

Changes in the Classroom: Accomplishments and Obstacles of an Innovative Proposal in the View of Teachers

Letícia Portieri Monteiro, Katia Stocco Smole Mathema, São Paulo, Brazil

Email: leticiaportieri@globo.com, katia@mathema.com.br

Received December 6th, 2013; revised January 6th, 2014; accepted January 13th, 2014

Copyright © 2014 Letícia Portieri Monteiro, Katia Stocco Smole. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. In accordance of the Creative Commons Attribution License all Copyrights © 2014 are reserved for SCIRP and the owner of the intellectual property Letícia Portieri Monteiro, Katia Stocco Smole. All Copyright © 2014 are guarded by law and by SCIRP as a guardian.

In 1999, the Judaic Education Council of Rio de Janeiro implemented the Educational Innovation Program (EIP) in the Israeli schools of that city so as to meet the new trends in Brazilian education. The present work was designed to evaluate the modifications taking place in the school environment as a result of EIP implementation, a program whose core idea is to work on knowledge building from the Piagetian perspective, active learning in Dewey's conception, and multiple intelligences as presented by Gardner. In order to assess the chosen program, we used a qualitative approach through semi-structured interviews with the participants and observation of classrooms from the first to the fifth grade of elementary school. The results of our study showed that from the implementation of the program, the professionals involved were more motivated to search for information and update their knowledge so as to meet the differences between students, using a diversity of strategies and dynamic activities which led to encouraging student autonomy as regards their learning. The reported difficulties for the work to proceed were mainly about the schoolwork timetable planned for both the project and the subjects, and teachers having to cover an extensive curriculum, common to other Brazilian schools. In every innovative program, it is important for the professionals involved in it to continually re-evaluate its development, searching for changes or alternatives as difficulties are encountered. The aim of the present paper is to report the main findings of this research, as well as indicate the strengths and precautions to take in educational innovation proposals whose primary focus is classroom innovation.

Keywords: Innovation; Multiple Intelligences; Active Learning; Teaching Methods; Curriculum

Introduction

In most countries, education is today a national priority that, according to historical characteristics, promotes reforms in educational systems so as to make them more efficient and equitable for the preparation of a new citizenship, where individuals can be able to face the technological revolution that is occurring in the production process and its political, social and ethical developments (Mello, 1998).

In recent years, there has been a growing trend of introducing changes and innovations to the classroom and the educational structure in general. The innovations in education encompass different fields, ranging from the redefinition of educational outcomes to the redesign of educators profile and, in particular, the organization of educational spaces including the classroom. Our main objective here is to describe the sorts of gains a school has from implementing an innovative educational program.

The educational systems of nowadays have as their main goal to contribute for students to be active, caring, critical, and democratic citizens. The teaching and learning that take place in the classrooms represent one way of building meanings, reinforcing and forming social interests, forms of power, of experience, always with a cultural and political meaning. In any effort to form this type of citizen, it is crucial to take into account the cultural content, as well as the teaching strategies, the learning and the required evaluations to undertake such task. Perhaps that's why research into school institutions has lately been increasing and aroused a lot of interest and concern. In this sense, changes occurring in various parts of the world and which are inspirational for educational projects in Brazil are important as sources of research, as is the case of the Educational Innovation Program (EIP) developed in Israel, which is the object of this work.

When the State of Israel was founded (1948), a complete and functional system of education was already in place; nevertheless, right after the establishment of the State, the educational system was faced with the huge challenge of integrating a great number of children from over 70 different countries, some of whom coming with their parents and others by themselves. New teaching methods had to be developed in order to absorb young people coming from different cultures within one single school environment (Sechter, 2001). Among the innovations that arose is the Educational Innovation Program (EIP), which takes into account the heterogeneity of the clients to be reached by it.

The State of Israel proposed to build an educational system that influenced the character of society and the products of education. For this reason and because of the varied background of the population, the national policy was from the start based on the principle of the heterogeneity of the classes, in both elementary and high schools. This policy was conceived from the perceived need to improve the results attained by students as a whole and to promote processes of social integration. Within this concept, some educational programs have arisen, which are still in place in Israel today. In the present work, we will assess one of these programs, the EIP, which is targeted to diversify education.

