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FORMING ENTREPRENEURIAL MINDSETS? PRELIMINARY EVIDENCE OF TEACHING PRACTICES FROM PRIMARY SCHOOLS IN A DEVELOPING AREA IN SOUTH AMERICA¹

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Abstract

Over the past few years there has been a renewed interest by governments, companies and academics in the role of entrepreneurship in innovation and economic growth. There has also been a proliferation of studies on education for entrepreneurship in industrialised and developing countries. By addressing 'entrepreneurship' in terms of SMEs and high-tech start-ups, they overlook the blurring distinctions between entrepreneurial and managerial capitalism, an erosion of the Schumpeterian dichotomy between large and small firms, and the growing importance of entrepreneurial management within companies as a source for economic growth. Additionally, 'entrepreneurship' tends to be taught as a stand-alone topic inside business and non-business courses. Entrepreneurship education within primary schools, especially in least developed locations in developing countries, is largely missing in this field of study. Drawing on first-hand empirical evidence from primary schools in a developing area in South America, this paper examines the incidence and functioning of pedagogic practices potentially related to the initial formation of entrepreneurial mindsets. The findings show that, despite some efforts, the researched schools suffered from inadequate physical conditions and, most importantly, teachers' unawareness and deficient qualification related to the adoption of these techniques. These problems seemed to prevent children from developing important features of their initial entrepreneurial mindsets. Thus, if companies and countries want to secure their sources of revolutionary ideas and continuous and des-continuous innovation, they need to have a long-term commitment to continuously develop and nurture the seeds for their future innovative knowledge bases. Specifically, a comprehensive, long-term, geographically and socially inclusive perspective on entrepreneurship education, that is, from primary school levels, especially in least developed areas, is badly needed to improve our understanding and policy recommendations in this field. Otherwise, all the discussions on entrepreneurship education will not evolve beyond hype and rhetoric.

Key words: Entrepreneurship education; entrepreneurial mind-sets formation; primary schools; developing locations.

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1. Introduction

Over the past decades, especially during the past few years, there has been a renewed concern by governments, companies and academics with the role of entrepreneurship and innovation in economic growth. As a consequence, there has been a proliferation of initiatives to promote and stimulate entrepreneur projects in the form of small and medium sized enterprises (SMEs), hightech start-ups, incubators, and ventures. In parallel, there has been a profusion of education programmes addressing these issues, in both the industrialised and developing countries.

Despite their merits, there are two problems with the majority of the existing education programmes on entrepreneurship. At first sight, they may appear unrelated. Firstly, they tend to address the issue of entrepreneurship in the realm of SMEs and start-ups. As a result, they seem to miss out a transformation process occurring in the nature of entrepreneurship (see, for instance, Teece, 2007) involving two features. On the one hand, there have been blurring distinctions between entrepreneurial capitalism and managerial capitalism; on the other hand, there has been an increasing erosion of the traditional Schumpeterian dichotomy between large and small firms, especially in the context of industrialised countries with some reflections already observed in developing countries. Regardless of companies' size, innovative capabilities and, especially talented and imaginative individuals will play an increasing role in achieving enterprises' superior performance.

Secondly, most educational and training programmes tend to address entrepreneurship as a specific discipline that to be taught either as prescriptive-type of 'entrepreneurship courses' or as a stand-alone topic inside traditional business and non-business courses. With a few exceptions, there are some recommendations addressing entrepreneurship at the level of secondary schools. The treatment of entrepreneurship education within the context of primary schools, especially in the context of least developed locations within developing countries, is largely missing in the entrepreneurship education literature. Put differently, the issue of forming entrepreneurial mindsets at the level of primary schools in geographical areas that are away from the industrialised centres in large developing countries, like Brazil, has been excluded from the existing studies, debate and policy agenda over the past decades and, especially over the past few years.

As a result, this paper focuses on the adoption of primary schools teaching practices that are likely to contribute to and/or stimulate children's further absorption of entrepreneurial skills. We examine the incidence, functioning and conditions under which such pedagogic

practices and techniques are adopted within a sample of 20 primary schools located by the border between South-western Brazil, South-eastern Bolivia, and North-eastern Paraguay. This paper is structured as follows. Section 2 presents background, conceptual basis and motivations for the performance of research subjacent to this article. Main design elements and study method are presented in Section 3. Section 4 shows some of the main research results. Finally, Section 5 contains conclusions and implications of the article.

2. Study Background

2.1 'Entrepreneurship' and economic progress

The investigation of the role of creativity and technological innovation in the acceleration of industrial and economic growth of nations dates back to Adam Smith and Karl Marx. However, it was Joseph Schumpeter who, during the first phase of his work (Schumpeter Mark I, in the 1930s, see Schumpeter, 1934) explored these relations systematically, mainly considering the importance of entrepreneurship for economic progress. He made a distinction between 'administrative management' (management of what is known) and 'entrepreneurship' as the creation of the new by individual 'entrepreneurs' (Pavitt, 1990). However, during the second phase of his work (Schumpeter Mark II, from the 1940s), he recognized the importance of innovative large firms in economic growth, although he did not develop any theory for firm-level innovation (Freeman, 1989). The neo-Schumpeterian studies took up that task, especially from the 1980s, especially in terms of firms' capabilities (or firms' knowledge bases) and their inputs (learning mechanisms) as key sources for firms' innovative performance and economic growth of nations.

From the early 1990s, following the intensification of the competition pattern based on knowledge-intensive products and services, there has been a proliferation of academic studies and government and business reports addressing entrepreneurship as a key source of economic progress of industrial sectors, regions and countries. This phenomenon has generated a number of initiatives on education for entrepreneurship. In the context of industrialised countries there have been a number of initiatives across Europe since the 'Bologna process' [see, for instance, the 'Oslo Agenda for Entrepreneurship Education in Europe 2001-2005'; the 'Best Procedure Project: Entrepreneurship in Higher Education, Especially in Non-business' (European Commission, 2008); Klapper, 2004; among others] and plenty of them in the US like the roadmap document 'On the Road to an Entrepreneurial

Economy: A Research and Policy Guide' (see, Kauffman Foundation, 2007). In the context of developing countries there have also been similar types of initiatives, although less numerous, like the recent '*UNESCO Inter-Regional Seminar on Promoting Entrepreneurship Education in Secondary Schools*' (see, UNESCO, 2008).³

Most of these documents have emphasised the role of individual (bold) entrepreneurs, innovative small and medium sized enterprises (SMEs), incubators and start-ups (especially in 'high-tech' areas), and venture capital, particularly within the context of industrialised nations. However, such perspectives seem to be inspired by Schumpeter Mark I-type of perspective. Indeed, such initiatives have not captured more elaborated ideas that entrepreneurial capitalism and management capitalism are blurring, that is, that the traditional distinction between entrepreneurs and managers is fading. Put differently, the association of entrepreneurship to small businesses does not seem to reflect our current reality (see Teece, 2007).

