Promoting students’ engagement in school: Effects of the eclectic communication model

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Abstract

This investigation includes a quasi-experimental study whose purpose was to analyze the effects of the use, by teachers, of a communication intervention program supervised by the school psychologist, on students’ engagement in school and on their academic performance. The sample involved 7th and 9th grade students, in a total of four classes, two of those forming the experimental groups (n = 52) and the other two the control groups (n = 47). Student Engagement in School-A Four-Dimensional Scale (SES-4DS) was used to assess engagement. The eclectic communicational program was applied to the experimental group whereas the control group was subject to the formerly existent teacher-student relationship. In each of the 4 classes, the operation was preceded by a pre-test using the SES-4DS sale as well as of assessment tests to measure their performance in mathematics and in Portuguese language. The experiment lasted for 6 and half months during the school year. At the end, the above mentioned scale was applied again and performance tests were performed once more. The results indicated the effectiveness of the communication intervention program on students’ engagement and on their performance, thus being consistent with previous studies. An implication is that psychologists and teachers, working together and taking an intervention perspective, may play an important role in projects to promote students’ engagement as well as their grades.

Key-words: student engagement in school; interpersonal communication; teacher-student relationship; teachers’ effectiveness.

Students’ engagement in school is defined as the experience of centripetal connection of the student to the school in particular dimensions: cognitive, affective, behavioural and agency (Veiga, 2012; 2013). It has been operationalized as the extent to which students are committed to school and motivated to learn (Simons-Morton & Chen, 2009; Veiga et al., 2013). Teachers’ practices and support, opportunities to participate, curricula, positive relations, and classroom environment are frequent aspects referred in available literature, and appear positively related to the students’ behaviour and academic performance (Smith, Gruenewald, & Yeh, 2010).

Although there are several studies underlining the relationship between the teacher and the students’ engagement, there is a lack of specific studies about teachers’ inter-personal communication as a previously trained skill and its effects on students.
Teacher-student communication and their relation was considered in this study. Our goal was to analyze the effects of an intervention program named Eclectic Communication Model (ECM) on students’ engagement and performance. Before we present our methods and results, we shall highlight some studies in which a revision of important concepts such as “teachers’ effectiveness, teacher-student relationship and students’ engagement in school” is put forward.

### 1. Teachers’ effectiveness and students’ engagement in school

The concept of classroom management is understood as the series of actions carried out toward designing the teaching-learning setting, by adapting the physical environment and clarifying rules and procedures, aiming students’ engagement in the tasks and attending to the subjects to be learned (Veiga, 2007a; Woolfolk, 2014); it comprises, thus, students’ behaviour management and also the promotion of a positive learning environment (Little & Akin-Little, 2008). Teachers’ beliefs about the subject, classroom control and management are conceptualized in a continuum that goes from non-interventional, interactionist and student centered, to teacher-centered, focused on the teacher (Wolfgang & Glickman, 1995). Management skills are divided in several categories by Veiga, Caldeira and Melo (2013): content management, behaviour management, conflict management, communication management, and time and space management.

Classroom management includes several procedures and techniques relying on several factors, such as classroom ecology, the seriousness of the behaviour, support services, contents, and teacher’s previous training (Veiga, Caldeira, & Melo, 2013). An appropriate classroom management appears positively related to academic performance and adaptation of the student’s behaviour (Arbuckle & Little, 2004).

A minor occurrence of disruptive behaviours and a higher engagement in learning are present in those classrooms where the teacher uses effective behaviour management strategies (Emmer & Strough, 2001), derived from interactionist strategies, and characterized by organized routines and structures (Cameron, Connor, & Morrison, 2005). According to Veiga, Caldeira and Melo (2013), a student-centered classroom management may be described as a series of specific dynamics, such as a socio-emotional emphasis, the existence of connection with the school, a positive classroom climate and students self-discipline. The lesson is built by both
teachers and students, and learning and order, within the classroom, will be the result of students’ engagement in meaningful activities (Doyle, 2009). The teachers’ beliefs about discipline – interventional, interactionist, non-interventionist (Wolfgang & Glickman, 1995) – appear related to specific behaviours of the teacher-student relationship, and may be authoritarian, participatory, permissive or inconsistent (Veiga, 2007a; Woolfolk, 2014). Other studies focus more specifically the variables of involvement and the relationship between teachers and students.