In the Brazilian model, the problem centers around the challenge of testing a program that has been successful in Israel, cautioning, however, that the reasons in our reality lie on the multiple abilities to be developed in elementary school students (from first to sixth grade), abilities which are crucial for their progress considering the individual differences that are so present in the classrooms.

Education for Diversity

The basic assumption of the diversified approach, considering the existence of differences between students, leads to the socializing concept of teaching, which aims to maintain the most diverse educational processes in the heterogeneous class. This class is conceived as being a social and organizational context, which provides students with ample social contact and an opportunity to improve their learning. The concept of heterogeneous class points out not only the different paces of learning but also a set of individuals who differ in several respects: backgrounds, personal characteristics, learning styles, tendencies, needs, wills, abilities, difficulties and other variables.

Education for diversity suggests recognizing the existing heterogeneity in each class in all of its dimensions, as a starting point for the plan and organization of teaching and learning, and acting to create an environment that provides students with possibilities of study and personal and social development, taking into account their differences (Glubman & Yram, 1996).

Modern society is going through rapid and frequent changes as result of the economic and technological developments. Because the school occupies a central place in society, it has become an institution to where all expectations converge for meeting these changes.

Within this new conception, the Council of Judaic Education of Rio de Janeiro implemented the EIP in the Israeli schools of the city in 1999, with the main aim of getting these schools ready for preparing the citizens of the twenty-first century, preserving their cultural and moral values. The education of critical citizens requires their inclusion in a society in which scientific and technological knowledge is increasingly valued.

This program is in agreement with the teaching reform that is under way in Brazil, where the greatest innovation of the Law of Guidelines and Bases is to prepare citizens, developing competencies and skills, where the school must diversify its methods, investing the contents with meaning, attempting to teach how to learn and respecting individual differences. One of the principles that also appear in the Law and that dramatically innovate the history of formal education is expressed in article 1: "education must be linked to the world of work and to social practice", and comes to stress the importance of implementing the EIP.

The Importance of the EIP for the Judaic Schools in Brazil

According to article 1 of the Law of Guidelines and Bases of National Education (Law 9.394):

Education encompasses the formative processes that develop in family life, human relationships, at work, in educational and research institutions, social movements and organizations of civil society, and in cultural manifestations (Brazil, 1996: p. 1)

Starting from this principle and in keeping with current trends, the EIP intended to make changes to the school, understanding it as an organization and a totality. These changes should occur in the pedagogical, methodological, social and technological fields; in the field of organization and relationships between people; and in the way of planning and making decisions.

The principles of the program are constructivist and also humanistic, as they give priority to the transmission of values. They are democratic and work in democratic schools which accept to work this way. Work is based on the idea of diversity in intelligence, learning, interest, pace, previous knowledge, modalities of communication and organization of tasks. Each of these characteristics should be identified by the teachers, in themselves and in the students, so that they may lead the child to recognize his/her own diversity and then be able to build a work plan that meets these.

Most teachers of today are the result of a model of professional formation that demanded their paying attention to the definition of goals and methods, failing to consider as their mission the explicit selection of cultural contents.

According to the documents assessed in this program, the role of the teacher has changed a lot. The teacher is no longer the center of the class, neither the only source of information for children, to become someone that accompanies processes of search and selection of information. The teacher provides the child with resources to organize himself/herself, still being the one who transmits knowledge, but most of all helps the student build his/her own formation. The teacher is a learning counselor, someone whose primary task is no longer the lecture and who takes over the role of tutor.

Education based on copy or mere transmission of knowledge becomes pointless and begins to take as its primary strategy of development the construction of knowledge through research, work by one's own, and continual update. In the present rate of scientific and technological innovations, the ability to get professionally updated is crucial all over the world. Taking these aspects in consideration for implementing the program in schools, it was important to promote the formation of teachers who take part in the IEP. During this process, many professionals traveled to Israel to get to know the schools that adopted the program. In Brazil, they discussed and studied the curriculum and the methodology to be adopted. Continued education also happens under the supervision of specialists who come to Rio de Janeiro and through meetings in the school itself, with the board of directors, coordination and teaching staff, where experiences are exchanged.

In the educational institution under study, the Judaic culture is part of the curriculum. According to Santomé (1998), a democratic curriculum, one which respects the political, cultural and linguistic diversity, has to offer the possibility that all of

the students understand the history, tradition and customs of their own community. This means also getting to know those of other peoples, in the context of a philosophy of respect, collaboration and solidarity.