Additionally, most studies and government reports on entrepreneurship in developing countries seek to mirror the initiatives in industrialised countries. As a result, most of the existing reports seem to miss out the historical knowledge-related resources deficiency in developing countries, especially in terms of human resources and managerial and organisational aspects (Hobday, 1995, 2005; Mathews, 2002). Consequently, these locations tend to be excluded from the debate and policy agenda as far entrepreneurship-related studies and strategies are concerned.

In addition, most of the existing studies and proposals tend to teach entrepreneurship, as an isolated discipline, at higher education levels. Such 'tip-of-the iceberg' view seems to miss out a more comprehensive and long-term perspective that would take into account the early stages of formation of entrepreneurial mindsets, especially in primary schools (see, for instance, Dolabela, 2003). Put differently, there is a scarcity of evidence and discussions on how pedagogic practices, at the level of primary schools, that have been recognised as having potential to stimulate the early formation of entrepreneurial mindsets, particularly within the context of schools located in least developed areas of developing countries.

The choice of such topic is justified on the basis of three points. First, let us consider, on the one hand, the increasing role of entrepreneurial management, and not only 'individual entrepreneurs' or SMEs, in superior enterprise performance and, in turn, in economic growth and

development (Teece, 2007). On the other hand, let us also consider that such entrepreneurial management is nurtured by people and virtuoso teams characterised by revolutionary ideas, critical, inventive and breakthrough thinking and collaborative work (e.g. Leonard-Barton, 1995; Leonard and Swap, 1999; Bessant et al., 2005; Fischer and Boynton, 2005; Teece, 2007). Second, let us also take into account that the formation of such 'entrepreneurial mindsets' does not derive, instantaneously, from specific training programmes, particularly at higher education levels.

Instead, it is constructed and nurtured since early school years by comprehensive pedagogic teaching practices based on the stimulation of critical thinking, imaginative, inventive and risktaking spirit, group activities and the 'what-might-be' kinds of question (Tudor, 2008). Thus it would be plausible to study the extent to which and how these practices are implemented within primary schools. Third, considering the scarcity of treatment of these issues in the context least developed areas in developing countries, there is a need to include such settings into the debate and analyses, so that they can receive the attention they deserve by academic studies and business and government policies.

As a result, this paper focuses on the incidence and functioning of pedagogic practices that might contribute to stimulating early development of inventive and imaginative thinking as an initial basis for the development of entrepreneurial mind-sets. These practices, based on games, ludic activities and children literature, are deemed here as one of the initial sources for the development of entrepreneurial mind-sets that might carry out innovative work within organisations, of different sizes, and contribute to their innovative performance and to economic progress of the surrounding environment.

2.2 Creative pedagogic practices as initial sources for entrepreneurial mind-sets

Over the past decades we have observed many conceptual and empirical studies on the importance of ludic activities for the enhancing of the learning process and creativity. As stated by Piaget (1971), ludic activities allow each child, whose thought is qualitatively different to that of adults, to 'play' with his/her world and exercise dominion over the specific reality of surroundings in a pleasant manner (see also Linaza, 1984). Ludic activities reflect a function of life, transcend immediate needs of human beings and bestow a purpose to action (Huizinga, 1980). In addition, the act of playing implies a caring for existence in a creative, fun and even hilarious way, according to the specifications of each age group and life circumstances (Luckesi, 1990, 2002a). Moreover, ludic activity does not only prepare children for future creative activity (Huizinga,

³ Earlier vague publications include Nelson (1977) and Nehrt (1987).

1980), but also becomes a base for story-telling and inventing of adults according to their potentialities and resources (Luckesi, 2002b). In fact, it is precisely in this environment of constant play and living in creative movement that enables the creation process reflected in scientific research and technological advancement (Luckesi, 2002a,b, 2006).

Specifically, playing and games contribute to the development of the imaginative mind and spontaneity of actions (Chateau, 1987). They are equally important to activate higher cognitive functions such as understanding, deduction, analysis and summarizing, constituting a base for extension of creativity (Luckesi, 1990, Santos, 1997; Vygotsky, 1991; Luckesi, 2006; D'Ávila, 2006; Santos, 2006). It is through playing that a child establishes the first relationship with learning (Brougère, 2004). One of the characteristics of playing effectively lies in the fact that there is no demand for specific behaviour that would allow for a clear separation of ludic activity from any other behaviour (Brougère, 2004). In this way, playing stimulates exploration and creativity in the child, unblocking tension and fears, as it does not overvalue errors and helps to break free from certain stereotypes that are generally common in classrooms (Soares and Porto, 2006).

In addition, Almeida (1987, 1998) argues that ludic education has always been present in different periods and peoples and numerous research contexts, forming a wide network of knowledge in the fields of education, psychology and physiology, and other areas of knowledge. Consequently, according to Almeida (1987, 1998), ludic education integrates deep theory and active practice. The objectives, other than explaining multiple relations of humans in the historical, social, cultural and psychological context, emphasize liberation of personal relations and techniques for reflexive, creative, intelligent and socializing relations, making the act of educating a conscious intentional commitment that requires effort but does not, however, cloud pleasure, individual satisfaction and its socially modifying character.

Goraigordobil (1990) emphasizes the contribution of playing for the global development of the child, and that characteristics of playing are linked to intelligence, affectivity, motor activity and social skills, being that affectivity promotes the necessary energy for psychic, moral, intellectual and motor progression of the child. In relation to the intellectual factor, playing stimulates the development of thought and child's creativity (Goraigordobil (1990).

