

Psychology *in* school and *for* school: an “experimental” reflection on the use of tests.

by Luigi Verducci*

Introduction

Research in psychology is used to dealing with large numbers. Researchers take great care to validate their hypotheses on very broad samples, so as to guarantee the generalizability of the results obtained. This is also shown by the space given in psychology research manuals to the concept of external validity and to the factors that threaten it. External validity means the extent to which the results of an experiment can be generalized beyond the experimental conditions (Kazdin, 1996). Good external validity is obtained, on the one hand, by constructing a representative sample, through a careful analysis of the socio-demographic characteristics of the people making it up; on the other, by ensuring the standardization of the experimental situation to prevent the environment where the research takes place from invalidating the results obtained (Kazdin, 1996). Most experiments use a large number of people due to the desire to generalize the results to as broad a slice of the population as possible. In their studies, therefore, psychologists come into contact with many people, at times with many groups of people, but, being driven essentially by the need to ensure external validity for their research, they are more interested in the number of people contacted and in their individual characteristics than in the relationship that can be established between them and towards the subject of the research. This means that the unit of analysis with which the data is interpreted is the single individual. Despite the large sample of people available, these are all studies as single cases. As Kazdin underlines when talking about the importance of external validity, the explicit reference point of these experimental designs is medical research, which, *by its mission*, takes the single person as the object of its intervention: “the concerns about the characteristics of the sample and the implications arising from the need to extend the results to other subjects are well illustrated in medical research in which the intervention (for instance, consumption of soft drinks or of a particular food) is administered to the subjects (for instance *laboratory rats*) with the intention of showing that it causes cancer. Undoubtedly *non-laboratory rats* would be glad to know if these results can also be applied to them and to their daily diet” (Kazdin, 1996, pp. 43-44).

The only difference lies in marking out the portion of the individual that is of interest: the body in medicine; personality traits, the emotions (or other things depending on the school of orientation) in psychology. This brings to mind another practice, the custom in school which “strangely [...] has used from its institutional beginnings, the “class” as place of learning [...] but the fact remains that the teacher, at school, has made minimal use, and only in sporadic cases, of the resource that the “class-group” embodies; today he or she still usually pursues individual learning, assesses the learning of the single individual, reasons according to strictly individualistic models when he/she has to think about his/her own educational performance” (Carli, 2001, p. 66).

These considerations clearly reveal two aspects characterizing the research in the psychology field (see Carli, 2004):

- *The aim*: the identification of general laws, in the hope that they will prove to be *truly valid* for all men, in any situation.

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- *The unit of analysis used*: the single individual and his personal characteristics (physical, emotive, personality).

Generally, then, one starts from large groups of people (in search of a representative sample) in order to describe and differentiate single individuals.

In the present study, we followed the opposite path: we used a tool (the S.D.I.) designed to record individual needs (the *individual* as the unit of analysis) to arrive at an analysis of the symbolization of one's own school, shared by the pupils involved (the *cultural space* of the "student group" as the unit of analysis). This is because as we went ahead with the research, it seemed useful, in terms of understanding the findings, to abandon the anchorage to the individual and his development stages (e.g. the idea that in 1st class primary school children, we should expect greater security needs than in those in third class), in order to focus on what the children's stories had in common: the way of representing school and school life. Starting from this idea it was found fruitful to use the construct of collusion¹, in the sense of the interface between the cognitive and the social sphere. From this point of view, the single stories produced (individual cognition), can be connected to a common "semantic field" (collusive processes), suggested, in turn, "by the characteristics of the social space" (Grasso & Salvatore, 1997) shared by the children: the school class.

Working hypothesis

The SDI "Storie Da Inventare" (Stories To Invent) is a thematic test emerging, as the manual says, "from years of experience and critical studies on other thematic tests, first of all the TAT and the CAT". The S.D.I. retains some of the traditional elements of thematic tests: the stimuli made up of drawings representing scenes of life and the instruction to imagine a story; but it also presents innovations (colour plates, the presence of a parallel series...) designed to overcome many of the criticisms aimed at such tests in the past (Boncori, 1996). The basic hypothesis that the S.D.I. shares with all the projective tests is that when a situation is open to various interpretations, these differ in accordance with people's personality (Boncori, 1993). The term "projective" can be interpreted in different ways. Using it in a non restrictive sense, it refers to the process through which, in a task of "imagining", the objective characteristics of the stimuli are distorted or enriched because the subject attributes the subjective contents of his own experiences and his own dynamics to the stimuli (Boncori, 1993).

