Contribution to Validation of the Student–Teacher Relationship Scale (STRS Italian Version) in the Italian Educational Setting

Michela Fraire, Claudio Longobardi and Erica Sclavo
University of Turin (Italy)

The quality of the relationship teacher-pupil represents a relatively new field of research, both nationally and internationally. Our principal objective is the development and the evaluation of the Student-Teacher Relationship Scale (Pianta, 1996), which aims to assess the quality of the teacher-pupil relationship from the point of view of the latter; our own goal is consequently to recognize the applicability of the STRS to an Italian context, especially by analysing in depth the psychometric characteristics of the Scale. Thanks to the use of the STRS, it is possible to identify precise relational patterns between teacher and pupil, therefore the questionnaire is of decisive importance both for teachers and for whoever else is involved in the field of primary education.

Key words: Teacher-pupil relationship, STRS, educational contexts, test.

Contribución para la validación de la Escala de relaciones entre estudiantes-profesores (STRS versión italiana) en el entorno educativo italiano. La calidad de la relación maestro-alumno es un tema de investigación relativamente reciente, tanto en el contexto nacional, como en el ámbito internacional. Nuestro objetivo es desarrollar y validar el cuestionario Student-Teacher Relationship Scale, instrumento que se propone valorar la calidad de la relación maestro-alumno desde el punto de vista del maestro. La finalidad es, por lo tanto, descubrir la aplicabilidad del instrumento al contexto italiano, analizando las cualidades psicométricas de la escala. Gracias al uso del STRS, es posible localizar estilos relacionales específicos entre el maestro y el alumno. El cuestionario se presenta como un instrumento útil para los maestros y para los que trabajan en el campo educativo.

Palabras clave: Relación maestro-alumno, STRS, contextos escolares, test.

Correspondence: Michela Fraire. Università degli Studi di Torino (Italy). Dipartimento di Psicologia. Via Po, 14, C.P. 10123 Torino (Italia). E-mail: michela.fraire@unito.it
The present work is part of a brand new current of studies considering the actual impact of the relationship between teacher and pupil within the educational context (Pianta, 1999a, 2006; Baker, 2006). Such studies refer to diverse paradigms and schools of thought but, in spite of the natural differences arising from them, all converge towards a common characteristic: the value of the mutual relationship between teacher and pupil. This consideration may be extended to other interpretative models which did not necessarily develop within the sciences of education, such as the psychoanalytic and psychodynamic (Salzberger-Wittemberg, 1987; Fonagy, 2002), the one related to the Theory of Attachment (Ugazio and Castiglioni, 1995; Birch, 2002) and, finally, the one about the Systemic Panorama (Pianta, 1994).

Generally, the relation between teacher and pupil is fundamental for the healthy socio-emotional development of the child (Hamre and Pianta, 2001; Birch and Ladd, 1997): especially within the school system, the relationship finds its ideal dimension, and often becomes a means of support both for the individual and the group (Santiniello and Vieno, 2003). Risk factors and socially unacceptable behaviours may be prevented or diminished by the presence of a good teacher-pupil connection (Eaton, 1981; Yates, Egeland and Sroufe, 2003), and prevention is a key factor in the reduction of both risk factors and the individual’s vulnerability (Di Biasio, 2000).

The significance of the teacher-pupil relationship cannot simply be ascribed to field of prevention, it must be extended to the entirety of everyday’s school life: it becomes essential for the successful introduction of new pupils in a class (Sturm, 2000), for the full integration of disabled children (Murray and Greenberg, 2000; Westwood, 2003; Eisenhower, Baker and Blacher, 2007) or foreigners (Kesner, 2000). Nevertheless, it must be borne in mind that some factors may act as an obstacle to the possibility of fully exploiting the benefits of the teacher-pupil relationship: incapacity of recognizing and preventing dangerous situations, ignoring the essential role of the emotive and relational fields in order to build up a healthy school atmosphere and, last but not least, the lack of instrument capable to evaluate the potential issues and resources of the relationship are all valid examples. Availing of a significant number of tools to investigate the quality of the relation, guarantees greater precision in highlighting the presence of difficult situations and therefore brings about a better understanding of the teacher-pupil relationship, which as a consequence can be utilized at its full potential (Rosso, 2004; Pianta, 1999b). Pianta (1996b) also suggests that the improvement of the relationship between teacher and pupil increases the mental well-being of the teacher, his or her level of professional satisfaction and his or her actual skills as an educator (p. xviii).