In this work, we use the term curriculum in Gimeno Sacristán's sense (2000): a set of knowledge and learning experiences offered to students that includes not only the list of schools subjects that should be taught but also the way of organizing classes, the organization and management of time, the selection of materials and resources for the teaching and learning process, the forms of control and monitoring of students, the values preserved and lived daily at school—ultimately, the whole way of school life.

Educational Innovations

In schooling, the history of innovations always appears linked to ideological, social and economic issues. Any innovation depends on the global context in which it arises, who are its promoters, the impact and extension that it acquires. Hernández (2000) states that the innovations that had the greatest impact were those that gave an alternative response to the needs of the school or society and thus remained at the culture of the school and favored the quality of teaching and the different educational systems.

In the mid-sixties, talking about innovations was already part of the pedagogical discourse and school culture. In the US, this period was marked by the proliferation of innovation in education and as an attempt to solve the social problems that were emerging.

Innovations are usually produced by some external pressure (educational reform), by the will or desire to change of a group or institution. That was the case, for example, of the Projects of work that emerged in 1983 in Spain, from the need felt by elementary school teachers for going deeper into the theory and practice of globalization.

An Innovative Proposal

A school that is focused on learning should be a place where children learn to study, learn to work. At present, children do not learn to study and work much. This is a problem that can be seen in south Europe countries, in Portuguese, Italian, Greek Schools, in part of the French schools, and also in South America, differently from what is seen in northern Europe countries, where schools are quite focused on learning to study, autonomous work, in groups and collaborative work. It is crucial to have these tools, especially when we consider the importance of learning throughout life (Nóvoa, 2013)

Within this new tendency, the EIP can be considered an innovative project because it counters the traditional models of education, i.e., instead of being centered on the educator and knowledge, it is centered on the learner and life. The conventional methods are not merely replaced by others. What is rethought is the purpose of education, putting it at the service of society.

Depending on the culture of a school, an innovation project will be welcomed or meet hostility, suspicion or openness. Culture is represented by how people involved in this project appropriate themselves of information coming from the outside and assimilate it; how they interpret what happens in school life; the interventions of parents and principals; the research data, as well as any idea or suggestion circulated within the school.

According to Thurler (2001), each school responds differently to innovative ideas and educational system reforms according to its priorities and its definition of a "good school". Innovation projects force teachers to question their practices, perhaps leading to some destabilization which will have different consequences, depending on how innovative ideas fit in the established culture. According to this context, teachers are more or less likely to submit themselves to authority.

Generally speaking, researchers studying educational innovations are concerned with how these are planned and implemented and if there was a real process of change. Every innovative idea will be justified only if it contributes to better meet the established purposes and guarantee efficiency of the educational system.

Educational innovation is closely related to the quality of teaching, and that is what encouraged us to perform this study to get to know how teachers put this innovative program in practice.

The Educational Innovation Program

The EIP has an educational view that acknowledges the existence of differences between students and believes that the role of the school is to meet these differences by adapting the educational environment to the students' needs and to the aims of the study plan. In this approach, students should be placed at the center of the educational process, so that they can pace their own study and development and be offered pedagogical, cultural and personal aims that are consistent with their possibilities, penchants and needs, through active participation in the process and guaranteeing their progress as both an individual and a group member.

The ideological roots of the EIP can be found in the Judaic tradition and other old traditions dealing with the position of student and teacher. The idea "Teach young people according to their nature" is part of the theory of educational philosophy, cognitive psychology and humanistic psychology.

The guiding principle of education for diversity is that of reaching a maximum goodness of fit between the individual student, as a part of the group, and the learning environment, so that he/she will be able to progress and develop his/her potential

The central ideal that guided the concept of this teaching was the acknowledgment that the role and obligation of the school is to create an environment that offers each student opportunities for success and growth, in both the academic and social/ersonspheres.

In order to meet the goals of the EIP, a variety of flexible teaching and learning strategies were created that included the organization of a rich pedagogical environment favoring the various teaching and learning processes, through the cultivation of a new pedagogical and social school culture. This pedagogical environment promotes the flexibility of a study program that contains the differentiation of common objectives to the totality of students and personal objectives appropriate to each individual student; the progress of personal and group teaching and learning processes must fit the possibilities, trends and preferences of the students; the use of a wide variety of techniques, methods and resources; flexibility of study time and learning scopes, as well as development of criteria and tools of evaluation about the personal progress of the student and his/her collaboration in the different processes.