Similarly, considering that activities based on children's games are ludic activities that allow free expression of the child, children's literature is capable of fascinating and

promoting increased creativity in children. As a result, a child will have the chance to widen horizons of culture and knowledge, and the opportunity to develop creative potential and a better perspective of the world and the surrounding reality (Oliveira, 1996).

According to the above studies, we perceive a strong link between ludic activities and the development of creativity. The creative capacity of virtuoso teams and management systems are increasingly considered the basis for firms' innovation and superior performance and, consequently, for the economic development of countries (see Teece, 2007). Furthermore, creativity and new ideas brought to us by persons of different academic background are adopted by various organizations (companies, universities, hospitals, research institutes, laboratories, etc.) as technical innovation that results in new processes, products and services for society. This, however, does not imply that we must deal with the accumulation of inventive capacity of people and organization as panacea. However, evidence in history show that countries and regions that reach significant economic, industrial and social progress deliberately and competently engaged in the improvement of cognitive and creative capacity of people in different areas of knowledge, and the development and dissemination of innovating technological activities in organizations of all types and sizes.

Development of creativity is the main element of the innovation process. Playing, with all its possibilities and variations, is the basis for continuous investigation, scientific discovery and techniques, serendipity, inventions and even technological innovation.⁴ It also involves challenging existing practices in the scope of organizations, a context in which most innovation is developed, in terms of new products and services that generate benefits to society (Leonard- Barton, 1995; Figueiredo, 2001). This creative activity derives from generating sources based in experimentation, trial and error, investigation, and systematic research (Bessant, 1998; Bessant et al., 2005; Figueiredo, 2003). These sources are directly related to principles of playing and ludic activity and can be systematically developed and stimulated in children in the early years of formal pre-school and primary education.

⁴ Serendipity refers to discoveries that are apparently and relatively "by chance". It is considered one of the various forms of manifestation of creativity that involves investigation, perseverance, curiosity, exploration and a sense of observation. For this reason, scientific and technological discoveries (and/or inventions) arising from serendipity are not exactly casual. They are the result of prior creative disposition and effort, as reflected in the famous quotation of the French scientist, Louis Pasteur, "Chance favors the prepared mind".

It is, therefore, essential that we consider ludic activity and access to children's literature in schools as a crucial educational strategy for the formation of future innovation, and creative and enterprising professionals. It is also important we consider access to children's literature as having the same property in relation to teacher training, which is never fully completed and in constant building process during pedagogic practice (see, for example, Rizzi and Haydt, 1987; Oliveira, 1996; Wajskop, 1995; Silva, 1997; Kishimoto, 2000; Craidy, 2001).

However, the mere presence of ludic activity in the classroom does not imply that teaching is ludic. This suggests that we must observe not only incidence of such activities in schools, but also the *manner* in which they are adopted and applied, namely their *operation* in schools (Luckesi, 2006; D'Ávila, 2006). Indeed, there have been some initiatives seeking to develop an entrepreneurial thinking via pedagogic practices since the early school years (see Dolabela, 2003). However, still there is a scarcity of empirical evidence about *whether* and *how* such pedagogic techniques are adopted within schools. Thus it is also important to improve our understanding of the nuances of main factors that contribute to stimulate and/or inhibit productive use of ludic activity in pedagogic practice in schools.

3. Study Design and Methods

The study underpinning this article was structured to answer the following issues:

(i) How do a sample schools use pedagogic activities – such as games, ludic teaching practices and children's literature – that are likely to contribute to creating children's capacity to further absorb and/or develop further entrepreneurial skills and mind-sets?

(ii) What are the main factors that contribute to stimulate and/or inhibit the implementation of these pedagogic practices? In other words, which are the main problems faced by schools in the case of non-implementation or limited implementation – of ludic activities and children's literature?

Based on answers obtained in (i) and (ii) the study focused on recommendations for the improvement of ludic activity use for school teachers in order to enhance and use these activities as an essential instrument in pedagogic practices to stimulate further development of entrepreneurial mind-sets.

Types of empirical evidence needed to answer our research questions were mostly qualitative, such as pedagogic practices used in schools, teacher training, school facilities,

adopted methods, etc. In terms of sources of information, research was based on empiric first-hand evidence collected directly in studied schools. The decision to seek primary data directly from the empirical context, namely in schools, resulted in more effort and resources from the Research team. The search for data directly from the empirical source placed us in direct contact with the reality of studied schools. This was also important to answer our research questions with an adequate level of detail, clarity and reliability.

Our sample design followed the criteria of 'intentional sampling' thereby the researcher selects cases that offer more richness of evidence and meets purposes of research in a productive way (Patton, 1990; Yin, 2001). In order for us to compose the study sample, we carried out an exploratory work involving an initial set of schools in Corumbá, in the western state of Mato Grosso do Sul. The municipality of Corumbá is located at the far western side of the state of Mato Grosso do Sul by the border with Bolivia and Paraguay. Founded in 1778, Corumbá comprises an area of 64.961 Km² and a population of approximately 90,000 inhabitants. The economic basis is exploitation and exporting of iron minerals, cattle farming and fishing tourism.⁵

Objectives of exploratory field work were: (i) to identify the universe of main schools in Corumbá from consultation with official sources and professionals in the area – teachers, school employees and governmental bodies – and to visit city neighbourhoods; (ii) to identify the real viability of conducting this kind of research; (iii) to select schools that could potentially participate in this research; (iv) to consult each school previously selected according to interest in participating in research.

This exploratory work resulted in the selection of 20 schools to be researched: eight private schools (40% of the sample), eight municipal schools (40% of the sample) and four state schools (20% of the sample). This represents around 85% of schools of Corumbá. Among pupils in these schools there are children coming from both Bolivia and Paraguay. Names of the researched schools are not revealed here. Instead they are referred to as School 1, School 2 and so forth. In this study we used multiple techniques to collect empiric evidence, such as: semi-structured interviews with teachers and direct observation of ludic activities and teacher practice in studied schools. It is important to note that the data collection process mainly involved established techniques in participant research. For this reason great emphasis was given to the direct observation technique.

⁵ In 1865 Brazil took Corumbá back from Paraguay during the Paraguay War.