The first objective of this research is based on all the above-mentioned premises, and intends to understand if the STRS questionnaire, already in use in the USA, could be also applied to the Italian educational reality; aware that the questionnaire...
itself may need to be adapted to such a reality, we will advance possible ideas to do so. Wherever a consistent non-adherence to the Italian schooling background of some of the STRS items is found, we will investigate its possible causes and advance possible modification which may provide the substratum for further studies.

Another objective of this research is to discover the presence of significant variables within the Italian sample which may influence the quality of the teacher-pupil relationship. Hence, we will observe if the sex and nationality of the pupils on one hand, and the amount of teaching hours of any given educator in a class on the other may somehow influence the quality of their relationship.

METHOD

Participants
We have collected 729 questionnaires belonging to a sample of 496 children. The discrepancy between the numbers is determined by the fact that 12 couples of teachers have compiled the questionnaires referring to the same classes. Among the 496 children, 54.64% are boys, the remnant 45.36% are girls. All children are Italian, none of them comes from difficult families and their socio-economic level is within the norm.

For what concerns the teachers, we have worked with 40 of them, all females: 15 belong to kindergarten schools, 25 to primary schools. Age-wise, the majority of the sample (21 teachers) is between 41 and 50. 11 teachers are between 31 and 40, 7 between 51 and 60; one teacher is between 18 and 29. The length of years spent teaching has been divided in 4 groups: 7 teachers have between 0 and 10 years of service, 12 between 11 and 20, 14 between 21 and 30 and 6 between 31 and 40.

Instruments
This instrument has been elaborated by R. Pianta in collaboration with other researchers from the University of Virginia; the STRS aims to evaluate the quality of the relationship teacher-pupil from the point of view of the educator, keeping a particular focus on prevention and solution of all those issues linked to the educational iter (Pianta, 1996).

The original questionnaire consists of 28 items, each of which is evaluated by a 5 points Likert-type scale (from not applicable to totally applicable). The object of the evaluation is the representation the teacher has of his or her relationship with a given pupil and his or her perception of the value the pupil gives to the relationship itself. Each of the three factors forming the scale analyse a particular dimension of the teacher-pupil relationship: conflict, Closeness, dependence. The results obtained are analysed and put forwards the creation of the overall value of the Scale, which is connected to the quality of the relationship taken into account.
The Conflict sub-scale consists of 12 items and refers to the negative aspects of the relationship as they are perceived by the teacher: a high level in this sub-scale underlines the presence of a hostile attitude of the pupil towards the teacher, commonly represented by feelings of rage and aggressiveness. In such cases, the teacher often feels incompetent.

The Closeness sub-scale is formed by 11 items and measures the positive emotional aspects of the teacher-pupil relationship, often founded on mutual trust and characterized by an above average quality of communication: high levels in this sub-scale usually see the teacher as confident about his or her competence, efficiency and as a figure of support and help for the child.

The remnant 5 items refer to the sub-scale of Dependence. This factor analyses the teacher’s own perception of the level of dependence any given pupil has towards him or her. Its high-value may suggest the pupil responds negatively to the separation from the teacher and may seek his or her help even when it is not needed.

The applications of the STRS are many as they can be extended to different fields of research other than the educational.

**Procedure and Data analysis**

The test consists of a series of passages:

- Translation/ re-translation of the questionnaire into Italian (Brislin, Lonner, Thorndike, 1973)

Submittal of 729 questionnaires, compiled by 40 teachers of kindergarten and of the first three years of primary school. Moreover, each teacher has been asked to complete a socio-demographic form both for each pupil involved in the research, and for him or herself.

Collection and Treatment of Datas.

**RESULTS**

With the help of an investigation directed to extract the latent dimensions of the 28 items of the questionnaire (ACP, Varimax Rotation), we achieved the first results of our research which highlighted a clear distinction among 3 different dimensions, in conformity with the original version of the STRS (explained total variable of 48.3% against 48.8% - Pianta, 1996).

Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization. The analysis has been made on the Italian version: in order to facilitate the reading of the tables, the items in English have been reported as from the original version. Before the text of the item, its original number and scale are reported.
Table 1. STRS: Italian Version

