

# DESIGNING A SYSTEMIC METHODOLOGY FOR PROGRAM EVALUATION

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## ABSTRACT

Evaluation is commonly seen as a systematic process to determine merit, worth, value or significance. When engaging in program evaluation, evaluators use research methods to systematically investigate the effectiveness of social intervention programs adapted to the political and organizational environment surrounding them. However, aside from having a systematic character, evaluation has at its core a systemic and a critical character as well, as it is based on the establishment of judgments and the inclusion of stakeholders, both of which inevitably affect what will be seen as an improvement. Critical in terms of not taking for granted predefined assumptions about the evaluation and systemic in terms of a dynamic attitude towards the establishment of what and who should be considered in the evaluation and the acknowledgment the existing relationships of those involved in the evaluation. Thus, the systems theory of boundary critique (about how to explore value and boundary judgements) is relevant. For this reason, we seek to propose a methodological development for conducting social program evaluations. Our methodological proposal, seeks to contribute at a theoretical and a practical level as we not only seek to present a methodology that can be widely applied in the realm of social program evaluation through a practical case but we also seek to contribute to enriching the literature that links systems thinking practice and evaluation, focusing primarily in the contributions that critical systems thinking can make to the practice of evaluation. We examine different stages of the evaluation process and show how boundary critique can be used in each one. A practical example will be provided of an evaluation of a program for teaching alternative conflict resolution techniques to children in vulnerable areas of Bogota, Colombia.

Keywords: Critical Systems Thinking, boundary critique, program evaluation, participatory approaches, improvement.

## INTRODUCTION

Throughout the past century, major developments have been made in designing methodologies for program evaluation. However, the interest on including systems concepts on these developments has only been raised in recent years. This paper, seeks to address how systems concepts can be used when designing and conducting an evaluation. In order to show this, we will present the design of the initial phase of an evaluation of the Hermes program, a program which was developed and implemented by the Bogota Chamber of Commerce and which seeks to teach students how to solve conflicts through the use of Alternative Conflict Resolution Techniques. The document will first present a brief summary of the two major theoretical strands that were taken into account, these were systems thinking, and evaluation, as well as presenting a brief description of how

theoretical developments have been made involving both fields. It is important to take into account that in the systems thinking field, three waves will be presented but our primary focus will be directed towards those developments made in the third wave. After presenting the theoretical concepts, we will focus on the practical case of the evaluation, for this reason we will talk about what is the Hermes Program, which is the subject of the evaluation, how what to be evaluated was decided and how the design of the activities took place. Finally, we will be presenting a short description intended to join the theoretical and the practical component and some conclusions.

## **THEORETICAL REVIEW**

The following section will summarize the most important elements from the evaluation, and the systems thinking theory. Aside of that we will also present some developments that have taken place in the evaluation realm considering systems thinking concepts.

### **Systems Thinking**

Historically there have been different developments that lead to the establishment of Systems Thinking, two of these key developments can be attributed to the work of Angyal on developing the system concept, and the work of von Bertalanffy and Boulding on the development of General Systems Theory. Angyal (1941) was the first author to coin the term “system” in the way it is used by modern systems thinkers, he defines it as a logical “genus”, for the treatment of wholes, under the ideal of developing a logic of system to a degree of precision that might offer the basis for exact mathematical formulation of holistic connexions. On the other hand, General Systems Theory emerged as a discipline that recognized the necessity of studying things as a system, that is, understanding and studying things considering the organizing relations that result from dynamic interactions and make the behaviour of parts different when studied in isolation or within the whole (Von Bertalanffy, 1956). Although Von Bertalanffy’s (1956) and Boulding’s (1956) work on GST is directed towards the conception of unity of science, both authors developed GST in different ways. Von Bertalanffy’s work was directed more towards the development of theoretical models for achieving the integration while being able to handle concepts such as wholeness, directiveness, teleology, control, self-regulation, differentiation which depict the need for interaction. Whereas the work of Boulding was directed towards arranging the empirical field in a hierarchical complexity of organizations of their basic “individual” or unit of behaviour, and to try to develop a level of abstraction appropriate to each (Boulding, 1956).

These two developments set the bases for the development of Systems Thinking. The way we conceive its development is based on the work of Jackson (1991b) and Midgely (2000) which use the narrative of waves to describe the changes of paradigm throughout the Systems Thinking developments.