4. Empirical evidence and discussions

Section 4.1 outlines some preliminary empirical evidence derived from observation derived from the implementation of a project based on development of children's creativity in Corumbá (UFMS campus). Such project worked as an initial basis for the study underpinning this paper. Section 4.2 examines evidence from the researched schools.

4.1 Initial evidence derived from observation

The first source of evidence for the study underpinning this paper were the systematic observations carried out during the implementation of a project based on development of children's creativity through games and artistic and artistic activities. This project was carried out continuously for 10 years, and always took place on Saturday afternoons at the university campus. The project involved more than 500 children. Most of these children lived in neighbourhoods near the university campus in Corumbá and from the neighbouring municipalities of both Brazilian and Bolivian sides. The vast majority of these children came from low-income families.

Activities included workshops of fine arts, musical and body expression, toy-making (building of toys from alternative material) and child literature. During implementation of ludic activities, two teachers, assisted by students of the pedagogy course, systematically observed and took notes regarding behaviour of children and their assistants, and of wording and reactions during the development of games, story-reading, theatre, painting, songs and other activities within the project scope.

The objective of the project was to provide the academic students of the pedagogy course with new theoretical and practical input for their pedagogic practice, improving their awareness of the importance of ludicity, creativity and criticism in the teaching-learning process. Simultaneously, the project aimed to grant the child community of Corumbá the opportunity to learn while playing, to learn while creating.

Additionally, continuous implementation of this project throughout the ten years allowed its actors to directly and systematically observe the way in which ludic activities are developed with children. These observations enabled actors to, for example: (i) identify a variety of techniques that permitted the use of ludic activities with children; (ii) observe how ludic activities and the use of children's literature are used to stimulate the creative capacity in children; (iii) capture different reactions to adopted techniques; and (iv) identify nuances regarding some factors that may contribute to a better and more beneficial

use of ludic activities in the enrichment of the learning-teaching process.

Observations and notes throughout the extension project helped to confirm the idea that playing and fantasy allow the child to put order in the world around him or her. The child assimilates, elaborates and better discerns experiences, information and values. Additionally, these activities permitted us to confirm the formative value of playing, of games and, mainly, of children's literature when it awakens in the reader a creative and critical potential.

For example, in many situations we observed that some children, from various types of schools, said that these ludic activities did not exist in their schools. We also observed the enthusiasm and revealing behaviour of many children during their involvement with ludic activities in our project. In other words, we detected a latent need. However, we were also surprised to see that some primary school teachers (first years) revealed little (or no) knowledge on ludic activities. These conditions caused certain unrest and were crucial for the initiation of the Research underlying this paper.

Nonetheless, conclusions obtained from these systematic observations pinpointed a certain abyss between various studies that attribute the essential value of children's games to the creative development of children – and the reality of mode of use (and/or simple non-existence) of ludic activities in schools. We also observed that school directors and educational policy makers, both at national and local level, tend to consider ludic activity and other pedagogic activities as routine or automatic. Little attention is given to the way in which these activities are adopted and implemented in everyday school activities. The results of these observations stimulated us to carry out more structured and systematic investigation at the level of schools within that empirical context. This led us to the second major phase of our project, whose results are shown in the following section.

4.2 Evidence of creative teaching practices from the researched schools

4.2.1 Overview of the researched schools

Public state schools. Physical conditions and conservation of schools were relatively good. Classrooms were ample and there are patios and sports courts. All schools had an enclosed and reserved area (room) denominated library. These rooms had some enclosed shelves with books, and students must ask a person-in-charge to open the shelves and take a book for research or reading.

Firstly, we sought information concerning whether the school had children's literature in classrooms, and if children's literature was mandatory. In three state schools there was no obligation to work with children's literature, and the teacher was free to carry out this work if desired. In the only state school that systematically worked with children's literature in the teaching-learning process (only 25% of the state school set and 5% of the total research sample) there was a discussion regarding whether literature should be developed during teacher activity time, but the teacher was not obligated to carry out this work. In this school, children's literature was used in the 2nd grade of primary school or in the 1st cycle.

Private schools. Although physical conditions of the eight observed schools were good, there was little space in classrooms and playgrounds, and an abundance of small areas denominated libraries. Of the eight schools, only one had a room solely for reading and, in this room, book reading and other activities related to children's literature is encouraged. Only one private school had ample physical space and a good library. Of the eight sample schools (40% total research sample), seven (87.5% municipal school sample) systematically developed children's literature activities, which comprise the Portuguese language programme. For this, students received a list of school supplies at the start of the school term which requested mandatory purchase of, at least, three children's books.

Of the eight schools, two (25% of private school samples) gave special emphasis to children's literature. For example, one of the schools had a project called, '*Reading at home*'; the other had a '*Reading Room*', which was an area where a teacher is designated for this specific function. This teacher received students according to grade and, together with their class teacher, developed reading activities for children. The reading room had shelves, tables and cushions, and students were free to choose the work they wanted to read in specific reading hours for each grade. This occurred both at Pre-school and Primary School level (first years).

Public municipal schools. Most of these schools were located in the suburbs. The teaching body largely comprised the low-income population of the city. Physical aspects of schools reflected a good state of conservation, but they lacked space. The number of classrooms increased according to growth of demand. Classrooms were small, as were patios and sports courts. The library did not have a reserved space for reading. Books were kept in the coordination room and teachers had to take books to students for reading in the classroom. Students interested in consulting or reading literature had to visit the Municipal Library or the University's Library in Corumbá. Of the eight observed municipal schools, five schools (62.5% of municipal school sample) had worked with children's literature. Children's books are not mandatory in schools of the Municipal Teaching Network. However, there is an interesting peculiarity: an annual festival involving municipal public schools.

Programmes of these festivals involved literature, fine arts, scenic, and body and music activities. This event had enabled teachers to develop mandatory work with children's literature based on existing resources. These activities were also stated as being classroom activities. Regarding school administration, we did not perceive any objection and/or problem regarding the development of activities based on children's books in classrooms. Nonetheless, we did observe resistance of teachers regarding activities based on works of children's literature.