|   | Condivido con il bambino un rapporto di sincero affetto. | Il bambino ed io sembriamo sempre in lotta l’uno con l’altro. | Se turbato, il bambino cerca in me un conforto. | Il bambino non si sente a proprio agio se compio gesti di affetto. | Il bambino appare ferito o imbarazzato quando lo correggo. | Il bambino dimostra orgoglio quando lo elogio. | Il bambino reagisce negativamente alla nostra separazione. | Il bambino condivide spontaneamente con me informazioni che lo riguardano. | Il bambino dipende eccessivamente da me. | Il bambino si arrabbia facilmente con me. | Il bambino cerca di compiacermi. | Il bambino crede che io lo tratti ingiustamente. | Il bambino dimostra orgoglio quando lo elogio. | Quando il bambino ha un comportamento scorretto reagisce positivamente ad un mio sguardo o al suono della mia voce. | Occuparmi di questo bambino prosciuga le mie energie. | Noto che il bambino cerca di imitare i miei comportamenti o il modo in cui faccio le cose. | Se il bambino è di cattivo umore, so che ci attende un giorno lungo e difficile. | I sentimenti del bambino verso di me possono essere imprevedibili o cambiare all’improvviso. | Nonostante i miei sforzi, non mi sento a mio agio nella relazione con il bambino. | Il bambino piagnucola o piange quando vuole qualcosa da me. | Il bambino è sfuggente e manipolatore con me. | Il bambino condivide apertamente con me i suoi sentimenti e le sue esperienze. | Il rapporto con il bambino mi fa sentire efficace e a mio agio. |
| 1 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 | 1 2 3 4 5 |

The coefficients of attendibility (α of Cronbach), appears higher and correspond to those of the original questionnaire.

The first dimension considered, that of Conflict (22.33 of the total variable) calculates the α of Cronbach on 10 items, and corresponds to .901, a value totally acceptable, especially if compared to the original questionnaire, which propose a value of .906.

The dimension of Closeness (16.35 of the total variable), the value obtained is .835, which proves to be within the norm established by the α of STRS, which correspond to the value of .837.

The sub-scale of Dependence (9.63 of the total variable) brings about a value of .667, where in the original version, a much lower value is registred, .64 as α of Cronbach.

On the basis of such results, we have opted in favour of distinctive modifications, which can be summarized as follows:
- elimination of the items number 4, 17 and 19;
- the displacement of the item 25 to the dimension of Dependence, due to its high value of saturation (.64).

Table 2. Matrix table of Correlation, with Varimax Rotation applied

<table>
<thead>
<tr>
<th></th>
<th>Conflict</th>
<th>Closeness</th>
<th>Dependence</th>
</tr>
</thead>
<tbody>
<tr>
<td>2C This child and I always seem to be struggling with each other</td>
<td>.798</td>
<td>-.052</td>
<td>.026</td>
</tr>
<tr>
<td>18C This child remains angry or is resistant after being disciplined</td>
<td>.764</td>
<td>-.073</td>
<td>.085</td>
</tr>
<tr>
<td>11C This child easily becomes angry with me</td>
<td>.758</td>
<td>.013</td>
<td>.148</td>
</tr>
<tr>
<td>23C This child’s feelings toward me can be unpredictable or can change suddenly</td>
<td>.727</td>
<td>-.011</td>
<td>.181</td>
</tr>
<tr>
<td>22C When this child is in a bad mood, I know we’re in for a long and difficult day</td>
<td>.714</td>
<td>-.058</td>
<td>.139</td>
</tr>
<tr>
<td>26C This child is sneaky or manipulative with me</td>
<td>.700</td>
<td>-.018</td>
<td>.147</td>
</tr>
<tr>
<td>20C Dealing with this child drains my energies</td>
<td>.691</td>
<td>-.144</td>
<td>.114</td>
</tr>
<tr>
<td>24C Despite my best efforts, I’m uncomfortable with how this child and I get along</td>
<td>.664</td>
<td>-.264</td>
<td>.052</td>
</tr>
<tr>
<td>13C This child feels that I treat him/her unfairly</td>
<td>.650</td>
<td>.059</td>
<td>.276</td>
</tr>
<tr>
<td>16C This child seems me as a source of punishment and criticism</td>
<td>.560</td>
<td>-.043</td>
<td>.331</td>
</tr>
<tr>
<td>17D This child expresses hurt or jealousy when I spend time with other children</td>
<td>.469</td>
<td>.128</td>
<td>.465</td>
</tr>
<tr>
<td>4V This child is uncomfortable with physical affection or touch from me</td>
<td>-.348</td>
<td>.007</td>
<td>-.103</td>
</tr>
<tr>
<td>27V This child openly shares his/her feelings and experiences with me</td>
<td>.053</td>
<td>.804</td>
<td>-.082</td>
</tr>
<tr>
<td>9V This child spontaneously shares information about himself/herself</td>
<td>.064</td>
<td>.778</td>
<td>-.070</td>
</tr>
<tr>
<td>5V This child values his/her relationship with me</td>
<td>-.168</td>
<td>.703</td>
<td>.041</td>
</tr>
<tr>
<td>28V My interactions with this child make me feel effective and confident</td>
<td>-.445</td>
<td>.645</td>
<td>.145</td>
</tr>
<tr>
<td>15V It is easy to be in tune with what this child is feeling</td>
<td>-.439</td>
<td>.618</td>
<td>.043</td>
</tr>
<tr>
<td>7V When I praise this child, he/she beams with pride</td>
<td>.018</td>
<td>.613</td>
<td>.133</td>
</tr>
<tr>
<td>1V I share an affectionate, warm relationship with this child</td>
<td>-.256</td>
<td>.602</td>
<td>.152</td>
</tr>
<tr>
<td>21V I’ve noticed this child copying my behaviour or ways of doing things</td>
<td>.097</td>
<td>.562</td>
<td>.113</td>
</tr>
<tr>
<td>12V This child tries to please me</td>
<td>.144</td>
<td>.536</td>
<td>.148</td>
</tr>
<tr>
<td>3V If upset, this child will seek comfort from me</td>
<td>-.219</td>
<td>.498</td>
<td>.412</td>
</tr>
<tr>
<td>19C When this child is misbehaving, he/she respond well to my look or tone of voice</td>
<td>.420</td>
<td>-.480</td>
<td>.067</td>
</tr>
<tr>
<td>14D This child asks for my help when he/she really does not need help</td>
<td>.179</td>
<td>.019</td>
<td>.725</td>
</tr>
<tr>
<td>10D This child is overly dependent on me</td>
<td>.230</td>
<td>.042</td>
<td>.718</td>
</tr>
<tr>
<td>25C This child whines or cries when he/she wants something from me</td>
<td>.279</td>
<td>-.082</td>
<td>.636</td>
</tr>
<tr>
<td>8D This child reacts strongly to separation from me</td>
<td>.070</td>
<td>.224</td>
<td>.536</td>
</tr>
<tr>
<td>6D This child appears hurt or embarrassed when I correct him/her</td>
<td>.138</td>
<td>.183</td>
<td>.382</td>
</tr>
</tbody>
</table>
As 3 items have been removed, the $\alpha$ of Cronbach for the Total Scale must be calculated on 25 items. As a consequence, a value of .80 has been obtained: the index is inferior to that of the original version (.89), nevertheless denoting both coherence and reliability of the STRS.