Also in the case of the S.D.I., the term "projection" refers to the relation between the perceived stimulus and the subjective contents of the one elaborating the stories. The individual characteristics taken into consideration by the S.D.I. test refer to Maslow's hierarchy of needs, a psychosocial model that does not presuppose a state of malaise to rectify, but a state of greater satisfaction and personal growth to pursue (Boncori, 1996). Maslow's motivational theory envisages a hierarchical classification of six groups of needs, from the most basic, the physiological needs, to those of the highest level of self-actualization and knowledge. The SDI plates are designed to be in resonance and to facilitate the expression of the individual needs of those making up the stories, ranked according to Maslow's classification. The underlying hypothesis is that the *protection* of the plates provides a privileged means of expression to the most urgent needs present in the subject at the time the test is administered. Through the presentation of plates that act as a more or less balanced stimulus of all the basic needs, i.e. of the needs, as Maslow says, beyond which one cannot go, since they seem to be an end in themselves (Maslow, 1954), it is possible to understand, based on the composition of the responses, which motives have found greater resonance in the subjects. The S.D.I. is made up of 12 plates,

¹ Defined and examined in depth in numerous studies by Renzo Carli.

designed to stimulate the expression of the 6 basic needs of Maslow's theory. The preference in the responses for one or the other of the motives is indicative, following this schema, of the motivational needs of the single subject and of his sensibility to one or more of the needs evoked. The S.D.I. test therefore envisages a two-way plate-individual relation². This approach is also underlined by the way in which it was presented in the classes: *"Each of you must write your own stories, without talking to classmates: otherwise how will I know which stories each of you really like?"* (Verducci, 2004, p. 36).

The group situation (school class) is therefore not a choice of method, but a research requirement, insofar as it enables a test to be administered to a number of people simultaneously. However, the group situation, though not envisaged in the test's theoretical approach, in our opinion influenced the data obtained. This research in fact took place in a particular environment in which the individuals share the spatial but above all the cultural context. The SDI was administered in two primary schools in Rome and the data presented here refers to the pupils in the first three classes of the two schools. So the subjects to whom the SDI was administered are not simply individuals, because before the stimulus plates they share the assumption of a specific social role: that of pupils. The hypothesis is that this condition may have a weight in the production of the responses, entering the relation between plate and individual (or between stimulus and personal need evoked) as an intermediate element

In their now classical analysis Harré and Secord (1972) maintain that social behaviour is the result of adapting to rules and conventions in a process of self-control of which the social actor may be aware. This means that, according to these authors, a person's behaviour can be explained as his adjustment to the rules, habits, and expectations that are shared in a specific context: "in general, social behaviour is the result of self-control when aware of the representation made by the individual himself during which he tries to establish the meaning of the situations in which he finds himself and to make a choice between various rules and conventions and to act according to his choices" (Harré & Secord, 1997).

It can therefore be hypothesised that the needs expressed in elaborating the stories, being the result not only of past experiences but also of the particular environmental situation in which the pupils found themselves, may be determined by the meaning given to the context in which the story is produced, by the expectations towards this context and by the aims pursued in it. This discourse is even more interesting if one considers that in one of the two parallel series of plates in the SDI (series B) there is one, plate number 10, that shows "a group of monkeys sitting in a school class". With plate 10, subjects are asked to produce a story starting from a drawing evoking their own role as pupils, at the same time and in the same place where, with the people who share it every day (school-mates), that role is acted out. This is why we believe that this plate can evoke responses determined more by the fact that rules, habits and meanings are shared by all the children that are part of that specific community, the school, than by strictly personal needs characterizing the single individual in his personal motivational configuration.