4.2.2 *Situation within classrooms: aspects of teaching activities*

Table 1 summarises some of the main findings related to incidence of teaching practices potentially related to the early formation of imaginative, creative and entrepreneurial mind-sets in a least developed context of a large developing setting.

Table 1. Formative and creative aspects of children’s literature in studied schools

Formative aspects		Studied schools		
		State Schools	Private Schools	Municipal Schools
Children’s literature and ludic activities	Impossibility and/or difficulty of development	4 (100%)	37.5% (Schools 7, 8, 11)	50% (Schools 14, 15, 16, 17)
	Creative and pleasurable form	Absent	62.5% (Schools 5, 6, 8, 9, 12)	25% (Schools 17, 18)
	Valorization and use	Absent	62.5% (Schools 5, 6, 8, 9, 12)	25% (Schools 17, 18)
	Child participation	25% (Only in School 4)	87.5% (Schools 5, 6, 7, 8, 9, 11, 12)	62.5% (Schools 14, 15, 16, 17, 18)
	Interaction with other literature	25% (Only in School 4)	62.5% (Schools 5, 6, 8, 9, 12)	12.5% (School 17)
	Acquisition of new knowledge	25% (Only in School 4)	87.5% (Schools 5, 6, 7, 8, 9, 11, 12)	37.5% (Schools 15, 17, 18)
	Re-elaboration of vision of the world	25% (Only in School 4)	12.5% (School 5)	12.5% (School 18)
	Integration of content with other subjects	25% (Only in School 4)	87.5% (5, 6, 7, 8, 9, 11, 12)	37.5% (Schools 15, 17, 18)
Formative aspects	Importance of literature and ludic activities in the teaching-learning process	Absent	87.5% (School 5, 6, 7, 8, 9, 11, 12)	50% (Schools 14, 15, 17, 18)
	Importance of games and ludic activities in learning	25% (Only in School 4)	62.5% (School 5, 7, 9, 11, 12)	50% (Schools 14, 16, 17, 18)
	Literature and literacy	Absent	87.5% (School 5, 6, 7, 9, 9, 11, 12)	50% (Schools 14, 15, 17, 18)
	Literacy process	Absent	87.5% (Schools 5, 6, 7, 9, 9, 11, 12)	50% (Schools 14, 15, 17, 18)
Age group (5 to 10 years old)	Use of appropriate texts/stories	Absent	75% (Schools 1, 2, 8, 9, 11, 12)	37.5% (Schools 15, 17, 18)
	Child appropriation	25% (Only in School 4)	87.5% (Schools 5, 6, 7, 9, 9, 11, 12)	62.5% (Schools 14, 15, 16, 17, 18)

Source: Derived from the fieldwork

Public state school

Three schools did not develop activities with children's literature. Justification included the fact the teachers had no academic formation and had not attended courses, and therefore felt it was impossible for them to work with children's literature. There was only one school that developed this activity (from 2nd grade and/or 1st cycle of Primary School). This classroom was quite crowded, with 50 students from the ages of eight to eleven years old. In this room, the teacher performed activities with children's literature without establishing dates for these activities. Sometimes, she used literature to present new subject content. During the period of observation, the subject was Portuguese language and the content was synonyms and antonyms.

During observation, the teacher worked with a specific story and started by explaining the definition of an author, an illustrator and an editor. The teacher then went on to tell the stories as the students remained in silence, synchronized, listening with curiosity. They laughed, experienced pleasure, and participated. However, we consider that there was not enough room for exploration of the imaginary and fantasy in relation to the work. This was explored for specific purposes to introduce new content and integrate this content to the discipline of Recreation and Games. We also perceived that the teacher, despite having shown effort, found it difficult to develop activities of children's literature in a ludic, satisfactory way. This evidence is aligned to arguments of Goraigordobil (1990) regarding the benefit of ludic activities for the full development of children.

Private schools

Of the eight observed schools, one school (School 10) did not work with children's literature, while the others developed a very varied work. School 5 was the only school with a *Reading Room* under the responsibility of a teacher, who always prepared the room to receive Pre-school students (Pre-school I to Pre-school III) and from 1st to 4th grades of Primary School, according to the general school schedule. Students had free access to read whichever book they wished, in programmed times, accompanied by the class teacher and the teacher responsible for the *Reading Room*.

We observed that this school showed special concern in working with children's literature in allowing the student contact with children's book during school stay. Teachers sought to stimulate free reading, exploited the story-telling procedure and read books with enthusiasm, sometimes including dramatization. All these activities, according to them, had the objective of awakening interest for literature, improving vocabulary and composition skills; sharpening

the spirit for adventure and creativity and improve behaviour.

We observed that work in School 5 emphasized interaction of the child with the literary work. Observation of School 6 occurred in Pre-schooling I. In this school, children's literature was not mandatory, but they sought to make reading pleasant for children. The teacher, during our observation, was concerned with reading children's stories according to the child's age. She then sought to dramatize the story with the children and developed activities of collage, drawing, and painting. After these activities the teacher sought to extract a message of the values that the story transmitted. As this is a very small school, there was no adequate space for playing and games. Classrooms are also small and crowded. In addition to the ludic aspect, we also observed great emphasis given to the literacy process.

In School 7, however, we observed the 1st grade of Primary School and perceived that the teacher had difficulty in developing ludic activities with children's literature. For instance, she always sought to add some additional content to the story. Alternatively, she chose a guiding subject to develop any activity foreseen in her class schedule. For example, the children were given various books of folk stories (books that do not contain full literary work; stories are fragmented and/or altered, hindering quality of reading). After handing out the books, free reading began (as most students could read, they tried to listen to colleagues). After reading, the students chose a book to study, structuring the activity in the form of an evaluation, which distanced the perspective of reading for pleasure that promotes exploration of the communication process that the work already represents.

In School 8 we observed the 3rd grade of Primary Education. The school has a religious basis and works with children's literature emphasizing universal literature, which was translated into an accessible language for children and comprises religious themes. Whenever possible, the teacher tried to read other stories that are more appropriate for the age groups of the children. During observation, the teacher worked with the book, *Little Cloth Doll* (by Ziraldo). Considering that such book is a theatre play for children and adolescents, the following procedures were adopted: (i) presentation of the title, author, publisher; (ii) exploration of the story: oral reading – teacher and three students told the story by reading (as it is a long story, they read for two hours during four days, for a total of 16 hours). On the fifth day of observation, students were asked to explore experiences and thoughts, and were then asked to draw. Using the drawings for support, the teacher collectively "re-wrote" the story on the blackboard, together with the grammatical exploration and reflexive questions for students to answer.

