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Evaluation and monitoring of innovation in school: a case study

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Abstract

The purpose of this study is to highlight the implications of a dual process of evaluation and monitoring conducted on an project on social and emotional learning introduced in Italian speaking part of Switzerland

The research design refers to the framework of mixed methods.

At the end of the first cycle of training, the evaluation and monitoring system has proved to be suitable and allowed researchers to make some adjustments to the project design, in order to prevent potential problems. The paper highlights some methodological problems related to a process with a double aim: evaluation and monitoring.

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1. Introduction

A project on social and emotional learning was introduced in Canton Ticino (the Italian speaking part of Switzerland) in 2010. The aim of this project is “together with academic knowledge, to promote, in school, the development of social and emotional skills, in order to ensure effective learning and the global development of the person” (Antognazza & Sciaroni, 2010, p. 49).

The main objectives are basically:

a) improve the level of teacher expertise in terms of managing and delivering social and emotional learning (SEL) content in school

b) improve the social and emotional skills of children.

In order to achieve these objectives, 80 pre-primary school and primary school teachers were, and will be, trained and guided for a period of 3 years², following the principles of social emotional learning, and, more specifically, those of the PATHS© program promoted by Prof. Mark Greenberg and by Prof. Carol Kusché. The project aims to involve a total number of approximately 1,200 children from classes of various scholastic levels.

The intervention project was accompanied by an assessment and monitoring process that was explicitly requested by the financial backer (Jacobs Foundation) in order to understand the efficacy of the program.

The aims of this article are to explain the main results of the first year of project implementation, and to highlight the implications of a dual process of evaluation and monitoring conducted on an innovation in the educational field.

2. Theoretic frame

The issue of evaluation is controversial. One possible definition is that given by Bezzi (2010) “the group of related activities that can be used to express an evaluation for a public purpose, evaluation argued by means of research processes that constitute the fundamental and indisputable element of reliability of the procedures and accuracy of the information utilised in order to express an assessment” (pp.25-26).

The figure of the evaluator must guarantee objectivity, adhering to both a proper ethical code and a rigorous and scientific method. As stated by Allulli (2005) “the evaluation activity must be delegated to a person who is completely independent from the administration that is being evaluated”(p.295), in order to maintain the required objectivity. In the present case, the evaluation and monitoring of the project have therefore been delegated to an independent research centre.

A recurring issue in the debate on evaluation is related to the fact that evaluation is either objective or subjective. There is not one single answer to this question. As maintained by Patton (2007), evaluation was initially created and dominated by the realist and positivist paradigm typical of the natural sciences, and marked mainly by a hypothetical deductive methodology. In fact, “evaluation arose in order to provide certainty, to tell if things were going well or not, if something should be done or if it would be better to stop doing something”(Bezzi, 2010, p.45), and it was conducted by means of a strictly quantitative methodology. Stame (cited in Mazzeo Rinaldi, 2012) also identifies the experimental approach as one of the main directions affecting evaluation. Subsequently, however, the evaluation also began to take on a more constructivist view, perhaps influenced by the advent of new currents of thought advanced particularly by anthropology and based on in-depth interviews and first hand observation (Patton, 2007). In this approach, the actors directly involved in the project are considered as fundamental to the evaluation process. Based on mainly qualitative techniques, the constructivist approach integrates contextual elements in its analysis, and takes into ample consideration the

² The project began in January 2010 and is scheduled to end in December 2013.
opinions, doubts, concerns of the actors involved in the process that is to be analysed (Stame cited in Mazzeo Rinaldi, 2012).

However, Patton (2007) says that “the methodological issues are strategic, not moral, issues” (p.192) so everything depends on the researcher who makes the evaluation, and on the method that s/he feels is most appropriate to use in order to answer the evaluation question. It can be seen that the lengthy paradigmatic debate is gradually being resolved, leaving increasingly more room for “methodological tolerance, flexibility, eclecticism and interest in appropriateness, rather than for orthodoxy” (Patton, 2007, p.222). This change of stance has encouraged increasingly more evaluators to move toward interdisciplinarity and towards an evaluation based on a construction of common sense, and of negotiation, between the various stakeholder, regarding the objectives, the reasons and the processes that activate and drive the evaluation process.

It is precisely in this sense that Bezzi (2010) talks about “evaluation as a participatory process” (p.38) (participatory evaluation). This concept began to develop in the 1960s, particularly in the social, healthcare and educational fields, and is becoming increasingly successful (Plottu & Plottu, 2009). Participatory evaluation is substantially different from traditional, managerial-type evaluation; in effect, it is directed by a distinctly constructivist spirit, based on “[…] the supposition that any human intervention will not be neutral but rather implies a set of values which helps determine the process” (Plottu & Plottu, 2009, p.345). In the participatory approach the objective is to involve all the stakeholders in the evaluation process, subsequently facilitating their acceptance of the results. In fact, if people felt involved, and if they were able to express their opinions, they were more likely to comply with the recommendations given (Plottu & Plottu, 2009).