According to this hypothesis, understanding of the stories entails the implicit assumption of a different point of view: the needs expressed cannot be described exhaustively in real individual terms, but instead they concern the way the pupils

² In its definition the term 'need' already refers to the individual as the unit of analysis of behaviour. See for instance, U.Galimberti's definition of need: "State of more or less marked tension due to the lack of something that responds either to more or less impelling physiological needs or to luxury needs that out of habit have become necessary, or to psychological needs felt to be indispensable in self-actualization, or to social needs learnt from the environment. [...]. The need is subjectively felt as a stimulus that drives the individual towards a goal in which the tension caused by the sense of dissatisfaction accompanying the stimulus itself, is annulled" (Galimberti, 2006).

perceive the school and, even while opposing them, share the conventions and attitudes.

In support of this hypothesis there are also some methodological notations related to the theory of projective tests. First of all, as far as the test material is concerned, it is generally thought that to bring out the unconscious aspects of the personality the stimulus must be: *ambiguous, non familiar, meaningful*. The stimulus of projective tests, in fact, should be able to arouse in different people different possible interpretations, that is, a greater amount of responses both in number and variety (the requisite of *ambiguity*); it is also necessary for the stimulus to describe specific situations and be capable of arousing meaningful "motivational states" (the requisite of *meaningfulness*). These first two characteristics however are not enough, because it is also important for the stimulus *not* to be familiar: "Finding oneself faced with something new and unexpected creates a certain disorientation and a certain anxiety in the subject who, in the attempt to give a "known" form to what is seen as unknown, ends up resorting to the defence mechanism of regression [...]. In this way the various contents of his repressed archaic world are triggered and resurface. The responses the subject provides in the end constitute a revelation of his inner unconscious world" (Castellazzi, 1991, p. 64).

According to the SDI Manual, plate 10 is designed to prompt all the needs groups theorized by Maslow, except for the physiological group. We can therefore consider this plate *ambiguous* because it is loaded with possible interpretations (Castellazzi, 1991). Equally, it can be considered *meaningful* because it is related to specific situations that the subject experiences (Castellazzi, 1991): school life. It is difficult to say, however, that plate 10 is *not familiar*, as it shows a school class (though composed of monkeys instead of children) when the conditions of administration are precisely that of a school class. The same reasons that explain the importance of the *non familiarity* of the projective test stimuli can make it clear why in this study there is so much interest in plate 10. The projective test hypothesis is that the newness of the stimulus, its contradiction of expectations, may disorient the subject who, in order to produce a response that gives a "known" form to what is "unknown", resorts to the past and "to contents of his repressed archaic world" (Castellazzi, 1991, p. 65). It is necessary to disorient the subject, making him lose his reference points, "not let him understand, for one moment, where he is", so he can turn to his personal past, allowing us to glimpse his inner unconscious world. When plate 10 is presented to pupils, the hypothesis is that it in fact has the opposite effect, that it reminds the subject of where he is, "contextualizing" him (if it is possible not to be contextualized!), inviting him to talk about school and to express emotions connected to that situation. This is why we feel that the *familiarity* of plate 10 makes the responses produced very interesting in that they tell us more about the context and its culture than about the individual pupil. There is another methodological aspect that goes towards confirming this hypothesis: we are talking about the tools used. What is shared by many studies using the individual-context relationship as the "hermeneutic paradigm", is that they see discourse analysis as the main research tool. The material produced in response to the SDI is a discourse in the form of a written story, and in that specific situation, plate 10 is a more or less explicit invitation to talk about *oneself in class*. Based on what has been said, we set out to analyse the stories produced by the pupils of the two Rome schools so as to verify two hypotheses:

1. The specificity of the responses to plate 10, compared to the average responses to other plates;
2. The homogeneity of the responses to plate 10 compared to factors such as the subjects' age (first, second or third class of primary school) and the school attended (Marcati primary school or Millevoi primary school).

In sum, the hypothesis that this analysis sets out to test is that when stimulus and context of administration coincide, this makes the responses to plate 10 hard to understand using

analysis categories of an individual kind (needs of single pupils, their personal history, their age, etc.).