School 9 had difficulty in developing activities with children's literature probably due to the school methodology, which comprised a rather stiff rigidity or traditionalism in the teaching programme. However, some teachers were eager to hear suggestions on how to work with some literature indicated in school books. School administration did not hinder the work of teachers. We perceived that literary activities were developed; students felt looser, tended to smile more and were more joyful. There was a clear demonstration of pleasure. We observed an interesting work (room of 1st grade of Primary School) involving the poem, *Things that we say* (by Ruth Roch).

The teacher recited the poem but was careful with intonation so that students could perceive the poetic text, musicality, rhyme, aesthetics and beauty. There was also concern and sensitivity of the teacher in playing with words, sounds and rhymes. After reading, and benefiting from the calmness and detachment of students, the teacher was quite creative and explored some tongue twisters that students spontaneously remembered and recited. These tongue twisters had probably been taught to them by the teacher or other people. This was, nonetheless, the only moment in which we observed the exploitation of ludicity during the entire observation period in this school.

School 11 had a reading project called, *Reading at Home*, with the objective of promoting reading interaction between children and their parents. The student chose a book to read at home with his/her parents. On the following day the teacher randomly selected a student to tell the story he or she read at home. The selected student told the story alone or with the help of a colleague, as there was generally another student that already knows the story. We observed that this activity ended there, lacking dynamics for greater exploitation of the literary work and of that which favours literature.

Public municipal schools

Of the eight public municipal schools, three did not develop activities with children's literature, alleging difficulty in conciliating children's literature and ludic activities with the school programme. These were Schools 3, 19 and 20. The schools, however, opened spaces for us to observe development of classes. School administration requested us to indicate specific courses of Children's Literature and Ludic Activities to better prepare their teachers. In relation to School 15 (1st grade of Primary School) the teacher had difficulty, but was eager and curious to know about new techniques for the adoption of ludic activities. She resorted to pedagogic books and magazines in search for new ideas that would help in the use of literature and ludicity in her pedagogic practice. This teacher stood out from other teachers and worked alone, as her colleagues did not share

the same attitude. She also sought to use pedagogic resources (pin board, flannel panel) and the dynamics of story-telling and reading.

School 16 developed work with Children's Literature from Pre-school to 2nd grade of Primary School. The objective of teachers was to work exclusively with subject content of Portuguese, maths, sciences, etc. Teachers that developed activities with children's book were free to work in whichever day or time and/or when considered necessary. In this school we observed emphasis on activities with games and playing because there was a subject of Recreation and Games.

Activities with literature were far apart and easily forgotten in the student's daily reality at school. Teachers justified absence of activities with literary work by claiming they did not feel secure and, therefore, encountered many difficulties.

School 18, however, systematically used children's literature and constantly uses literature inside the classroom. Work was performed through the school coordinator together with teachers of Pre-school and up to the 4th grade of Primary School, and was present in all classrooms. The challenge for teachers of this school was constant participative interaction of the child with children's literature, awakening the joy of reading and, consequently, the child reader.

Schools 19 and 20 did not work with children's literature or any ludic activity. We were able to observe various classrooms and noticed that some teachers have developed some form of work with children's literature and ludic activity. This work, however, was carried out with difficulties and/or is erroneous or limited because teachers still lack theoretical and practical basis. There was, however, intent and predisposition. Teachers showed a lack of specific preparation and anxiety in knowing how to develop this work in their pedagogic practise. This evidence is aligned with arguments and results of other studies such as Luckesi (2006), D'Ávila (2006) and Santos (2006), as mentioned in Section 2.2

4.2.3 Teachers' perspectives and action regarding ludic activities in the studied schools.

This section comprises results of interviews with nine teachers who voluntarily participated in this research. Our objective was to identify the perspective and view of teachers in relation to ludic activities and children's literature. We adopted the basic question programme, previously prepared but flexible, which was applied and conducted so as to pinpoint spontaneity and authenticity of interviewed teachers. We used a semi-structured interview

guide based on the following: (i) playing and games: concept, role and contribution for the development of pedagogic activities; (ii) teacher: role, position during playing and games, formation and adjustment courses; (iii) interaction: ludic activities (playing and games) and

children's literature; procedures and/or dynamics; the ludic and pleasurable relation with literary work; story selection criteria. Table 2 below shows a synthesis of results obtained in this topic.

Table 2. Summary of interviews with teachers of studied schools

Analysis categories	Analyzed points	Studied Schools								
		State Schools	Private Schools				Municipal Schools			
		School 4	School 5	School 7	School 11	School 12	School 15	School 16	School 17	School 18
Playing and/or games	Conception	Interaction and socialization	Learns through playing	Learns with rules	Both integrated	Learns through playing	Learning	Free and ludic activity	Socialization	Ludic activities
	Role	Stimulus	Ludic	Context values	Attitudes and values	Ludic	Fantasy and pleasure	Dynamic and creative	Interaction	Socializing
	Contribution	Learning	Learning	Learning	Learning	Learning	Learning	Learning	Learning	Learning
Teacher	Role	Encourages	Mediator	Participating	Mediator	Mediator	Mediator	Encouraging	Mediator	Mediator
	Posture	Organizer	Mediator	Participating	Mediator	Participating	Mediator	Develop ludicity	Mediator	Participating
	Formation	Secondary education and pedagogy	Secondary education and Psychology	Teaching degree and History	Teaching degree and Pedagogy	Teaching degree and Pedagogy	Teaching degree and Pedagogy	Teaching degree and Pedagogy	CEFAM and Pedagogy	CEFAM and Pedagogy
	Extension courses	No	No	Children's literature	OMEPE	OMEPE, Literary stories	Yes	No	No	Children's literature
Interaction	Ludic activities with literature	Considered important	Important with?	Important teacher mediation	Interaction	Interaction	Interaction	Vision between reality and fantasy	Pleasant interaction	Pleasant interaction
	Procedures and/or dynamics	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
	Ludic/pleasure	Students more relaxed in class	Children play	Student participation	Student participation	Student participation	Student participation	Student participation	Student participation	Student participation
	Story selection criteria	None. Students choose.	Age groups, suggestion of school book; free didactics	Student social context	Student social context	Age group and class book suggestion	Age group	Student social context	Student social context and free choice	Age group and classic literature
Basic education	Pre-school and/or Primary School	2 nd grade	1 st and 4 th grade	1 st grade	3 rd grade	Pre III	1 st grade	1 st grade	Pre III	Pre III

Source: Derived from the fieldwork. Note: CEFAM = Centre of Specific Training and Support of Improvement of Teaching Degree. OMEPE = World Organization of Pre-School Education.