The diversified teaching and learning strategies used in the EIP, also referred to as diversified work, can be presented via individual, group or whole-class activities. Sometimes the direction of the activities is determined by the teacher, but other times the student chooses which activities he/she wants to perform. These works can take place in the classroom or in other school spaces, such as library, computer room or sciences laboratory.

Diversified work allows the teacher to follow the students according to their learning pace, giving them a more personalized attention and suggesting other possibilities both to those that learn more rapidly and those who need more time to learn. In this way, possibilities of different times for learning are provided.

These changes demanded others which were associated with them. Assessments, for example, must be performed at different stages: as diagnosis, before the study; as monitoring during learning; and as comprehensive evaluation after some period in which the teacher considers that learning already took place. Both teacher and student participate in this process, as the latter may follow these steps through observation records and self-evaluation questionnaires. The assessment tools are various, such as activities in class, observation, conversations, games, portfolios, tests and others.

Assessment, as well as activities planning, should be done taking in consideration the learning level and personal rhythm of the student, the basic aims of the curriculum, and the normative outcomes to be attained. Diversified teaching places great importance on student assessment about his/her personal ability and pace of learning. This allows learning the extent to which the student learned the studied content and how effective was the adaptation of the teaching and learning to his/her needs.

The teacher is required to integrate sectors of knowledge, of knowledge about the student and study processes, means, methods and teaching resources. The suggested innovations for education for diversity demand qualitative changes that include attitudes, aptitudes, and a variety of pedagogical and didactical means by the teachers.

Some changes were necessary before implementing the EIP in the Judaic schools of Rio de Janeiro, such as: renovate the classrooms, creating an environment that is adequate for the activities required by the program; train teachers—with many of them traveling to Israel to know the schools using the program and take an updating course, and continuing to be encouraged by the presence of consultants who come to Rio de Janeiro to offer support; and extend students' time of permanence at the school, which then became full time.

To perform innovative programs, one has to count on professionals that face the challenges of innovation, with a profile defined by four parameters: self-confidence, independence, research spirit, and cosmopolitan view (Moulin, 1988).

For this reach, teachers' training in general and specifically for working in the EIP should be targeted to the development of this profile, something which does not always occur adequately, because, according to that author, the strategies of change are as a rule "manipulative" and "controlling", without consideration of context variables, in which interests and values may be conflicting and hinder the aims of this type of program.

On the other hand, as the "backbone" of the program is accepting and working on the diversities present in the classroom, we have to consider that teachers will also show individual differences that may have a positive effect on the new dynamics,

as long as the proposed aims are respected.

The central idea of this program is to work on the concepts of *active learning* and *multiple intelligences*, as viewed by Piaget, Dewey and Gardner.

Multiple Intelligences and Individual Differences

Considering that intelligences are multiple, Howard Gardner's research about the development of human cognitive abilities generated a refreshing pragmatic definition of intelligence, stated as follows:

- The ability to solve real life problems;
- The ability to generate new problems to be solved;
- The ability to do something or offer a service that is valued in one's own culture.

Gardner's definition (1995) of human intelligence highlights the multicultural nature of his theory. According to this author, intelligences are languages that, in part, suffer the influence of the culture the person was born in. They are tools for learning, problem solving and creativity that all humans can use.

From Gardner's perspective, the core of the Multiple Intelligences theory for education is to respect the many differences between people, the multiple variations in their ways of learning, and the various means by which they can be evaluated.

Taking the concept of multiple intelligences as a basis, it is possible to envision a different school education, where a pluralistic view of the mind differentiates between many diverse facets of cognition, acknowledging that people have differentiated cognitive strengths and contrasting learning styles.

Schools that consider Gardner's theory, as is the case of schools adopting the EIP, recognize that children of various ages or stages have different needs, perceive cultural information differently, and assimilate notions and concepts from different motivational and cognitive structures, and that the type of educational project that a school intends to use should consider these factors of development.

With regard to providing elements about how to deal with the differences between the students, the Multiple Intelligences theory open the doors for a wide variety of teaching strategies, which often are innovative (Smole, 2000).