The research

Administration and coding of the SDI stories.³

For the research the sample of children chosen came from two different Rome schools. The first group comes from the Marcati Primary School situated in the Torre Spaccata area and is composed of 55 children. The second group comes from the Domenico Purificato Comprehensive Millevoi Primary School in the Ardeatine area at Fonte Meravigliosa and consists of 61 children. The sample is therefore made up of a total of 116 people. Both the groups contain the first three classes, from first to third, with ages ranging from 6 to 8 years. The test was conducted from February to April 2004, starting with the Marcati school, then moving to Millevoi. During the test administration all the usual rules used for thematic tests were followed, with the purpose of motivating the children and reducing to a minimum the disturbance variables. All the classes and school staff were told beforehand which days, times and classes would be involved in the tests. Each time the test was administered, there were at least two administrators present, generally three. Before starting, a sign was placed on the classroom door indicating that a test was underway inside, so that nobody would come in and interrupt the creative process. The material for the SDI test was handed out and then the reason for the test was explained. All the classes were given a standard explanation:

"We want to know what stories children like. To be sure, we are asking children to write stories for us. This is what we want you to do today.

Each of you will be given an album containing some pictures and an exercise book. For each picture you have to make up a story: first say what is happening in the picture then invent a story about that picture. It doesn't matter at all if you make mistakes while writing: we will not show the stories to your teachers or to anybody else here at school. You can write whatever comes into your head. It's a kind of game, and a lot of people find it great fun.

Each of you have to write your own story without consulting your classmates: otherwise how can we know which stories you really like?

To write these stories all you need is the exercise book that we will give you and a pen. If you write something and you want to cross it out, just draw a line through it: don't waste time using an eraser.

Now please put away everything that's on your desk and just keep your pen. We will come around and give you the exercise books⁴." (Verducci, 2004, p. 29).

Talking among the children was kept to a minimum. The staff went around the room clarifying the doubts of single pupils and helping in writing, when necessary. We tried to prevent the children from talking to each other and copying the work of others. In each class two hours were given for the completion of the test.

We have focused on describing the modality of test administration so as to understand some of the characteristics of the experimental situation (attention to individual work, restriction on communication between the children, the no copying rule) and the way this may have affected the production of the stories.

³ In writing this part of the section, which describes the SDI administration phase in the classes and the work of coding the responses, use was made of the report written by Lucia Bonella for her degree thesis.

⁴ This instruction is consistent with the importance generally given to individual work in class and therefore may be perceived by the pupils as confirmation of the fact that, although there are no teachers, the model of work and the role to be played is the scholastic one.

Once the administration and the coding of the SDI tests was finished, the data was collected in a table made up of needs expressed plate by plate by each of the subjects in the two schools. A univariant ANOVA analysis (Variance Analysis) was then conducted to test the two research hypotheses. As Table 1 shows (see appendix), plate 10 differs from the rest of the plates in the high number of responses classified in the category "Security needs" (F: 7,420; significance equal to α 0,007). There are other differences in the physiological needs (F: 3,430; sig: 0,065) and in those of esteem/adjustment (F: 3,115; sig: 0,079), between plate 10 and the others, but they are not statistically significant differences. Moreover the needs codified in relation to plate 10 do not differ according to the age or the school attended by the subjects, as shown in tables 2 and 3 (see appendix). There is a general similarity between the pupils' responses to plate 10, independently of the age (first, second or third class at primary school) and the school attended (Marcati or Millevoi). This is in spite of the fact that, if we consider the responses to all the plates and not just to plate 10, there are statistically important differences in the expression of security needs among the pupils of both schools (F: 20,790; sig. 0,000 in the sense of a greater presence of security needs at the Millevoi), but also differences due to the subjects' age as far as security needs are concerned (F: 37, 651; sig. 0,000 in the sense, in contrast to expectations⁵, of security needs increasing with age and with the move from the first to the third class) and the needs of belonging (F: 4, 649; sig. 0,010). After seeing that the responses given to plate 10 differ significantly from those of the other plates, it was decided to deepen the analysis, focusing on the needs coded as "security needs". In the S.D.I. test, the security needs are subdivided into three subcategories because, as shown in the manual "the need for security" includes many manifestations, which can be qualitatively differentiated (Boncori, 1996). This has led the authors to a detailed classification that includes the sub-categories *Aggressiveness (A)*, *Fear (B)*, *Order (C)*. To see if the responses to plate 10 made by the pupils of the two Rome primary schools contain a difference between the three sub-categories of "Need for Security", Chi² statistics were used.