Teachers' responses allowed us to observe that teachers perceive and understand playing and games as social, cultural and educational activities, as stated in some of the following transcripts:

“Playing and games stimulate, integrate and socialize the child. They favour reasoning for the development of content.” (State School 4, teacher – 2nd grade). *“Games are free activity, fundamentally ludic, with unconventional rules. They are competitive and are characterized by spontaneity that allows the intense expression of cultural experiences. In this way, playing can prepare a child to use abilities for social coexistence”.* (Municipal School 15, teacher – 1st grade).

“The role of playing is to dynamically and creatively develop and transform reality according to interests and desires of the child. Its contribution is that it aids creativity, criticism and improves student learning skills.” (Municipal School No. 16, teacher – 1st grade).

Interviews showed that all teachers had higher education degrees: seven had teaching degrees in Pedagogy; one in Clinical Psychology and another in History for Primary School teaching (5th to 8th grade) and Secondary School teaching. Eight teachers had intermediate teachers training degree; one teacher had secondary education degree.

When teachers were questioned on participation in additional courses, four said they had not done any courses;

five answered they participate in some teaching events held in cities by the Municipal Department of Education or State Department of Education of Mato Grosso do Sul; or by the UFMS, Campus of Corumbá, in extension projects of the Teaching course. Of the five interviewed teachers, two had attended Child Education and Art courses offered by the OMEP (World Pre-School Education Organization); one had attended a short extension course. Indeed, most teachers, despite having undertaking some formal training, had a shallow knowledge or even lack of knowledge relative to the importance and manner of adoption of pedagogic practices to stimulate children's creativity.

4.3 Summary of main findings

Table 3 below summarizes one of the main results obtained in research, namely the distribution of incidence regarding the adoption of ludic activities in studied schools. In general terms, evidence in Table 3 indicates a *varied* incidence of adoption of pedagogic practices based on ludic activities and the use of children's literature both in the three school categories (state, municipal and private) and in total research sample. In relation to incidence within each category, state schools presented an incidence of only 25%, against 87.5% and 62.5% of private and municipal schools, respectively. In relation to incidence of total sample, state schools represent only 5% of total sample while private and municipal school show incidence of 35% and 25%, respectively.

Table 3. Distribution of the incidence of ludic activities in studied schools

School category	Incidence in relation to sample of school category (state, private or municipal)	Incidence in relation to total sample (20 schools)	Nature of pedagogic/ludic practices and children's literature
State schools	25% (One in four total schools)	5% (One in 20 total schools)	In general, not mandatory
Private schools	87.5% (Seven in eight total schools)	35% (Seven in 20 total schools)	In general, mandatory
Municipal schools	62.5% (five in eight total schools)	25% (Five in 20 total schools)	In general, not mandatory

Source: Derived from the fieldwork.

It is important to note, however, the difference between private schools and municipal school regarding this point. Incidence of pedagogic practices based on ludic activities and the use of children's literature in municipal schools, both in relation to the category sample (62.5%) and total research sample (25%) is less than the incidence of private schools (87.5% and 35%), in relation to the category sample and total sample, respectively.

In municipal schools, however, the use of pedagogic practices was *not mandatory*, while in private schools use of these practices is generally *compulsory*. Considering resource limitations, typical of municipal schools, we can affirm that these present a relatively equal or higher performance to that of private schools. This result corroborates studies that state that adoption of ludic activities in schools does not depend solely on physical resources and sophisticated material (see, for example, Rizzi and Haydt, 1987; Oliveira, 1996; Wajskop, 1995; Silva, 1997; Kishimoto, 2000; Craidy, 2001), as mentioned in Section 2.2.

In specific terms, among the four studied state schools it was not mandatory to work with children's literature. In one of these schools, this activity was developed by only one 2nd grade Primary School teacher. She worked with literature to present new subject content or integrate literature to the discipline of Recreation and Games. In state schools, we observed that one of the main problems that hindered or prevented the adoption of pedagogic activities based on children's literature and ludic activities is precisely the absence of academic formation and theoretical support to prepare teachers for this work. These same teachers acknowledge this lack of specific formation and feel the absence of continued formation that aids them as educators.

In seven of the eight private schools the use of activities based on children's literature was quite *heterogeneous*: in most schools it was obligatory; in others there was isolated work of one or more teachers. A reduced number of teachers manage to make literary work participative and pleasant when they adopt appropriate procedures for activities and with formative aspects; in other schools, teachers used literature to emphasize teaching. These observations are aligned with arguments of Oliveira (1996) about the importance of children's literature in the formation of children, which, according to the author, mainly occurs in the way reality is placed within the reach of child comprehension by means of the resource of fantasy and the ludic.

Evidence here indicates that private schools showed greater incidence of the use of children's literature and ludic

activities in classrooms. There was, however a vast variation of teacher procedures according to the school context in which they act. A very rigid and traditional school methodology did not necessarily prevent the teacher from performing these activities, but it imposed certain conditions and procedures, while the religious issues of other schools greatly influences the titles of literary work and the action of teachers in classrooms.

We also identified that limited academic formation of teachers associated to an absence of further training that enhances knowledge, preparation, valorisation and the presence of children's literature, determines the adoption of pedagogic practices aimed solely at passive and repetitive teaching in detriment of practices aimed at the formative aspect of child education. In relation to municipal schools, we identified very interesting and creative attempts in some schools. In others, in addition to sincere attempts, we also identified curiosity and a quest for information. In some schools, however, there was a certain resistance of teachers. In one municipal school, work with children's literature and ludic activities involved the participation of teachers of Pre-School Education until 2nd grade of Primary Education, which was always directed at specific subject content.