Evaluation of a project implies that the project objectives are known, but not the precise process by means of which these objectives will be reached. This is therefore a specific event, which is usually executed only once in the course of a project, at a specific and previously-scheduled time. There are various evaluation typologies, differing in terms of when exactly (during the project) they are conducted. So evaluations may be *ex-ante, in itinere, final, ex-post*, depending on whether they are conducted before, during or after the completion of the initiative.

This is one of the ways in which evaluation differs from monitoring. It is necessary to distinguish between these two terms and concepts, which cannot be used as synonyms, and there must not be any confusion between the two techniques, since they are two separate processes, in terms of both objectives and methods. In fact, while the aim of evaluation is to report (particularly to the financial backer) the results obtained (Allulli, 2005), the aim of monitoring is limited to studying the progress status of the project, basically answering the question: “are we doing the things that we planned to do?” (Ministero degli Affari Esteri Italiano, 2002). The aim of monitoring is therefore to provide information, for example by reporting inconsistencies with the forecasts or advising adjustments to work under way.

The term “monitoring” comes from the industrial sector, where it was used to describe of process of continuous supervision of industrial machines. The expression was subsequently adopted by other fields as well, while maintaining the original meaning of continuous data recording with regard to a specific context (Lombardi, 2010).

Lombardi (2010) says that the task of monitoring should be to:
- inform, and therefore explain the progress of the process with respect to the specified timings and deadlines, the costs and utilisation of resources;
- warn: highlight the critical points and notify them to the decision makers, who can then take the required action;
- advise: allow the decision makers to improve the planning of subsequent interventions;
- report: constitute the starting point for evaluating the effects of a certain action.

Chen and Rossi (2007) identify two ways in which a project is monitored: on the one hand they describe the engineering-type typology, which is used to ensure that implementation takes place in accordance with the specified procedures; on the other hand they talk about “social system type”, which instead specifies that the evaluator manages to identify the potential sources of problems and uncertainties that can arise during the implementation process, and, together with the various stakeholders (decision makers, staff, beneficiaries), find the correct ways in which to tackle these problems and manage them as well as possible.

Lippi and de Vecchi (in Mazzeo Rinaldi, 2012) also cite two main functions associated with monitoring: firstly, a confirmative function, which aims to control the progress of the project and identify any problems during the implementation phase; secondly, an explorative function, which aims to take into consideration the problems emerging during the implementation process, and the development of these problems.
Unlike monitoring, assessment is usually conducted at a precise moment of the process, considering this process as a whole. So it might seem contradictory to evaluate and monitor, in parallel, an innovative process, because, at the end of the task, there would be the risk of evaluating a process that has undergone the changes suggested by the monitoring, and that this process would therefore not be genuine and “sincere”.

So, based on the above considerations, while on the one hand it is necessary to be clear about the conceptual difference between monitoring and evaluation, on the other hand it is important to realise that although it is not always easy to integrate the two concepts (Lombardi, 2010), integration may also bring useful benefits. In fact, Kusek and Risk (cited in Mazzeo Rinaldi, 2012) maintain that “evaluation and monitoring provide each other with mutual support, irrespective of the fact that they each result from different questions and different uses made of the analyses and information acquired. A good evaluation explains the underlying reasons for critical situations and/or for inconsistencies reported by the monitoring system” (p.105).

Based on these theoretical considerations, the next step was to define the research design. The fundamental goal was to evaluate if the objectives set by the research team had been reached. In their research project, the leaders had set an initial objective, concerning teachers, and which aimed to improve the teachers’ abilities to manage and deliver SEL content in school. More specifically, after the first year of the project (which is the period discussed in this article) it is hoped that the teachers involved “will know about social and emotional learning, its strategies of implementation, the possibilities of using it in class and the educational opportunities it offers” (Antognazza, Berger & Sciaroni, 2009, p. 7). Training sessions and teaching practice periods in particular were therefore used in order to investigate if the teachers feel that they have assimilated the necessary contents, learned how to put them into practice and transfer them to the pupils.

The second objective, focused on the pupils, consisted of improving the social and emotional skills of children, and more specifically, it was expected that “the children from kindergarten will develop self-awareness, and be able to identify and manage their emotions [and that ] the children in elementary school will develop self-awareness and self-management skills, and be able to identify and manage their emotions and
behavior” (Antognazza, Berger & Sciaroni, 2009, p. 7). These two objectives were investigated mainly by means of an evaluation process, accompanied by a monitoring process at the same time, with the aim of closely supervising the implementation of this new program, and any problems that might emerge.