Tab. 4 Comparison between the sub-categories of the "Need for Security"

	Observed	Expected	N Residual
Aggressiveness	13	82,0	-69
Fear	28	82,0	-54
Order	205	82,0	123
Total	246		

Comparison between A, B, C

Chi-Square	278,122
Df	2
Asymp. Sig.	0,000

⁵ Maslow's theory is a hierarchical theory so the appearance of a higher level need presupposes the satisfaction of lower level needs. It might therefore be expected that as the age goes up there will be a gradual evolution in the satisfaction of needs from lower to higher levels up to self-actualization.

As can be seen in Table 4, in the stories produced upon presentation of plate 10, there is a statistically significant difference (χ^2 : 278,122; sig: 0,000) between the sub-categories of "Security needs" with a clear prevalence of responses coded in the sub-category "Order".

Conclusions

As the SDI Manual⁶ says, Plate 10 is designed to stimulate all the needs of Maslow's hierarchy, except for physiological needs. It can be argued therefore that it satisfies the criterion of the *ambiguity* of projective stimuli. Compared to the other plates, which are far more definite in evoking a need, number 10 should discriminate between the subjects more easily, precisely because it is able to stimulate a great range of needs. The data of the present research, however, shows that this plate differs in a statistically important way from the rest of the plates, due to the very high presence of responses that can be classified in the "security needs" category. This fact seems to support the hypothesis: due to the close agreement between what the plate shows (a school class) and the situation in which it is presented (in a school class), the responses can be interpreted by referring to a different theoretical model: while generally it is thought that the stories produced are the channel through which individual needs are expressed, in this case it seems more correct to interpret the responses with reference to the context in which they were produced. On the other hand, *non familiarity*, that is, the presentation of a new, unexpected situation, is a major requisite for the stimuli in projective tests, since this should trigger a mechanism in which, in order to give a reassuring "known" form to an "unknown" situation, the subject withdraws from the present situation and returns to experiences and memories of a familiar, intimate past, thus expressing his personality and his needs (Castellazzi, 1991). Instead of taking the subject out of the present, Plate 10, on the other hand, precisely because of its *familiarity* with the test administration setting, reminds him of the position he is in, that is at school with its well-known rules and conventions. The administration situation is also in many respects in line with what some literature on scholastic culture identifies as the typical features of formal education. In administering the test, the staff made an effort to limit communication as far as possible, walking among the desks to make sure none of the children were talking or copying from others.

In this way, typical exam conditions were reproduced, in which attention is entirely focused on the individual work and its evaluation.

All this reminds us of the traditional scholastic situation in which: "activities are always individual, and even when occasionally there are experiences of group work, the evaluation is still done singly. The pupils are all together in a classroom, but each of them is asked to produce and think independently of the others [...], any "external" tool is therefore seen as help that is forbidden in carrying out the task." (Zucchermaglio, 1996, p. 50).

This is why we believe that plate 10 may be perceived by the subjects as an invitation to talk about school and to express their way of seeing it and of representing it. Two other pieces of data emerging from the research can also be interpreted in this way. First of all, all the children's responses to plate 10 are very similar, regardless of the school class (first, second, or third) and of the school attended (Marcati, Millevoi). The hypothesis is that beyond the specific differences between single schools or classes, there is a dominant sharing of the "rules and habits" typical of School as an Institution and therefore found in the separate schools. This interpretation is reinforced by the fact that, considering the responses to all 12 plates and not only those to plate 10, there is a statistically significant difference between the stories produced in the two schools

⁶ Plate 10 – *A group of monkeys are sitting in a classroom. The monkey-teacher is standing up.* Themes presumably elicited: need for security (as the need for competition and for rules), the need to belong to a group of friends, the need for esteem, success, adequacy (self-esteem and esteem of others, independence), need for self-actualization (growth, autonomy), the need to know and to exercise one's rationality.

