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# CARLO TOMASETTO\*

# DEALING WITH EDUCATIONAL INNOVATION: ADOPTION AND RESISTANCE TO SCHOOL CHANGE IN A PSYCHO-SOCIAL PERSPECTIVE

Since modern school systems have been existing as we mean them to be (i.e. no more than two centuries ago), a rhetoric of school reform has been settled through the years and through the subsequent innovation waves: well motivated generations of reformers and innovators have been opposing a stereotyped image of 'school as it is' (boring, ineffective, out of time...), to alternative visions of 'school as it should be' (Tyack, Cuban, 1995).

Whatever the reform at glance, three main goals seem to characterize innovators' proposals:

- Making school more effective and productive
- Transforming learning in an engaging and active process connected to real life outside school
- Preparing the new generations for the future job market (Cuban, 2001).

Despite these goals and means might be, and actually are, shared by most of the teachers who are expected to turn innovations into practice, yet researchers, while monitoring the effects of any reform, continually face "quite idiosincratic, frustratingly unpredictable, if not downright resistant" teachers' behaviours (McLaughlin, 1998, pag. 70). More often than not, innovations do not turn into effective change in teachers practice, and when change occurs it seldom matches innovators' expectancies and goals: how come?

If we limit our perspective to an individualistic approach, we should blame teachers, and the stakeholders in general, who refuse valuable reforms, are unable to accept and implement innovations, prevent deeper changes to occur; we should also explain these behaviours as a display of cognitive narrowness, low self-efficacy, or even anxiety (e.g., the huge lit-

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erature on computer anxiety & technophobia). Such approaches neglect the evidence that a teacher (and also a principal, a district administrator, and so on) is part of a social system in which he plays a role, that this role is defined by social construction and by law prescriptions, that s/he interacts with other people in the same school system and in other related social systems (i.e., pupils, parents, community, broader society; Sarason, 1996). Face to a new pedagogical orientation, a new curriculum, a new educational technology, teachers select information, evaluate what could meet their specific didactical needs, and finally may put in practice some aspect of those same innovations. As a result, their practical use of an innovation could also be targeted to completely different goals than those initially foreseen by reformers.

That is to say that any educational change process involves outstanding and complex socio-cognitive regulations, so that the partial or full adoption of an innovation, alongside with the subtle or frank expressions of resistance to change by teachers, have to be interpreted as a motivated form of social behaviour.

Thirty years of cross-disciplinary studies in the field of Educational Change gave us a wide amount of descriptions and reflections about these complex phenomena; many prominent scholars suggest that what is needed, by now, is an effort to anchor educational change studies to stronger theoretical frames. For example, Giacquinta (1998) suggests that from a sociological point of view, it would be worth generating a theory of educational change derived from say structural functionalism, or symbolic interactionism, conflict theory, and so on.

Giacquinta's recommendation sounds also helpful in our research field, i.e. the social psychology of education. The research group I belong to, leaded by prof. Felice Carugati in Bologna, decided to deepen the theoretical and empirical link between educational change and social influence dynamics. Some outstanding features of the educational change process, such as the persuasive efforts of various reform promoters and supporters, or the need for teachers to evaluate, adopt or resist innovations, suggested us a research program whose aim was both to approach the educational change study from a theory-based psycho-social approach, and in the meantime to test the forecasting strength of the social influence theory on the battleground of educational setting.

Social influence topics have caught the interest of social psychologists since the very beginning of the discipline, and have reached a recent, interesting development thanks to the *Theory of Conflict Elaboration* (TCE)

by Perez and Mugny (1993). In a few words, social influence deals with the way people (targets of influence) form and change their attitudes, knowledge, and skills in the social world, by means of their exposure to other people's skills, knowledge, and attitudes (sources of influence).

In the first study we carried out, we were interested in the investigations of two possible motivations that could lead teachers to evaluate in a more favourable or negative light a proposal of educational innovation: the difficulty of the innovation task, and the status of the source that supports this innovation. For instance, we chose a multimedia-based learning project as an example of such innovation.