It was decided to adopt a mixed method in order to achieve the dual aim, therefore including a series of related qualitative and quantitative techniques.

3. Methods and tools

Research designs that specify the utilisation of mixed methods are increasingly adopted in the field of evaluation. In fact, by making complementary use of qualitative and quantitative methods, this technique makes it possible to understood a greater number of the aspects of the phenomenon to be studied. In this type of research design it is important to remember the importance of the triangulation technique, a concept defined by Greene, Caracelli and Graham (2007) as “the intentional use, in the analysis of one single phenomenon, of multiple methods the distortions of which compensate for or counterbalance each other, with the aim of confirming the validity of the results of the investigation” (p.273).

The learning outcomes of teachers, and the way in which they implemented the project, were evaluated and monitored during the project by means of a number of different techniques. The first used technique was the diary: teachers participating in the project were asked to write a weekly diary describing the socio-emotional educational activities conducted, and any observations concerning them. The teachers had been appropriately trained for this technique, and it proved very helpful in terms of developing their reflective capacity, evaluating their ability to implement the strategies of the program, and documenting the development of the pupils in the process.

Focus groups were implemented in order to collect data from teachers; they were conducted once a year with an average of 10 teachers per group. In addition to drawing up a general status report, participants are asked to express their opinions regarding aspects such as the evaluation of the process, the description of the activities conducted in class and their impact on the pupils, their initial expectations, the project guidance system (diaries, blogs, visits), relationships with team members, and any suggestions for improvement.

In addition to these two methods, which formed the most significant part of the teacher-related data collected, other techniques were also used: for example, classroom visits and evaluation questionnaires on the training days organised by the project directors.

The social emotional learning outcomes of the pupils were tested both by analysing the opinions of teachers reported in the diaries, and by means of specific tests.

One of these tests is the Kusché test, designed by Carol Kusché in 1984, and based on emotion recognition: children are shown 4 different images depicting emotions, and are then asked to identify the image that corresponds to a specific emotion. (Domitrovich, Cortes, & Greenberg, 2007). This test will be administered to all the pre-primary and primary children who participated in the project, but also to a control group of 300 children, with the aim to compare the obtained results. For this type of test the evaluation with control groups is structured over three years with three different groups. In the first year the information on the primary one classes is gathered, in the second year the data on the pre-primary classes, and in the third that on the primary two classes. This modular procedure makes it possible to reduce the impact on the scholastic system.

In addition to the Kusché test, another data collection instrument was used with the primary school children: the Social Problem-Solving Interview, in which the children identify with a specific situation (such as, for example, being rejected by a group, or being hit by a ball kicked by a classmate), and they must explain why this situation might have arisen and how they would have reacted. All answers are then classified in order of their level of effectiveness (e.g.: non-hostile response=3, indifferent response =2, aggressive response =1). The points allocated for the alternative responses given for each of the 3 stories are then added together. A control group was used here as well, in order to compare the results obtained from children who benefited from socio-emotional educational activities with those who had not.
4. Results

The adoption of a mixed methodology for data collection, and the integration of different techniques, made it possible to obtain some very interesting data. Since the data collected in the second year of the project (2011-2012) has not yet been analysed completely, this article provides only a summary of the results obtained during the first experimental year (2010-2011).

In terms of the implementation of the project by the teachers, the diaries show that, at the start of the project, the teachers did not all act in the same manner. Some delayed the start of the socio-emotional education program, while others started these activities in the first few weeks of school. After the first few months spent preparing the setting, the teachers generally displayed increasing involvement in the project. It is also possible to identify a difference between pre-primary school teachers and primary school teachers. In fact, the latter category finds it more difficult to allocate specific times in which to tackle emotion-related topics, times that must be taken out of an increasingly densely-packed weekly program.

The results of the focus groups also indicate general satisfaction with the project. The teachers feel that the socio-emotional educational activities allow the pupils to expand their lexicons and to manage their feelings of frustration and anger more effectively, substantially reducing the situations of internal conflict, and improving the internal relations and cohesion of the class. The assessment of the guidance system (consisting of blogs, diaries, zone meetings and visits) is relatively positive, although some deficiencies have been highlighted, particularly concerning the blogs and the forum, which are almost never used. Although the diary makes it possible to program coherently, and to become aware of the route taken, it is seen to be a very laborious task for the teachers, who often do not manage to dedicate to it as much time as they would wish. Both the trainers and the assistants are judged to be very skilled and helpful, and their periodic visits have provided excellent opportunities for discussion with a person external to the class and who is able to give an objective assessment of the various activities conducted and of the progress made by the children. Regarding collaboration with the outside, parent endorsement of the project was generally positive. Some participated more actively than others, but nobody has expressed any criticisms or negative observations. Many see the benefits in their children, and sometimes the various techniques learned at school are also adopted at home. Following a specific socio-emotional education course is perceived by the teachers as more legitimising than if they were simply tackling these issues, considered as private, without an educational support tool providing “justification”.