2. Teacher-student relationship and students’ engagement in school

Teacher-student interactions, and the way communication occurs, have been studied in relation to their influence during the course of classes. Pianta et al. (2004) materialize positive teacher-student relationships in academic support and open communication within classroom. Hamre and Pianta (2007) highlight teacher-student interactions as determinants of engagement in teaching-learning process, attending to three dimensions of teachers’ practices: emotional support, organization and support to instruction. Leitão and Waugh (2007) describe a positive environment by mutual acceptance and understanding; by respect; by trust; and by cooperation, resting on the teacher their promotion.

Lee (2012) aimed to study the relationship between the perceived social environment (encompassing teacher-students relationship and teacher’s demands) and each of the variables students’ engagement and academic performance. He found that: both teacher-students relationship and teacher’s demands were predictors of behavioural and emotional engagement; teacher-students relationship (but not teacher’s demand) was a predictor of reading performance; the effect of the variables teacher-students relationship and teacher’s demand was not significant.

Literature emphasizes the importance of these relations in the case of at-risk students, because they positively influence school adjustment (Burchinal, Peisner-Feinberg, Pianta, & Howes, 2002) and prevent disruptive behaviours and school dropout (Hamre & Pianta, 2001; Hughes, Luo, Kwok, & Loyd, 2008; O’Connor, Dearing, & Collins, 2011). Fostering dialogue encourages the students to reflect meta-cognitively about their learning (Guthrie & Wigfield, 2000); the value assigned to autonomy and the possibility to participate in academic decisions (Roeser, Eccles, & Sameroff, 2000) increase students responsibility and engagement (Hughes, Luo,
Kwok, & Loyd, 2008).

Being a fundamental aspect of the human condition, interpersonal communication has been pointed out in literature as a relevant aspect in teacher-student’s relationship and learning (Chesebro, 2003; Cooper & Simonds, 2003; Jones & Jones, 2006; Veiga, 2007a; Veiga et al., 2009). Although the strategies applied by the teachers may vary and be adapted to particular moments and tasks, specific skills have been identified as favorable to education, more specifically task appraisal, the type of questions asked to the students, the presentation of information that is useful for the student, orientation, explaining without blaming, acceptance through empathy (Cazden, 2001; Flanders, 1970; Veiga, 2012). We are about to describe those.

3. The eclectic communication model

The general goal of this study was to investigate the effects of a teaching method of intervention using the eclectic communication model on students’ engagement and performance. The importance of interpersonal communication has been highlighted by many investigation works, whether they have been theoretical (Coates, 1993; Daniels, 1995), or empirical (Graham et al., 1995; Joseph, 1997; Morse & Ivey, 1996; Veiga, 1999); located in school (Anderson, 1997; Bull & Kimball, 1996; Buschman, 1995; Hackett & Wilson, 1995), or in a broader spectrum of relationships (Hargie, Saunders, & Dickson, 1995).

The eclectic communication model (ECM) is included in interpersonal communication and may be used to promote Human Rights (Marques, 2014; Veiga, 2004; Veiga, 2007b; Veiga, García, Neto & Almeida, 2009). The model has been described in former studies (Veiga, 2007a), showing up as a joint of several communication categories, some working as an obstacle to human relationships while others are fundamental to promote education in general and students’ engagement in particular. Below are the itemized communication categories within the school context, in terms of obstacles and communication skills, within the teacher-students relationship:

- Evaluation Category: expressing negative criticism, disapproval or punishment; it may assume the form of a threat or of ridiculing.
- Orientation Category. Type I: an order or a duty perceived as unnecessary. Type
II: expressing an opinion or giving out information, perceived as timely or useful.

- Interpretation Category. Type I: it aims to explain "why", giving out reasons for certain behaviour, Type II: it aims to explain "for", the goals of each behaviour.
- Reassuring Category. Type I: a compliment to the individual. Type II: a compliment to his/her attitude.
- Exploratory Category. Type I: a question perceived as inconvenient. Type II: a timely and appropriate question.
- Empathic Category. Described as placing yourself in someone else’s shoes. Type I: repeating what the student said. Type II: the reflex of the feelings underlying the words. Type III: clarifying thoughts.