The first wave of Systems Thinking took place between the 1950’s and the 1970’s grounding its work in systems ideas that were being developed at the time, one of which was the open systems theory of Von Bertalanffy (1950). Several developments took place

during the first wave of Systems Thinking, some of which are Socio-technical Systems Thinking, Systems Analysis, Systems Engineering, Viable System Model (VSM), and Systems Dynamics. (As the work on these developments is not the focus of this paper, the reader might find more information about them in the work of Trist & Bamforth; 1951, Emery, 1959; Jenkins & Youle, 1968, Forrester; 1962, Sterman; 2001, and Beer; 1972, 1985). Although the development of the first wave of Systems Thinking represented a major advance in the conception of system, they were widely criticized by authors such as Churchman (1970), and Ackoff (1979) who believed they had problems when recognizing the systemic assumptions underlying data collection, understanding the systems they are controlling into their component parts and not their wholes, the value given to means and ends, and the objective character of their practices. For this reason, the second wave of Systems Thinking was developed.

According to Checkland (1985), the second wave of systems thinking was developed because the first wave, based on defining goals or objectives, did not work when applied to messy, ill-structured, real world problems. In this sense, the emphasis of the second wave is on how to cope with ill-structured problems or messes (Jackson, 1991a). The methodologies from the second wave differ from the first wave ones, in that they do not seek to reduce the messes to something that can be mathematically modelled. On the contrary they seek to explore these messes by working with the different perspective of multiple stakeholders, and has a long term objective to encourage and institutionalize a process of continual learning among the participants of the social system being addresses. The core developments of the second wave of Systems Thinking is represented by the work of Churchman (1971), Ackoff (1974), and Checkland (1985). However, just as it happened with the developments of the first wave, the second wave was also criticized, but in this case its critique was directed towards not being radical enough when using their methodologies in social systems where inequalities in the distribution of resources and power exist. For this reason, the third wave of Systems Thinking was developed.

The developments of the third wave of Systems Thinking, initially took place in two independent strands directed towards pluralism and power, represented by the work of Jackson (1991a, 1991b), and Ulrich (1983) respectively. Later on, Midgley (2000) managed to create a synergy of both works in his work on Systemic Intervention. The first strand of the third wave of Systems Thinking is based on three themes or principles (Midgley et al, 1996;1998: pp.1):

- *Critical awareness* - examining and re-examining taken-for-granted assumptions, along with the conditions that give rise to them;
- *Improvement* - defined temporarily and locally, but in a widely informed manner, taking issues of power (which may affect the definition) into account; and
- *Methodological pluralism* using a variety of research methods in a theoretically coherent manner, becoming aware of their strengths and weaknesses, to address a corresponding variety of issues.

This strand, has as major developments Systems of Systems Methodologies (SoSM), developed by Jackson & Keys (1984) as an attempt to address pluralism, and Total Systems Intervention (TSI) developed by Flood & Jackson (1991a; 1991b) which was conceived to represent an approach to planning, designing “problem solving”, and evaluation.

The second strand of the third wave of Systems Thinking, lies on the work of Churchman (1970) regarding the conception of the system and the importance of boundary and is represented by the work of Ulrich (1983) in developing Critical Systems Heuristics (CSH). Grounded on Churchman’s statements about boundary judgments, Ulrich discusses how the exploration and setting of boundaries can be undertaken through dialogue between stakeholders as a way of rationally justify the boundaries they use. Boundary Critique is the methodological core idea of CSH (Ulrich, 1983). It is defined as a systematic – reflective and discursive – effort of handling boundary judgements critically, whereby ‘critically’ means both ‘self-critically’ questioning one’s *own* claims and ‘thinking for oneself’ before adopting the claims of *others* (Ulrich & Reynolds, 2010). The systematic alteration of boundary judgments emerges as the process of unfolding consists in using the critically-heuristic categories or boundary questions for a systematic, iterative expansion and narrowing-down of the considered context. In addition to the process of unfolding, systematic boundary critique involves a second effort, the systematic *questioning* of boundary judgements with respect to their adequacy in terms of relevance, justification, and ethical defendability. According to Ulrich (1983), the quest for systemic thinking cannot alter the fact that all our claims remain partial, in the double sense of being selective with respect to relevant facts and norms and of benefiting some parties more than others. This is what boundary critique is all about; it aims at disclosing this inevitable partiality (Ulrich , 1996b).