concerning “security needs”. There are also differences linked to the subject’s class (first, second or third) both in “security needs” and in “need to belong”. This reinforces the data on plate 10, confirming the hypothesis that the stories produced are about the way of perceiving school rather than the needs of the single pupils. This is probably why the emotions aroused by plate 10 are the same, independently of the school attended or the age. It is interesting, at this point, to look more deeply at the question to see what kind of “security needs” are mainly expressed in the stories produced upon presentation of plate 10. We saw that apart from the macro-category “security needs”, most of the responses can be linked to the sub-category “Order” (the data shows a statistically significant difference, χ^2 : 278,122; sig: 0,000, in the use of the three sub-categories *aggressiveness, fear, order*). To go ahead with this in-depth examination it is however necessary to change the theoretical model, as suggested at the outset, and to use different tools to interpret the data at our disposal. In accordance with what is maintained by Harrè & Secord (1972) “in our view, human social life is linguistic in every aspect, and to understand it properly it is necessary to use linguistic or quasi-linguistic concepts”, psychologists who want to study “situated behaviours” generally analyse the oral and written texts produced by those who share the situation being studied. Consequently, as long as the behaviour is seen as a function of the stable needs of the individual, personality tests remain the most appropriate tools, but when understanding is no longer anchored to the individual, but rather to the context he is part of, then it is necessary to analyse the discourse and conversations produced in this context, to examine how the participants in a discourse invoke, construct, find relevance in a particular version of external reality and mental contents or take it for granted. In similar words Carli & Panizza (2002) also underline that “the local culture is sought and analysed by starting from texts, that is, from the linguistic products characterizing the population involved or the research object”. It can therefore be useful not so much to know how many children have Physiological or Security needs, as to know the idea of school that is shared in the stories told. Let us look at some stories: *“The monkeys are studying, they are going into the school, the bell has rung and they have come out”*; sometimes, as in this case, school is talked about as a routine, as a place with none of the learning objectives that should characterize it. At other times the focus is on the relationship between teacher and pupils, but in these cases the formal moment of assessment seems to dominate over the interest in the contents of learning. *“A class of monkeys does a test and the teacher explains it, the teacher takes in the tests and corrects them”*. In most cases, however, the stories are centred on the relationship with teachers, seen as the authorities controlling behaviour and setting punishments. *“One morning some monkeys went to school, but they were scared, the day before the teacher had slapped them because they had fallen asleep, they changed schools”*. Boredom and the story of pupils falling asleep during lessons remind us of what Lily Herbert said about school (cfr. in Carli, 2002, p. 27), that is, the fact that it is compulsory seems to manage to annul any investment in knowledge: “The teacher functions as the only adult, the one who knows, compared with a group of children, forced into school work because they are not at school of their own free will”. *“While the teacher explains the children fall asleep the teacher keeps on explaining and they wake up”*; *“Everybody is asleep the teacher gets mad”*. *“The teacher explains but nobody is listening to him they have argued and they have had a fight they make peace and they all listen to him”*; *“Instead of doing their exercises some monkeys were talking amongst themselves as they were monkeys they couldn’t do the work and so they were talking the teacher got angry seeing the monkeys weren’t working he gave them all a bad mark”*; *“In a class some monkeys and the teacher are working, at a certain point they start talking one of them falls asleep and the others laugh in the end the teacher shouted and everybody started crying”*. Another element that emerges is the power struggle between “adults that know and children that are forced to be at school”. This conflict becomes evident when in one story we read that *“some monkeys will take back control of the school”*.

In general these stories focus on the relationship between pupils and teachers, a relationship organized first of all around discipline and rule breaking. As Carli (2002) writes, discipline is one of the dominant emotional aspects in school and risks “emotionally

saturating” and overshadowing the other scholastic objectives (which are also present in the stories: “A monkey teacher teaching the children to write the first day of school the monkeys go to school and they go home happy with all the things they have learnt”).