Once the intrinsic value of the questionnaire has been ascertained, we concentrated our interest on the influence of particular characteristics offered by the sample (sex, grade of the schools) on chosen scales or single items. The investigation concretized in the analysis of the variance (ANOVA one-way).

The Sex of the pupils does not emerge as relevant in the dimensions of Conflict and Dependence, but it appears of interest if considered within the dimension of Closeness: a rough difference can be observed between the average results related to boys and girls (36.99% the first, 40.04% the latter). The ANOVA one-way confirmed the influence that the sex of the pupil has on the dimension of Closeness ($F= 27.442$, $p< .001$). We can thus maintain that the analysis of the variant significantly underlines the items referring to non-verbal behaviors (3, 21), those referring to the field of experienced emotions (3, 28) or those referring to attributed values (5). The statements concerning the Closeness created through language (9, 27) are decidedly important, but still inferior in comparison to the item above mentioned. The influence exerted by the sex factor is also highlighted within the rough total of the STRS ($F=13.978$, $p< .001$). The affinity of gender between teacher and female pupil, it must be concluded, facilitate a greater empathy and stronger behaviors of Closeness.

The analysis of the variance reveals that the quantity of the teaching hours of any given educator in a class influences the sub-scales of Conflict ($F=20.634$, $p< .001$) and Dependence ($F=19.096$, $p< .001$). A simple observation of the questionnaire’s rough results shows that, to an increase of teaching hours, corresponds an increase of the index of Conflict and Dependence.

On the other hand, the dimension of Closeness does not present evident links with the amount of teaching hours in a given class (except for items 15 and 19). Such a trend suggests that the actual time a teacher and a pupil spend together in the classroom does not influence their relationship, which is based on the quality, rather than the quantity, of the time-shared.

Among the variables exerting a statistically significant influence, the order of school is of special importance to our study ($F=10.426$, $p< .001$). The results obtained from the scrutiny of the rough totals’ averages suggest that the incidence of Dependence is higher I primary school (7.35) if compared to kindergarten school (6.59).

The dimension of Conflict also presents a link with the order of school’s variable, even though its values ($F= 5.288$, $p < .05$) are less apparent than those referring to Dependence.
Evaluating the Scale

The analysis of the results obtained in this study has been collected in 8 categories, which are directly connected to similar typologies of teacher-pupil relationships. Such a subdivision proposes the existence of relationships’ styles easily describable and which are correlated to specific parameters. In order to clarify the individuation of the various typologies discovered, the scores obtained through the STRS have been subdivided in three groups: high, medium and low.