## **Evaluation**

Evaluation is an activity that takes place in almost every daily life activity of an individual. However, it was formally established as a field of enquiry in the midst of the twentieth century. According to the American Evaluation Association evaluation can be defined as “*a systematic process to determine merit, worth, value or significance* (American Evaluation Association, 2014)”. The concept of evaluation and program evaluation can be used indistinctly, however, some authors have a particular definition of what program evaluation is. Here, we take into account the definition given by Rossi, Lipsey & Freeman (2004) which defines program evaluation as “*The use of research methods to systematically investigate the effectiveness of social intervention programs adapted to the political and organizational environment surrounding it.*”

There are around 20 models to conduct evaluation, although they will not be revised in this paper, they differentiate in the way they focus in different elements of the evaluation and also on different things to evaluate. Among those approaches are the consumer oriented approach , experimental and quasi-experimental designs, empowerment evaluation, theory based evaluation, fourth generation evaluation, and others. Although all of them are different, every evaluation approach follows the same structure, one consisting of planning, implementing, analysing, and reporting results of the evaluation.

When planning an evaluation, the evaluator must focus on solving the what (what should be evaluated) and the how (how to do so) of the evaluation. In the particular case of evaluating a social program, such as in this case, the evaluator must choose how to involve the stakeholders in conducting the evaluation, as they are the primary source of the information he/she may need to gather. On the planning phase, the evaluator must also choose and design where necessary the tools that will be used to gather the information. This considerations are the ones that will be described in this document.

## **Systems Thinking and Evaluation**

Throughout the evaluation literature, several types of problem situations are recognized, these are; simple, complicated and complex (Glouberman & Zimmerman, 2002; Snyder, 2013; Rogers, 2008; Patton, 2011). Williams & van't Hof (2014) use the term “wicked situations” to describe a complex situation as well. The complex/wicked situations are the ones of particular interest for us. However, there is not a unified definition of what a complex situation is, instead several authors have pointed out general characteristics that this type of situations might have.

According to Patton (2010), a complex situation is defined as a “situations in which how to achieve desired results is not known (high uncertainty), key stakeholders disagree about what to do and how to do it, and many factors are interacting in a dynamic environment that undermine efforts at control, making predictions and static models problematic”. Hummelbrunner (2011) & Snyder (2013) express complexity (when referring to a complex situation) as being the result of many different elements (e.g. actors, actions, factors) and their linkages and is because of these linkages that changes in a single element do not remain isolated but can influence others – often with unforeseeable consequences. In terms of Byrne & Callaghan (2014), complexity concepts include nonlinearity (small actions can produce large reactions), emergence (patterns emerge from self-organization among interacting agents), and dynamic adaptations (interacting elements and agents respond and adapt to each other).

If the world is complex the theories and methods of evaluation should mirror that complexity (Forss, Marra, & Schwartz, 2011) and is for this reason that systems thinking and complexity science are two ways in which complex situations in the evaluation field are started to be tackled. However, although there are several evaluators who claim to be using systems thinking and complexity (independently) ideas and methods in evaluation, the extent and ways in which evaluators are drawing on these ideas is not well understood or operationalized (Gates, 2016; Reynolds et al, 2012; Walton, 2016).

According to Imam, LaGoy & Williams (2006), Reynolds (2007), Hummelbrunner (2011), Reynolds *et al* (2012), and Williams & van't Hof (2014) there are three concepts of systems thinking evaluators need to know, these are: perspectives, boundaries and interrelationships. Exploring different perspectives gives an evaluator the opportunity of contemplating different ways of framing a situation. Systems approaches provide methods for conveying ideas between different stakeholders (perspectives), and to overcome differences to improve mutual understanding, achieve consensus or create new insights or options.

Boundaries are a key element in systems thinking approaches more explicitly in those approaches in the third wave of systems thinking, as the establishment of a particular boundary drives how we see a system as it determines what and who is being included and excluded. The importance of reflecting upon boundaries lies in the necessity of assessing the consequences of the boundary choices (boundary critique) (Boyd et al., 2007). Third is the concept of interrelationships or entangled systems referring to the existence of a system within a bigger system and the fact that a system cannot be analysed on its own. Instead it needs to be considered in relation to other systems, whether these are wider or within it. In considering this interrelationships, a systems thinker is able to critique the current boundaries of the systems and decide if they should be widened, kept or narrowed.

The systems thinking characteristics that we just described give us the possibility of exploring how they can be identified when using approaches of the different systems thinking waves.

## CONTEXT

The context in which the evaluation took place can be divided into a local and a general context.