Type I categories (evaluation, orientation, interpretation, reassuring and exploratory) are obstacles to communication. The others are skills. Therefore, it is up to the teachers to avoid negative criticism, to give unnecessary orders, to make abusive interpretations, to centre praise in activities rather than in the personality of the individuals, learning how to listen and understanding their students’ problems. Besides these dimensions, the program comprises the following communication skills; active listening (attention and empathy); self-revelation and authenticity; feedback; confrontation; communication coherence; self-control and cooperation.

The fundamental communication skills trained by the teachers were repeating information until it is understood, refrain from negative criticism (especially in public), asking questions to the student when everything seems to indicate he / she is able to respond correctly, giving time to think, giving time to answer, developing listening, understanding and support. Furthermore, teachers also had brief training in students’ engagement in school through analysis and discussion of specific texts (Reeve, 2009; Veiga, 2013). This training led to a general plan of action which became the guidance for teachers’ planning of their classes. The following was established: whenever possible, using communication skills in their relationship with students, valuing cooperative learning and taking advantage of the schools’ syllabus as well as of daily events to think about the importance of being at school. The aim of such an investigation implied a quasi-experimental study, as described below.
4. Methodology: A quasi-experimental study

Before specifying the methods, we will present the main goal and the study questions derived from it. The main goal of this study was finding answers for the problem: What are the effects of the use of a communication intervention program on students’ engagement and performance? From such a question, others resulted:

Q1: Are there any differences in engagement dimensions between the pre and the post testing in the experimental groups (the differences being superior in the post testing situation) but not in the control groups?
Q2: Are there any differences in the performance at mathematics and Portuguese language between the pre and the post testing in the experimental groups (results being superior in the post testing) but not in the control groups?

4.1 Participants

The sample involved 7th and 9th grade students, in a total of four classes, two of them forming the experimental groups (n = 52) and the other two forming the control groups (n = 47). Specifically, the 7th grade control group had 24 students and the experimental group included 27 whilst the 9th grade control group had 23 students and the experimental group 25.

4.2 Instrument

Engagement was evaluated using the Student Engagement in School-Four-Dimensional Scale (SES-4DS; Veiga, 2013). This new measure consists of 20 items and uses a Likert-type scale ranging from 1 (total disagreement) to 6 (total agreement). The validation study sample included 685 students attending middle and high schools from various regions of Portugal. The four dimensions of engagement feature 5-items per scale and include items such as the following: cognitive (e.g., “When writing my work, I begin by making a plan for drafting the text.”), affective (e.g., “My school is a
place where I feel excluded.”), behavioural (e.g., “I am absent from school without a valid reason.”) and agentic (e.g., “During classes, I put questions to the teachers.”). For different groups of students, values of internal consistency ranged from .70 to .87. Evidence for convergent validity is provided (Veiga, 2013).

Academic performance in mathematics and in Portuguese language was evaluated using specific tests, made by the teachers, before and after the study took place.

### 4.3 Procedure

This study is part of a larger project on student engagement in school (Veiga, Carvalho, Almeida, Taveira, Janeiro, Baía, Festas, Nogueira, Melo, & Caldeira, 2012). Classes were selected according to their similarities and to teachers’ availability to participate in the study. In each experimental class, one of the teachers was trained on the ECM, in a series of tutorials with the project’s coordinator, starting in September 2012 and following the course of the project. In each of the experimental classes, our intervention was preceded by a pre-test of our evaluation scale named “Students’ engagement in school: a four-dimensional scale” (SES-4DS), in the beginning of October 2012. The intervention started on that same month and lasted until May 2013. During that time, the project coordinator met with the teachers for planning and analysis. After the intervention, the above mentioned scale was used to perform a post test, and an interview to the teachers was also performed. The experimental group used the eclectic communication model while the control group was subject to the formerly existent relationship teacher-students. Therefore, it is a longitudinal study which lasted for six and a half months, within a quasi-experimental model, more specifically a 01 X O2 // O3 - O4 type, with registers before (O1) and after (O2) intervention (X) in the experimental and control groups(O3, before; and O4, after).

### 4.3.1 Study questions

The main goal was to find answers for the following questions: Q1- Are there any differences in engagement dimensions between the pre and the post testing in experimental groups, the differences being superior in the post testing situation, but not in the control groups? Q2- Are there any differences in the performance in mathematics
and in Portuguese language between the pre and the post testing in the experimental groups, results being superior in the post testing, but not in the control groups?