Interestingly, however, one of the municipal schools showed concern in developing children's literature and ludic activities with the participation of coordination and all Pre-School and 1st to 4th grade Primary School teachers in order to promote participative and pleasant interaction, instigating a message of art, beauty and emotion. Nonetheless, we also noticed that in municipal schools resistance, limits and difficulties (1% of schools) are normally associated to an absence of theoretical basis in the formation of most teachers, and a lack of continued specific formation programmes.

Our evidence indicates that the use of pedagogic practices based on ludic activities and the use of children's literature was varied both in terms of incidence and *manner* in which they are adopted and implemented. This variation – or heterogeneity – was found both *between* each school category (state, municipal or private) and *within* the categories. Therefore, albeit different studies that discuss the importance of these pedagogic practices in creativity building process, there still is a scarcity of empirical evidence, with an adequate level of detail and depth, relative both to formal introduction of such practices and, above all, the way in which they are implemented in schools.

We specifically identified a similarity between schools in relation to obstacles to the adoption of pedagogic practices based on ludic activities and the use of children's literature.

Both in private and public schools (state and municipal) the recurring problem is the lack of appropriate theoretical basis and specific teacher formation in this area. In most cases, we observed that some teachers are also insecure regarding the use of ludic activities and children's literature due to mere lack of knowledge on concept and functioning. They did not know how to use these resources adequately and, for this reason, do not adopt them. In other cases, they adopt these practices in an erroneous or confused manner. Our findings based on systematic observation and interviews suggest that this discordance between the discourse and pedagogic practice, as well as the limited or erroneous use of ludic activities, reflects a scarcity of appropriate theoretical basis and specific teacher training in this area.

In other words, although the use of these techniques was usually considered routine in pedagogic school activities, our study revealed that experiences at schools were diverse: varying between absence of use, limited and/or erroneous use and effective and successful use. However, the daily reality of schools showed many nuances that need to be acknowledged and understood both by those who train teachers and those who create public educational policies at local and national level.

This type of knowledge is necessary so that we may contribute to substantiation of professionals in the area of pedagogy, and, by means of courses and workshops, offer teachers different possibilities and new forms of working. These possibilities and forms can be present in their pedagogic practices and awaken in these professions the true function of literature and ludic activities (playing and games) in the creative and entrepreneurial formation of children.

Consequently, the work of professionals will be more effective regarding various difficulties in children, such as language, rhythm, reading, expression, coordination, social skills, writing, emotional problems, spatial organization, aggressiveness, low self-esteem, etc., all of which reflect in learning capacities and enable and/or hinder the construction of knowledge. In addition, a study centred on the examination of these issues, as is the present study, is relevant in that it adds new evidence and explanations to studies in this area. It is also important to influence and promote an improvement in the formation of education professionals.

In other words, the academic community should contribute in a more dynamic and practical way, and also contribute with continued formation of education professionals (Pre-School and Primary School – Initial Grades) offering projects, courses, workshops and programmes that may aid and orientate them to develop ludicity with children in the

classroom. In this way, we could contribute to make the teacher a facilitator of interactive and participative learning. This would clearly contribute to valorise and use literary work and ludic activities in their pedagogic practices.

Additionally, it is important that the school environment, namely the class room, be a pleasant place for children. This is an important aspect to be observed in order to avoid formal and mechanical relations and contact of children with literature, which also inhibit and discourage all incentive for reading, perception of beauty and enchantment of literary work.

5. Conclusions and implications

In this article we sought to examine, in a preliminary manner, some evidence relative to the adoption and implementation of ludic activities and children's literature in pedagogic practices, in a sample of 20 state, municipal and private schools in a least developed location of a large developed country: the bordering area between Brazil, Bolivia and Paraguay in the municipality of Corumbá, state of Mato Grosso do Sul, in far western Brazil. These practices are deemed here as an initial strategy to stimulate further absorption of entrepreneurial thinking.

The findings show that, with a few exceptions, the researched schools suffered from, inadequate physical conditions and, most importantly, teachers' unawareness and deficient qualification related to the application of these techniques. These problems seemed to prevent children from developing important elements of their creative and entrepreneurial mindsets. Despite all the constraints and obstacles, there were some brave initiatives to adopt and carry out creative pedagogic practices. However, these could be further improved and supported if there were more policy attention to these types of school.

Additionally, there is a scarcity of studies examining the initial stages of the spectrum related to the formation of entrepreneurial mind-sets, in other words, in early school years, within the context of least developed locations. As pointed out earlier, the achievement of companies' sustainable superior performance and economic growth and development of nations will depend increasingly on entrepreneurial management, based on talented and imaginative people. Thus, if companies and countries want to secure their sources of revolutionary ideas and continuous and des-continuous innovation, they need to have a long-term commitment to continuously develop and nurture the seeds for their future innovative knowledge bases. Specifically, it seems plausible to point out that a comprehensive, long-term, geographically and socially inclusive perspective on entrepreneurship education, that is, from primary school levels, especially in least developed

areas, is badly needed to improve our understanding and policy recommendations in this field. This paper seeks to provide a contribution in that direction.

Thus, we recommend more focused and refined efforts on the qualification of teachers in order to expand their knowledge and skills and so that they can perform as facilitators of an interactive and creative teaching and learning processes. Such efforts should be made not only within the schools themselves, but also at the level of universities, that train teachers, and policy makers, at both local and national levels, that can influence the provision of physical, financial and human resources. Otherwise, all the hype and discourse in favour of entrepreneurship will not move beyond rhetoric.

Finally, the importance of ludic activities for children should not only be considered in the teaching- learning process, but also for the development of the perennial capacity to invent and create (Leonard-Barton, 1998; Figueiredo, 2003; Luckesi, 1990, 2002 a,b, 2006). Consequently, we recommend more refined efforts regarding teacher training in this field so that teachers may become facilitators of creative learning. These efforts should involve school administration and universities, which train teachers, and public policy-makers that can promote the provision of physical, financial and human resources.

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