General context. Colombia is located in the top tip of South America, and its capital is Bogota. According to the Departamento Administrativo Nacional de Estadística (DANE) until 2016, the country's population was 48.747.708, 28% of whom live in poverty levels. On the other hand, the inequality rate (using the Gini coefficient) was 0.517 making it the second most unequal country in the hemisphere, and the seventh most unequal country in the world (BBC, 2016). On the other hand, Colombia has the largest internal displaced population in the world, with 6.900.000 (UNHCR, 2016) displaced inhabitants up to 2016. This last statistic is due to the civil war the country has been in for the past 50 years, which is at least coming to an end with one of the remaining subversive groups. As the displaced population of the country is internal, it is estimated that until 2013 Bogota had 415.174 displaced individuals (El Colombiano, 2013).

Local context. The local context of the evaluation was the city of Bogota, the capital of Colombia, as the evaluation was focused in different zones of the city. Up to 2016, Bogota's population was 8.000.000 (DANE, 2016), 88% of whom lived in 1, 2, or 3 levels of stratification<sup>1</sup>, making them being classified as "very poor", "poor" and "lower middle class" respectively. The level of inequality of the city, measured with the Gini coefficient, is just slightly lower than the one of the country, with a value of 0.492. A major reason to having such a high level of inequality is the fact that, as the city has a large displaced population, this limits their access to education and job opportunities as they live in very vulnerable areas with large social, and economic problems.

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<sup>1</sup> Colombia's stratification system has 6 levels of stratification from 1 to 6 which classifies the population according to different variables primarily based on their living conditions, their access to public services and their level of education.

The conflict resolution program which was subject to the evaluation described in this document, takes place in public schools located in vulnerable areas of Bogota. The location of these schools presents challenges not only related to difficult social and economic factors but also to the inclusion of displaced population as well.

### **THE HERMES PROGRAM**

The Hermes Program is a program created to transform school conflicts through the use of Alternative Conflict Resolution Techniques and the prevention of bullying in schools in Bogota and the region surrounding it (Chamber of Commerce of Bogota, 2016). The program is currently being used in 452 schools with 5369 trained students in 2016. It has 6 stages, 3 of which are focused on training students in conflict resolution techniques and the remaining 3 are focused on using the skills learned in developing entrepreneur activities.

Hermes is a model that works with all the school's community. It provides a series of pedagogical tools to transform conflicts through dialogue and consultation, in an environment where respect for the other and tolerance towards the difference is a reality. Thus, it seeks to contribute to improving the quality of life of young people, and of the educational community, training school leaders, empowering their personal and social skills and stimulating creativity in the transformation of the environment school starting with conflict (UNICEF, 2006).

### **EVALUATION DESIGN**

This section seeks to explain in a general basis how the evaluation was designed and which stakeholders were included in developing it.

*What is going to be evaluated?*

This can be considered as the most important element when setting up the evaluation, and in the case of the Hermes program, it was influenced by two factors; what the program directors wanted and what we as evaluators perceived as being the subject of the evaluation. Initially the evaluation was proposed by the director of the program to identify in which way the program was having an impact in the way children were solving and approaching conflict. However, we as evaluators considered that the goals of the evaluation should be directed towards what seemed to be important under the view of different members of the community. This could be considered as the first stage where establishing boundaries for the evaluation took place, and most importantly, being able to reflect upon them and seeing the necessity of expanding the boundaries that were initially considered.

The boundary that was initially considered, which at the same time was the starting point for conducting the evaluation, had several effects on the design of the evaluation. First, narrowing the evaluation to evaluating the impact on a particular behaviour is extremely difficult as this behaviour might be attributed not only to the program but also to other variables that might be playing a role in the student's life and that will not be considered by directing the evaluation only to those elements. Second, the initial conception of the evaluation was directed only towards evaluating students, in that sense the other key stakeholders of the program would not be able to have a word in it, this would completely

affect how the picture of the functioning of the system (the program) is depicted. Third, it is very likely that the program has a much wider effect on other stakeholders than only on students, having a narrowed scope for the evaluation will leave aside these effects. Fourth, conducting an evaluation with such a narrowed scope cannot be considered systemic, as it will be focusing on a single stakeholder and a few elements that will not form a reach picture and is very likely to leave aside important interrelationships.

For this reason, we not only wanted to assess the impact of the program in the way students approached conflict, but also which were the variables that might affect the performance of the program and the stakeholders that are involved in it. In order to do so, we decided to involve the community by conducting a workshop with the most relevant stakeholders. As it is impossible to involve every single member of the community, a focus group was chosen with 4 to 6 representatives of each of the stakeholders.