The satisfaction questionnaire on the educational interventions has also revealed a generally relatively high level of teacher satisfaction.

In addition to the standard visits made by the project assistants (4 visits in the first year of education, and 2 in the second), the monthly group meetings held by the various teachers and trainers were introduced in the course of the project. In fact, both the focus groups and the diaries and assessment questionnaires showed that the teachers wanted greater contact with the trainers. These meetings were therefore added to the initial project. The initial results collected for the current year allow us to say that a large part of the teachers are satisfied with this change (optional meetings) introduced to the program. This is an example of how, when conducted in parallel with the evaluation process, monitoring made it possible to rectify deficiencies that had not been envisaged at the beginning, and therefore improve the quality of the whole process, although at the same time creating some other methodological implications that will be explained in the conclusions.

The test conducted during the first year on primary one children was executed by administering eight stimuli in the initial phase and eight stimuli at the end of the year. The two scales are similar but differ in terms of the materials used (the stimuli adopted at the start of the year are not the same as those used at the end of the year), in order to reduce the learning effects that arise if any psychometric type test is repeated. A comparison between the first and second tests conducted on pupils who had completed the emotional literacy program shows that there was an improvement. In quantitative terms, the total value of the recognition scale is 12.0 for the first test (Sum_1) and 14.6 for the second (Sum_2) out of a possible total of 16 points. This difference is statistically significant.

A comparison between the control group and the pupils who had followed the program also reveals a significant difference. As mentioned above, the group involved in the socio-emotional literacy program scored an average of 14.6 points, while the control group (that did not experience any specific intervention, apart from the evaluation) scored an average of 13.7 points.
5. Conclusions

Although at present the only results available refer to the first year of evaluation and monitoring, the results of the research conducted show that the objectives set by the directors of the “Call them emotions” project have been achieved. Teachers are generally satisfied with the action taken and with the benefits of this action on the conduct and on the learning outcomes of the pupils. The Kusché test conducted on pupils also emphasised that those who had followed the socio-emotional education program achieved better results than those who did not.

Although the project results are undoubtedly interesting, the main goal of this article was to utilise a specific case study in order to highlight the implications of a dual evaluation/monitoring process of a socio-emotional literacy project conducted in Ticino.

The role of the evaluator, who at the same time also monitors an innovation project, is ambiguous. This ambiguity also affects relations with those evaluated/monitored. The main implication of the difficulties involved in the role is of a scientific nature: if I modify (by the effect of the monitoring) a process that I am evaluating, will the evaluation relate to the process that was initially envisaged? This question is especially important in the case of innovation projects in which the definition of the causality processes is a particularly significant requirement. The reciprocal question, which generates opposite but no less significant problems, could be: if I identify a potential problem in a process that I am evaluating, can I intervene? In this case it is necessary to consider how, in an innovative process, it is not possible to know in advance the extent to which an identified problem may lead to negative results, or, on the contrary, to positive results.

One concrete example of an in itinere modification that took place in the study in question consists of the addition of optional meetings between teachers at the start of the second year. In effect, the monitoring process highlighted a deficiency that was rectified in the course of the project, after careful analysis and discussion between project evaluators and directors. At this point it would be possible to ask what would have happened if the program had gone ahead with a final evaluation of the three years, without worrying about any continuous monitoring of the process. In this specific case of the optional meetings, it would undoubtedly have been more difficult to notice this problem, and therefore also more difficult, in the course of the project, to make changes improving the implementation of the program.

Nevertheless, having said this, it is necessary to be aware of the repercussions of this type of transformation for the general evaluation process: in fact, intervening and modifying a process in itinere, means that, when this process is evaluated it can no longer be considered as completely in line with the initial design, but on the contrary will be distorted by the modifications made. So, taking this line of reasoning to an extreme, in some sense it could be said that, in a similar process, there would be little reason for evaluation since all the deficiencies have been resolved and problems solved, leaving virtually nothing to evaluate apart from the positive aspects. This is an exaggeration in order to emphasise the importance of remaining vigilant regarding the potential implications of a dual monitoring/assessment process.

Regarding relations with team members, it must be considered that any evaluation process activates aggressive and persecutory sentiments, and creates the need for self-protection, sometimes hiding problems (in an involuntary manner). Monitoring, on the other hand, activates sentiments of collaboration and open-mindedness. However, it must be remembered that the presence of the two dimensions embodied in one single person can create problems in terms of recognising a specific role and establishing a process of profitable collaboration.
References


