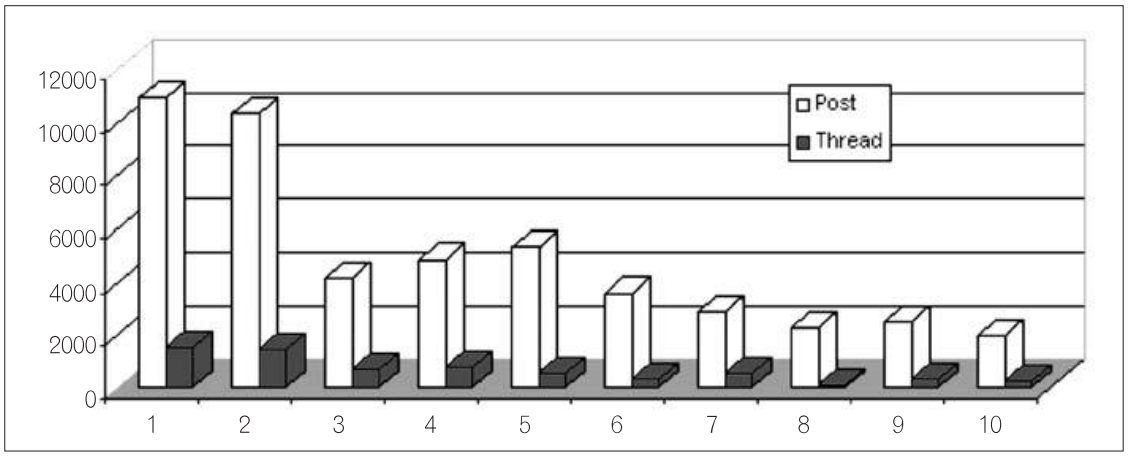


**Figure 5** Post-thread ratio in FORTIC B forums (in Marcianò, 2004).

## 5. Tutors

As already stated, issues related to tutors were the most widely discussed ones, for this reason only a few open questions will be considered, that is, tutor choice, training and professional profile.

In all training programmes carried out in *blended learning* mode so far, tutors have been chosen by course directors, usually school head-teachers, who selected them among their teaching staff. The *Guidelines* attached to *Cir. 55/2002*, which launched FORTIC, for the first time suggested some criteria on how tutors should be selected, setting some tasks for each level and stating that tutors «should be chosen according to competences and experiences in relation to topics in each module».[1] In addition, for Level B and C, *Guidelines* also stated that course di-

[1] Guidelines for Cir.55, sections 3.1.5, 3.2, 3.3.

rectors had to choose tutors from lists purposely set up by *Uffici Scolastici Regionali* — regional education authorities. In practice, though, the ultimate decision on tutor selection remained a prerogative of course directors, with little chance of fairness and transparency.

FORTIC set a new standard even in tutor training. In fact if Level A tutors were not trained, all Level B and C tutors obtained some kind of training. Training for level A tutors was considered unnecessary, since they had only practical tasks, that is, helping trainees practise what they learned online. Level B tutors, who had to facilitate, support and stimulate both onsite and online co-operative learning activities, had to participate in specific training programmes organised at regional level. A few regions involved universities in extensive programmes, meant at familiarising tutors with the training environment and letting them experiment with the learning materials first-hand. Most regions, though, provided short seminars held by ICT experts; possibly taking for granted the soundness of tutors' self-declared competences. Difference in tutor training had a deep impact on course quality, which greatly varied from region to region and often from course to course. Level C tutor training was held by universities in most cases, thus providing a higher degree of uniformity, if not of quality.

As for the tutors' professional profile, it is far from clear both what skills tutors should have and how they should be certified. But FORTIC has demonstrated once and for all that, on the one hand, competent and qualified tutors are one of the key assets in course success, on the other hand, that tutors need specific and suitable training to operate properly. However, criteria on how to choose and train tutors in order to guarantee competence, fairness and transparency, still need to be established.

## 6. Monitoring

According to the director of MONFORTIC, who has written a few articles to analyse monitoring statistics (Bolletta, 2004b), the platform was created to give real time visibility both to the process and its actors. It also had some other purposes: carrying out a factorial analysis on the introduction of ICT in schools; finding out trainees' level of satisfaction; measure both the general and specific appreciation of the training experience.

Data gathered by MONFORTIC, as well as some grouping into clusters, are freely available on the website, http://monfortic.invalsi.it. Nobody has attempted an overall evaluation so far, neither at a national nor local level, but (Bolletta, 2004a; 2004b) highlighted a few general features. First of all trainees were keen to get their ICT skills recognised and certified; they were also willing to use ICT tools at all school levels; even computer illiterate teachers were ready to learn and use ICT tools; trainees liked to be placed in mixed groups; finally, tutors were the key

factor in the training process. This seems to confirm the overall positive evaluation referred to at the beginning of this paper. It is a pity, however, that there won't be any feedback on the actual impact of FORTIC on teaching practices until next year, provided MONFORTIC is still operating and former trainees are willing to fill-in feedback questionnaires after so much time.

But was this the only possible form of monitoring? Most data gathered by MONFORTIC, apart from enrolment statistics, are based on the participants' subjective perceptions and opinions. Why not think of some kind of objective monitoring, such as the one already tried in previous training programmes? For instance in the *Training Course for Newly Hired Teachers*, held in 2002? This type of monitoring would provide both quantitative and qualitative analysis for the following:

- features of target population;
- access to the online learning environment;
- participation in forums and virtual classroom;
- production of ICT based teaching/learning materials;
- building and maintaining of communities of practices;
- ECDL certification.

## 7. Conclusions

FORTIC was a complex, multifaceted training programme whose reach is still difficult to grasp and whose impact on teaching practices is hardly measurable at the moment. Lights and shadows seem to be more or less balanced. FORTIC proved that many schools have the necessary hardware equipment for the introduction of innovative teaching practices, however it is not clear if and to what extent this equipment is, or will be, actually used. New professionals are ready to help teachers in this innovative process; but they seem to have few chances to do it. As a result of FORTIC quite a large number of teachers are familiar with technology, but evidence of effective application in teaching practices is rather difficult to be found. Some teachers now have certified ICT skills, but not as many as one would expect after so massive a programme. A few teachers seem to be able to handle the new communication tools effectively, but many are still clumsy at using them. In the end, what really matters, though, is not to waste the many positive experiences FORTIC contributed to developing, in order to really enhance the use of technology in the learning/teaching process.

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