*Who was going to participate in the evaluation?*

An important element of the design of the evaluation was letting the different stakeholders have an active role in the different stages of the evaluation, so that they were not seen only as a source of information to be used by a research team, but as an active and important participant not only of the program but of the evaluation as well. In that sense, it was key to make them feel not only important but also empowered with the activities that were going to be conducted.

## **Workshop Design**

### *Stakeholders*

The school community related with the Hermes program has 6 main stakeholders, these are: students, parents, teachers, former students, administrative staff of the schools (these are the principal and other important disciplinary figures inside the school), and the program consultants<sup>2</sup> (these are the Chamber of Commerce employees in charge of bringing the program to the schools).

### *Workshop constraints*

There were several constraints that were key in the design of the activities that were to be included in the workshop. First, there is a large difference in age among the participants of the workshop, the average age of the students is around 14 to 15 years old, whereas parents or grandparents could be in their 50's and 60's. Second, there were large differences in the level of education of the participants. Although all the consultants and the teachers have at least a bachelor degree, the other participants of the program do not necessarily have one. In the case of the students and the former students of the program, they do not have a bachelor degree, although they have basic skills related to having achieved at least a middle school level of education (as the school students have not graduated yet), however, on the parents side, they do not necessarily have a high school degree either, and for this reason the activities needed to be the simplest as possible, but at the same time oriented towards gathering adequate information. Third, the workshop

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<sup>2</sup> Consultants have this name because the original name for their role in spanish is “consultores”, the word corresponds to the literal translation of the word used in Spanish.



itself had two restrictions related to time; intensive sessions and a limited time frame. The workshop was going to be conducted in a single session which lasted around 8 hours, this posed a challenge in terms of conducting activities that were appealing to the participants and that did not make them feel tired too soon and also on being able to tackle the most relevant issues so that we could have a general idea about the opinion of the participants regarding different topics. Fourth, the evaluation described here constitutes my PhD thesis and as such resources to conduct the activities is limited. Fifth, trusting issues among the participants needed to be handled, this might be the most important restriction of all the ones listed above. The main reasons to having trusting issues was associated with power related to roles. For example, students might feel that their opinion is seen as less important for being younger and for being in a position which is always under the directions of everyone else.

### *Workshop Goals*

Although the main goal of designing and conducting the workshop was identifying the variables affecting the performance of the program, there were several specific goals as well, which determined the activities that were used. These were:

- Identifying the perception of the stakeholders regarding different elements of the program, such as given times, spaces, commitment, motivation, external factors affecting the program, and others.
- Assessing the participant's (of the workshop) perception regarding the structure of the community.
- Getting to know positives and negative experiences that took place as a result of the program.
- Gathering desired future changes about the design or the implementation of the program. This goal is oriented towards giving the opportunity to the participants of proposing their own ideas.

### **Workshop Structure**

Taking into account the goals, constraints and participants, we decided to design a workshop consisting of 6 activities. Each of the activities will be briefly described here. The way in which the workshop was designed had a particular order for conducting the activities as well as if they were conducted individually or in groups.

#### *Activity 1*

The first activity of the workshop consisted on a questionnaire based on the Critical Systems Heuristics (CSH), developed by Werner Ulrich (1983), these questions were aimed at identifying elements related to power, motivation, commitment and context variables that might important in the development of the program. Although it was based on CSH questions, its questions were not barely similar to those used in the CSH questionnaire, however they were intended towards similar objectives. The questionnaire was customized in two ways. First, each group of stakeholders had a particular set of questions that took into account their role within the program, and second, the language used to formulate the question was eased so that they were easily comprehended by all

the audiences. In total, each stakeholder had between 6 and 7 questions which had to be answered individually. By doing so, the individuals would be able to answer as honest as possible without feeling any peer pressure or any role pressure associated with being with different people in the same room.

### *Activity 2*

The second activity was the simplest but maybe the most important activity of the workshop, it is called “Crazy Trains” and it was directed towards generating confidence among the participants of the workshop. After finishing with the first activity, the participants were organized in groups which included a representative of each of the stakeholder groups. As we have told, there are power relations associated with the roles of the stakeholders not only in the program but also within the school, summing this with the fact of being with unknown people in the same room will have a direct impact on the performance of the participants of the workshop. For this reason, we decided to use the “Crazy Trains” activity which aside of being a confidence activity, it is also oriented towards generating group cohesion. It consists of forming the members of the group in line, while only one of them can see, that person (which is at the back of the line) has to guide the rest of the group to a desired target only by using touching directions. These elements boosts the confidence among the participants as they have limited access to their senses (speech and sight). The activity showed up to be very successful among the participants.