According to Armstrong (2001), this theory warns that there is no set of strategies that always works best for all students. Every child has different inclinations in the eight types of intelligence, so that any particular strategy will likely be successful with a group of students and not so successful with others. A teacher devising teaching strategies based on multiple intelligences makes the students interact differently, such as in pairs, small groups or larger groups, and sets apart some time for individual self-reflection. In the EIP, these aspects are foundations for organizing schoolwork.

Active Learning Manages the Program

As another core idea of the EIP, the active school proposes learning through personal activity of the student. It transfers the control of the learning process from the teacher to the students, and it's up to the latter to plan and pursue their own learning objectives and select the resources that best fit their needs.

Active learning is one that is constructed by learners from their interaction with sociocultural contents, requiring also active teaching. The educator, in working with their learners, should be careful to propose contents and activities that allow

learning by action.

The EIP experience, introduced from the first to the fifth grade of elementary school, follows the principles of active learning redefining the aims of education, contents transmission, role of the teacher and classroom organization. In this view, the fact that children differ in their physical, psychomotor and cognitive development is respected; that is, every child has specific characteristics.

The ideas that underpin these modifications are governed by major educational and psychological theories and social educational theories, such as Dewey's (1976).

Dewey's thinking consists in his attempt to connect the notion of individual and social (cooperative) intelligence to the discourse of democracy and freedom. According to this author, one of the advantages of getting this freedom is that it favors the conditions of the learning process. For this to happen, and despite the fact that students constitute a general group, the teacher should consider every child individually, as no two cases are exactly the same. Uniformity in teaching generates immobility which ends up in disregard for individual tendencies.

Dewey's view of the classroom as a microcosm of society is an instructional system based on techniques that are similar to the multiple intelligences (Gardner, 1987). Many alternative educational models of today are essentially systems of multiple intelligences, and these include the active learning that supports the EIP.

For Gardner (1995), the ideal school is one which takes into account that people do not have the same interests and abilities, meaning that not everyone learn the same way. This model of school must also consider that no one is able to learn everything that is there to be learned, for nowadays the ideal of learning "everything" is no longer possible. This author highlights the importance of an individual-centered education, in which the aim should be to build education around each child's specific potentialities and inclinations.

Research Design

From the theoretical framework, the survey and subsequent data analysis were based on a qualitative method which, according to Alves-Mazzoti and Gewandsznajder (2001), is characterized by an emphasis on subjects, giving priority to their perceptions, and an emphasis on the role of science as transformer of reality, considering that the researcher's values are present throughout the process of investigation, since the analysis and interpretation of the process of knowledge production and transformation are part of the present context in which we live and do research.

According to Lüdke and André (1986), qualitative research is characterized by having the natural environment as direct source of data and the researcher as main instrument for data collection. Another characteristic mentioned by the authors is the fact that such research is concerned with the process rather than the product, guaranteeing the confirmation or not of the initial hypotheses of the study.

To assess this program, three techniques were used for data collection: documental analysis, interviews, and participant observation

Documental Analysis

Documental analysis was used to complement the other data

collection techniques that will be described further below. Documents can be considered a rich and stable source for research, where evidence can be collected to support the researcher's observations.

In the present work, a bibliographical research was carried out into the origins of the EIP in Israel, in documents that are in the *Órgão de Educação Judaica* of Rio de Janeiro (*Vaadachinuch*), as well as a bibliographical review based on the theoretical framework.

Observation

Observation has to be controlled and systematic if the instrument is to be valid and truthful during research. It allows a personal, close contact with the phenomenon investigated (Lüdke & André, 1986).

Denzin (1978) describes participant observation as a field strategy that simultaneously combines documental analysis, interviews with actors involved, participation and direct observation. In participant observation, the researcher interacts directly with the subjects, becoming a part of the setting in which the study is being conducted, taking part in the everyday lives of the actors involved, and gaining greater insight into the situations lived by the subjects involved in the research.

For the EIP analysis, observations of the classes were performed focusing on teachers' work practices and children's autonomy in doing assignments. This instrument allows to identify unintentional or unconscious behaviors and explore topics that teachers do not feel comfortable to discuss. Also, by means of observations, teacher and student behavior can be recorded in their temporal-spatial context.

At first we intended to perform free observations, but we realized that during our presence in the classroom teachers talked with us to explain the work they were developing and, at the end of class, we also looked for them to have informal conversations. With this, we started to perform participant observation in order to describe and understand non-predetermined behaviors occurring on a daily basis. Observations were performed in first to fifth grade classes of elementary school from March to August, 2003.