“The power relationship, which is embodied in the scholastic practice of “discipline”, seems to construct emotional dynamics that aim to emotionally symbolize school as a system of the knowing adult controlling the child “who is not at school of his own free will”; this control seems to embody, in itself, the whole emotional dynamic of whoever is part of the school, contributing to a process of collusive emotional symbolization, based on the one hand (the adult side) on the reassuring need to be in control, and on the other (the child’s side) on the equally reassuring need to avoid being judged negatively and to obtain affective approval from the adult who judges. With all the possible variations on this scenario: children’s indifference towards being assessed, as a reassuring dimension based on denial; the introduction of new assessment criteria within the pupil group, in contrast to those of the adults: criteria that downgrade whoever studies and heeds adult warnings, labelled “swot”, “teacher’s pet” or worse; the alliance of the children with their families, so as to oppose the school and its rules [...]; the split between the school and the social context where it should operate, thus annulling the sense of scholastic learning [...] and so on” (Carli, 2002, p. 28).

At this point it seems to me important to underline that by reversing the viewpoint from which one regards the stories, and shifting from the focus on individual needs to the way school is experienced and recounted, spaces for intervention open up in the two schools. This research, in fact, which sprang from the researchers’ interest in validating the SDI Test, can, on this basis, reinvolve the two schools and, starting from the knowledge of the pupils’ perception of the school context, construct with them an intervention to promote symbolization models that are more competent and designed for personal growth (Salvatore, 2002).

Tab. 1 – Difference between responses to Plate 10 and to the rest of the SDI plates.

		Sum of Squares	df	Mean Square	F	Sig.
Physiological Needs	Between Groups	2,359	1	2,359	3,430	,065
	Within Groups	396,815	577	,688		
	Total	399,174	578			
Security Needs	Between Groups	8,068	1	8,068	7,420	,007
	Within Groups	1199,241	1103	1,087		
	Total	1207,309	1104			
Need for Belonging and affection	Between Groups	1,179	1	1,179	1,701	,193
	Within Groups	238,485	344	,693		
	Total	239,665	345			
Need for Esteem/adjustment	Between Groups	1,275	1	1,275	3,115	,079
	Within Groups	105,572	258	,409		
	Total	106,846	259			
Need for Self-Actualization	Between Groups	4,748E-03	1	4,748E-03	,022	,883
	Within Groups	18,321	84	,218		
	Total	18,326	85			
Need for Knowledge	Between Groups	3,213E-02	1	3,213E-02	,184	,669
	Within Groups	27,769	159	,175		
	Total	27,801	160			

Tab. 2 – Needs expressed to Plate 10 by age group (first, second, third class)

		Sum of Squares	Df	Mean Square	F	Sig.
Physiological Needs	Between Groups	,254	2	,127	,392	,682
	Within Groups	4,857	15	,324		
	Total	5,111	17			
Security Needs	Between Groups	3,231	2	1,616	2,398	,096
	Within Groups	68,731	102	,674		
	Total	71,962	104			
Need for Belonging and affection	Between Groups	,190	2	9,524E-02	,571	,605
	Within Groups	,667	4	,167		
	Total	,857	6			
Esteem/ adjustment needs	Between Groups	1,151	2	,576	1,006	,376
	Within Groups	20,592	36	,572		
	Total	21,744	38			
Need for Self-Actualization	Between Groups	,833	2	,417	,	,
	Within Groups	,000	3	,000		
	Total	,833	5			
Need for Knowledge	Between Groups	8,333E-02	2	4,167E-02	,062	,943
	Within Groups	,667	1	,667		
	Total	,750	3			

Tab. 3 – Needs expressed to Plate 10 by school attended (Marcati, Millevoi)

		Sum of Squares	Df	Mean Square	F	Sig.
Physiological Needs	Between Groups	,488	1	,488	1,688	,212
	Within Groups	4,623	16	,289		
	Total	5,111	17			

Security Needs	Between Groups	5,541E-03	1	5,541 E-03	,008	,929
	Within Groups	71,956	103	,699		
	Total	71,962	104			
Need for belonging and affection	Between Groups	2,381E-02	1	2,381 E-02	,143	,721
	Within Groups	,833	5	,167		
	Total	,857	6			
Esteem/adjustment Needs	Between Groups	4,459E-03	1	4,459 E-03	,008	,931
	Within Groups	21,739	37	,588		
	Total	21,744	38			
Need for self- Actualization	Between Groups	,000	1	,000	,000	1,000
	Within Groups	,833	4	,208		
	Total	,833	5			
Need for knowledge	Between Groups	,750	1	,750	,	,
	Within Groups	,000	2	,000		
	Total	,750	3			

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