### *Activity 3*

This activity was called “Drawing the community” and it was directed towards identifying how the participants perceived the interactions of the members of the community in the program. We decided to do a drawing session because it constitutes an easy tool to translate and consolidate ideas, as well as facilitating the expression of the ideas among the participants. A key element of this activity was that the picture of the community had to be constructed by achieving consensus among the participants of each of the groups.

### *Activity 4*

A key element when assessing the impact of a program is getting to know stories of the people that has been affected by it. However, it is important not only to listen to successful stories but also to be aware of those that can be seen as a failure or a negative result of the implementation of the program. For this reason, we asked the participants to share (initially with their small groups and later with the rest of the groups), stories they considered as being a direct result of the design or the implementation of the program. These stories could take place within or outside the school and they could come from any of the stakeholders, even the consultants of the Chamber of Commerce.

### *Activity 5*

The last of the activities used De Bono’s (1985) Six Thinking hats so that the stakeholders could propose their own ideas of what they wanted to change in the implementation of the program. The methodology used by the hats uses 6 different hats with 6 different colors to represent the type of idea a person is expressing, in that sense

they focus on the ideas and not on the person or the position of the individual who is expressing it. Each of the individuals of the group had the chance of expressing an idea while the other members of the group represented one hat.

At the end of the activities, all the groups had the chance of socializing what they had discussed in their small groups as well as sharing the experiences they considered were the most important or most valuable to them.

### **Workshop Insights**

In general terms the workshop was conducted as it was described in the previous section. Results were very positive in terms that the workshop gave many insights in many aspects that otherwise would not have been taken into account in the evaluation. Some of these insights were:

- Students' motivation is stronger when the administrative staff, teachers, and parents give adequate status and prominence to the program in their schools.
- Students perceive that the administrative staff and teachers' commitment to the programme can be better. However, they are very pleased with the support and the accompaniment given by the Chamber of Commerce consultants.
- The structure of the tools and timings of the programme should be assessed.
- The program has wider systemic effects than the ones originally considered. This means that although the program is expected to have an impact on the student's life and behaviour, its impact can be seen in other stakeholders as well.
- The effect of administrative requirements on the performance of the program needs to be assessed.
- When drawing the community, the stakeholders expanded the boundary of what was considered as the system to be considered in the evaluation. Stakeholders recognized janitors, cleaning, and maintenance teams as having a role in the program as well.
- The way in which stakeholders are motivated by the program needs to be explored.

Taking into account this insights (and others not stated here) we proceeded to design and apply a series of surveys to students and consultants of the program. This surveys are currently being analysed and for this reason their results will not be discussed in this paper.

## **SYSTEMIC EVALUATION**

As can be seen, the aim of conducting this evaluation, or at least of what has been described here was to develop a systemic evaluation. This is not only by considering the interrelationships between the actors and the issues concerning them, but also by exploring the establishment of the boundaries of the system. One can explore boundaries not only in relation to physical spaces, which in this case would have been the school, but also by exploring boundaries regarding what and who to include in an evaluation while thinking how to do it. The key aspect of exploring boundaries does not only lies in establishing them per se but in being able to reflect upon changing them and also by

considering the implication of establishing a particular boundary, what is being included by it and what is being left outside not only the boundary but of the evaluation as well.

On the other hand, the exploration of interrelationships is a key element of conducting an evaluation because these are the ones that contribute to enriching the picture of the program which in extend helps to facilitate the comprehension of what is going on it. However, although one might try to construct a picture as rich as possible, no matter how much we seek to do it, because it will always be partialized by the perspectives being included and under which it is being modelled. However, not taking into account at least some of these interrelationships will certainly have a negative impact on the results of the evaluation.

## CONCLUSIONS

As can be seen in the previous description, using systems concepts when conducting an evaluation can be very beneficial for several reasons. First, it allows the evaluator to gain an insight of the different ways in which an evaluation can be conducted, and in that sense being able to be aware of the implications of conducting it in one way or another. This is related to the establishment of boundaries as they will define what is going to be taken into account as well as what is going to be left aside. Second, considering an evaluation in a systemic way allows the inclusion of the different perspectives represented by the stakeholders, these are the ones that shape how the picture of the system which in this case is the particular aspect of the program that is being evaluated, is perceived. Third, establishing the boundaries not only over what is going to be evaluated but also over who is going to be included, allows the recognition of interrelationships that otherwise will not be considered, not only over the participants but also over the issues regarding them.

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