Before we began our observations, all the research aims were explained to the teachers involved in it, including the times in which we would be in the classrooms. In average, four observations were performed per class.

In each of the classes from the first to the fourth grade, observation was performed at the times of common nucleus (when topics related to mathematics, Portuguese, science and social studies are addressed), which is taught by one and the same teacher.

From the 5th grade on, the cited subjects are taught by specific teachers for each of them, which made observation work longer in this grade.

Interviews

The interviews complemented and brought a new focus on the impressions obtained through participant observation, as well as providing interaction and immediate and current capturing of the information sought (Lüdke & André, 1986).

For validation of interview scripts, a pre-test was administered in another Judaic school where EIP was adopted too, in order to assess the questions and make any changes thought to be needed.

With scripts reviewed, semi-structured interviews were conducted in which the interviewees answered specific questions, taking in consideration their own words. Since the focus of research is to make an analysis of the EIP, interviews with teachers and managers were conducted in order to evaluate how the school measured the program.

For interpretation of these data, categories of analysis (categorization) based on Laurence Bardin (1977) were created. Categorization is an operation of classifying the constitutive elements of a set, by differentiation and re-grouping according to gender, with previously defined criteria. Categories are classes that gather a group of elements under a generic heading, a grouping that is performed because of the common features of these elements. Categorization comprised two steps:

- Inventory: isolating the elements;
- Classification: sorting out the elements and search for a certain organization for the messages.

General Data Analysis and the Evidentiary Paradigm

Our intent in analyzing all of the research instruments was to search for evidence of approximation to the answers of our questions, as well as confirmation or refutation of our hypotheses.

Here we use the term *evidence* because we think that in a Master level research, our data and reflections are not sufficient to provide definitive answers for questions as complex as those we decided to investigate.

Our interpretation related to the reading of evidence was based on historian Carlo Ginzburg (1991), who assumes for an evaluator, whatever his/her field of action, the ability not to stick only to the most striking features of a phenomenon or object of observation, but also the examination of details, of data that would marginal, less expressive to understand it. A recognition of minutiae is assumed, the perception of a reality that is not readily perceptible, the search for clues which allow to capture deeper information and interpret and diagnose it.

For the author, this should be a "conjectural" paradigm that is related to an interpretive method, in which seemingly irrelevant details without any importance are forms of access to a certain reality. These details may provide the path towards networks of deeper, otherwise inaccessible, meanings.

Ginzburg (1991) asserts that an attitude of reading the evidence on the part of the researcher demands an attitude oriented to the analysis of symptoms, of clues, of evidence that allow to reconstruct the history of what we observe and allow the analysis of more individual cases. For the author, only through careful observation and records is it possible to develop accurate histories.

Conclusion

The analysis of the Educational Innovation Program, considering the theoretical picture and the data obtained in field work, allowed the questions of this study to be effectively answered, identifying a few relevant factors as regards the proposed method.

We highlight that this program showed as main characteristics an innovation of the learning model, centered on the student, with the use of diversified strategies, which consider individual differences and encourage student participation, even by proposing extra-curricular topics, yet of interest for their ample formation and development, by means of socialization of in-

formation.

According to the authors reviewed, the relationships that emerge in the classroom transform the participating subjects of the process, generating collective benefits, which make education one of the main pillars of long-range social changes.

The so-called "alternative models of education", which draw on innovative methods and techniques, have along their evolution encountered some structural and conjectural resistances, very often without having been given the necessary pedagogical support as regards the elements stated for such contrary arguments. We understand that only through support to systematic research on the subject and with the necessary adaptations to the proposed methods can new conceptions be secured, whether favorable or not to these methods.

As regarding the difficulties implementing the EIP, we can point out the need to reorganize the structure of the school timetable, since the method has been applied only once a week owing to the impossibility of continuous class times.

Another issue that hinders this type of work is teachers having to cover an extensive curricular program, thus preventing a more in-depth study of some topics, mainly those that are innovative relative to the initial scheme presented, with the first grade allowing more possibilities for this development, as the curriculum is less extensive than in the other grades. The subjects of Portuguese Language and Mathematics have more class hours and thus allow greater adaptation to the program.