On one hand, teachers could be motivated to reject a proposal of innovation because of its difficulty: the more the adoption of an educational tool is perceived as difficult to be managed, the more the teacher will be likely to refuse it, thus avoiding a possible failure that would threaten her/his positive professional identity.

On the other hand, another reason to resist might lay in the social relationship between the teacher/adopter and the source of that innovation: social influence literature shows us that an high status/high power source is perceived as more trustworthy, but it does not always result in being more influencing than a low-status source, as the asymmetry of power could induce the target to refuse the source's viewpoint, as a mean to reestablish her/his autonomy face to a constraining (i.e. identity-threatening) source of information (ibid.).

Our main hypothesis forecast an interaction between the difficulty of the task, the status of the source and the teachers' computer confidence. In particular we hypothesized that teachers with a low computer confidence would concentrate their attention on the task difficulty, giving a better response when the task was presented as relatively easy to manage; furthermore we hypothesized that teachers highly skilled in computer would not care about the difficulty of the task, as they were supposed to be able to manage the innovation in any case, but they would be more concerned by the status relationship face to the source; for instance, our hypothesis was that teachers would accept the innovation if its proposal came from a low status, non threatening source, and they would resist it when coming from an high-status, more threatening source.

The experimental device we prepared for this study consisted in the description of the multimedia-based learning project we mentioned above. Before reading the project, teachers were submitted a persuasive message stressing the value of that project; in two random experimental

conditions, the message was attributed either to a group of school principals (high status source), or to a group of teachers coming from the same district of our sample (low-status source).

Another experimental manipulation concerned the difficulty of the task: a bogus advertising box informed respondents that in similar experiences the rate of failure by teachers in realizing the learning project had been very high vs. very low. Finally, teachers' computer confidence was measured and not manipulated, considering the average self-evaluation on a list of computer tasks (using a word-processor, surfing on the Net, etc.).

We obtained a 2 (status of the source: high vs. low) x 2 (task difficulty: high vs. low) x 2 (computer confidence of the target: high vs. low) experimental plan. The set of dependent variables included the evaluation of the project (usefulness for pupils' learning, soundness of its educational objectives, and so on), the perceived possibility of its integration in normal daily teaching practice, the degree of interest toward the project, and finally the teacher's will to get further details about educational technology. Moreover, we inserted a set of items on general opinions about technology in education, in order to test a generalization of influence beyond the content of the persuasive message (that concerned only that specific didactical tool).

Another study we are carrying out deals with the effect of the rhetoric of the message on teachers' evaluation of the same educational innovation we described above. The main hypothesis, drawn from recent social influence literature (Quiamzade, Mugny, 2001), postulates in short that in an asymmetrical influence relationship between a high-status source and a low-status target, an 'authoritative' style will be more effective with targets who perceive themselves as scarcely skilful in the influence task, reducing their uncertainty about the right answer they are expected to give; vice versa, a 'democratic' style will result more effective with highly skilled targets, being more respectful of their decisional autonomy, i.e. less threatening for their positive identity.

Thus in this second experimental plan we had a 2 (*style: authoritative vs. democratic*) x 2 (*computer confidence of the target: high vs. low*) structure of independent variables, and the same set of dependent measures as in the first study.

We are about to complete the sample collection. It's worth noting that ecological research settings, like that of real schools in which we carry out our studies, need wider sample sizes than traditional laboratory experiments, in order to balance the possible biases due to uncontrolled and

unpredictable variables (e.g., the particular climate, the organizational history and culture, the specific pattern of hierarchical relationships that characterizes any single school, etc.).

Despite the difficulty of such complex research programs, it is clear that an exhaustive educational change theory needs a stronger integration between descriptive cross-disciplinary approaches and more disciplineanchored, hypothesis-testing experimental studies.

Using the words of one of the most outstanding scholars of Educational Change, we could say that a social psychology of education may help to outline the subjective meanings of educational change among the stakeholders who are asked to adopt an innovation. By the way, renewing schools is not just a subjective matter: sociological, socio-political, and historical contributions are needed as well in order to build a meaningful picture of it, "because educational change, after all, is a socio-political process" (Fullan, 2001, p. 8).

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