Conflict-rage. It corresponds to a high value on the scale of Conflict and it is associated with low values of Dependence and Closeness. The relationship is perceived as tense and viewed as a continuous struggle by the teacher, who blames it for frustration and stress; the educator senses the pupil’s hostility, feels impotent and inadequate for solving the problem. The educator often is convinced to be considered as a source of unjust punishment by the pupil.

Dependent. A high index on the sub-scale of Dependence, and a visibly lower one on the scale of Conflict characterize this second style of relationship. The sub-scale of Closeness, on the other hand, may assume varied values. The teacher feels that often the pupil depends too much from the adult’s figure represented in school by the educator, who also believes that, at times, the requests for help and attention expressed by the child are overestimated and often unnecessary. The child also tends to imitate adults’ behavioral attitude, in order to gain their approval. The position of the teacher, when faced with a pupil with this sort of issues, is very delicate, as the natural desire for helping the child may end in a disastrous formative mistake, increase even more the liaison of dependence between teacher and pupil.

Enraged-Dependent: It is determined by higher levels of the Conflict and Dependence’s levels, and by a lower index of Closeness. The teacher considers him or herself as inadequate to the requests and behaviors of the pupil, sensing the pupil’s malaise and his or her capability of dealing with it. Often the child strongly refuses the affective closeness offered by the educator, or either depends too much on the adult and seeks his or her presence too heavily; such relationships are usually unstable and depend greatly on the mood of teacher and pupil.

Dysfunctional: high levels of Conflict are associated with high levels of Closeness, and irregular presence of Dependence. It is in fact rather hard to describe in scientific terms the nature of this relationship, which proves how psychologically challenging it may be for the those who experience it: the teacher is often confused as the signals coming from the pupil may follow opposite patterns, at times denoting affection and need of sharing, at times coldness and lack of emotional involvement. Rage and affection play alternate roles in this type of relation, as in a continuous, emotionally draining bond, which is psychologically and educationally unproductive.
Lack of Involvement: the relationship is characterized by low levels on all dimensions of the questionnaire, and can be viewed as the antithesis of the Dysfunctional relationship discussed above. In spite of sharing the same difficulty of definition, these relationships are not as much influenced by the extreme mood swings of the Dysfunctional one. In other words, such relationships do not strike as being neither negative nor positive, but the lack of a standardized emotive response by no means denies their difficulty.

Positive: this type of teacher-pupil relationship is distinguished by a medium level of Closeness in correspondence with low levels of Dependence and Conflict, and reflects positive feelings both from teachers and pupils. Communication and confidence between the subjects is usually good and the balanced, and it does not depend on frustration and anxiety. Both the educator and the child feel at ease with each other and invest energy and effort in the relationship, which is often enriched by the sharing of experiences external to the educational contest.

Totally Positive: presents a very high level of Closeness, associated with lower levels of Conflict and Dependence. This type of relationship has similar connotation to that of the Positive relationship outlined in the previous paragraph, but the dimensions of sharing and Closeness are perceived as above average. This is the very typology of relationship to which teachers must look up to, and on which both educators and pupils must focus in unison.

Medium: this relationship lacks the strength and certainty brought by a very definite score, as it does not present relevantly high or low scores in none of the dimensions analyzed. As a consequence, the Medium relationship cannot be regarded as either negative or positive, as it does not settle definitely on either pole. It is, one can say, a normal relationship, blooming from opposite forces mutually annulling one another.

DISCUSSION

Our research has proven the overall validity of the Italian translation of the STRS; the version we used appeared reliable and opened up the way to the Italian validation of the STRS itself. After a series of focus group sessions, it has been decided to carry on some changes to the Italian version, in order to make it more apt to be applied to a wider sample.

The new research, which will follow the revision of the Italian version of the STRS, will have the ultimate aim of improving the reliability of the instrument, and of investigating in greater detail the predictive validity of the questionnaire, especially in reference to the influence that the child’s relationship with both teacher and parents may have on the rational capability of the child itself (Howes, Hamilton and Matheson, 1994;
Graziano, Reavis, Keane and Calkins, 2007), to the connection between relation and emotional development (Waajid, 2006) and to the link between the teacher-pupil relationship and the development of educational abilities (Hamre e Pianta, 2001).

REFERENCES


Vicente, A. Ventura e I. Ruiz (Eds.), *Nuevos contextos psicológicos y sociales en educación*. Santander: Psicoex.


Received July, 3, 2008
Revision received September, 29, 2008
Accepted October, 4, 2008