Concerning the contribution of the program to the school, we noticed that teachers who were present since the beginning of the implementation had incorporated the changes. From this assimilation, teacher evaluation of the program and its comparison with other learning methods enrich the process and may eventually allow an effective implementation with the necessary adjustments. Teacher work, from the knowledge and representations of the students, exerting the role of supervisor, brings new conceptions based on the model proposed in this program.

As a relevant factor, we observed that the diversified activities not only allowed the development of autonomy, but also facilitated attending to children with higher levels of learning difficulties, developing solidarity and cooperation among themselves, promoting the integration and formation of work teams, thus strengthening the levels of socialization and affectivity, which give full sense to the themes worked and the projects to be developed.

Another step that the school has been taking is the adaptation of the evaluation system to the program, implementing more elastic and malleable models with the use of other instruments besides the formal test. These include levels of participation and interest, but these qualitative criteria are converted into grades.

The classrooms where the program is developed are quite different from the other ones: the walls are creative, books and games are available for the children, with exhibits of works done; there is a sense of participation and humanization. The students move during class to work in teams, interacting with the other groups, perhaps searching for information or materials on the school premises, outside their classroom, for example, in the library.

Student autonomy is encouraged and regulated by the teacher in an open and participatory way. One senses that the program has become a challenge for the school and its teachers, in the search for a pedagogical model focused on the formation of

individuals more prepared to interact in society. However, it should be noted that this research is not exhaustive, making it necessary to follow and deepen the proposal along a period of its application so that some of the aspects identified here can be consolidated or improved.

Many were the lessons learned from this assessment, including the importance of variety in the teaching strategies used to make students learn; the reaction of the teaching staff and students to an innovation program; how innovation can change the daily life of a school; and the necessary structure to propose, develop and see the results of a program like the one we assessed.

REFERENCES

- Alves-Mazzoti, A. J., & Gewandsznajder, F. (2001). O método nas ciências naturais e sociais—Pesquisa quantitativa e qualitativa. São Paulo: Pioneira Thomson Learning.
- Armstrong, T. (2001) Inteligências múltiplas na sala de aula. Porto Alegre: Artmed.
- Bardin, L. (1977). Análise de conteúdo. Lisboa: Edições 70.
- Brazil (1996). Lei de diretrizes e bases (LDB). Lei 9394/96. Lei de Diretrizes e Bases da Educação Nacional. www.planalto.gov.br
- Denzin, N. (1978). The research act. New York: McGraw Hill.
- Dewey, J. (1976). Experiência e educação. Tradução de Anísio Teixeira (2nd ed.). São Paulo: Nacional.

- Gardner, H. (1987) Beyond IQ: Education and human development. Harvard Educational Review, 57, 187-193.
- Gardner. H. (1995). *Inteligências múltiplas: A teoria na prática*. Porto Alegre: Artes Médicas.
- Gimeno Sacristán, J. (2000). O currículo: uma reflexão sobre a prática. Porto Alegre: Artmed.
- Glubman, R., & Yram, I. (1996). Desenvolvimento das técnicas de ensino em Israel. Ramat Gan: Universidade de Bar-Ilan.
- Ginzburg, C. (1991). *Mitos, emblemas e sinais*. São Paulo: Cia das Letras.
- Hernández, F. (2000). *Aprendendo com as inovações nas escolas*. Porto Alegre: Artes Médicas Sul.
- Lüdke, M., & André, M. (1986). Pesquisa em educação: Abordagens qualitativas. São Paulo: EPU.
- Mello, G. N. (1998). Cidadania e competitividade. São Paulo: Cortez.
- Moulin, N. (1988). Projeto novo saber: Mudanças e inovações em educação. São Gonçalo: Universidade Salgado de Oliveira.
- Nóvoa, A. (2013) Nada substitui o bom professor.
- www.sinprosp.org.br/arquivos/novoa/livreto_novoa.pdf
- Santomé, J. T. (1998). Globalização e interdisciplinaridade: O currículo integrado. Porto Alegre: Artes Médicas.
- Sechter, F. (2001). *Desafios da educação em um país nascente* (pp. 25-35). Rio de Janeiro: Revista Fundo Comunitário.
- Smole, K. C. S. (2000) Matemática na educação infantil: A teoria das inteligências múltiplas na prática escolar. Porto Alegre: Artmed.
- Thurler, M. G. (2001). *Inovar no interior da escola*. Porto Alegre: Artmed.