5. Results

To analyze the results, we have used SPSS, the Students T test for paired samples. The information which gives an answer to our study questions is in the following Tables.

Table 1 shows that, in what pertains to the 7th grade, the control group (CG) the mean differences in pre and post testing were not statistically significant in either of the concerned dimensions (cognitive, affective, behavioural, agentic); however, in the experimental group (EG) there were statistically significant differences in their mean comparing the pre and post testing, within the affective dimension (T=-3.1; df=52; p<0.01), behavioural dimension (T=-3.7; df=52; 0.001) and agentic (T=-2.5; df=52; p<0.05).

Table 2 shows the results for the 9th graders. The control group (CG) showed no statistically significant differences in their mean comparing pre and post testing in either of the concerned dimensions. The experimental group (EG) there were statistically significant differences in the behavioural (T=-2.1; df=48; 0.05) and agentic dimensions (T=-3.4; df=48; p<0.01).

Table 1. Difference between the means (M) and standard deviation (SD) on dimensions of engagement (SES), in the pre and post testing for the control group (CG) and the experimental group (EG), in the 7th grade

<table>
<thead>
<tr>
<th>Dimensions of SES</th>
<th>Class</th>
<th>Pre-test</th>
<th>Post-test</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>N</td>
</tr>
<tr>
<td>Cognitive</td>
<td>CG</td>
<td>24</td>
<td>16.8</td>
<td>4.9</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>EG</td>
<td>27</td>
<td>17.2</td>
<td>4.2</td>
<td>27</td>
</tr>
<tr>
<td>Affective</td>
<td>CG</td>
<td>24</td>
<td>23.4</td>
<td>4.6</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>EG</td>
<td>27</td>
<td>24.5</td>
<td>4.2</td>
<td>27</td>
</tr>
<tr>
<td>Behavioural</td>
<td>CG</td>
<td>24</td>
<td>25.9</td>
<td>4.8</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>EG</td>
<td>27</td>
<td>26.8</td>
<td>2.5</td>
<td>27</td>
</tr>
<tr>
<td>Agentic</td>
<td>CG</td>
<td>24</td>
<td>18.2</td>
<td>5.6</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>EG</td>
<td>27</td>
<td>17.4</td>
<td>5.8</td>
<td>27</td>
</tr>
</tbody>
</table>

* p<0.05; ** p<0.01; *** p<0.001; ns = non-significant (two-tails)
Table 2. Means (M) and standard deviation (SD) on dimensions of engagement (SES), in the pre and post testing for the control group (CG) and for the experimental group (EG), in the 9th grade.

<table>
<thead>
<tr>
<th>Dimensions of SES</th>
<th>Class</th>
<th>Pre-test</th>
<th>Post-test</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
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<td>N</td>
<td>M</td>
<td>SD</td>
<td>N</td>
<td>M</td>
</tr>
<tr>
<td>Cognitive</td>
<td>CG</td>
<td>23</td>
<td>16,5</td>
<td>5,0</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>EG</td>
<td>25</td>
<td>16,0</td>
<td>5,6</td>
<td>25</td>
</tr>
<tr>
<td>Affective</td>
<td>CG</td>
<td>23</td>
<td>22,4</td>
<td>4,4</td>
<td>23</td>
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<td></td>
<td>EG</td>
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<td>23,9</td>
<td>5,2</td>
<td>25</td>
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<tr>
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<td>Agentic</td>
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<td>19,0</td>
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<td></td>
<td>EG</td>
<td>25</td>
<td>18,3</td>
<td>6,4</td>
<td>25</td>
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</tbody>
</table>

* p<0.05;  ** p<0.01;  *** p<0.001;  ns = non-significant (two-tails)

Table 3. Means (M) and standard deviation (SD) in the Mathematics and Portuguese Language grades in the pre and post testing for the control group (CG) and the experimental group (EG) in the 7th grade.

<table>
<thead>
<tr>
<th>Dimensions of SES</th>
<th>Group</th>
<th>Pre test</th>
<th>Post test</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>N</td>
<td>M</td>
</tr>
<tr>
<td>Mathematics</td>
<td>CG</td>
<td>24</td>
<td>3,3</td>
<td>.9</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>EG</td>
<td>27</td>
<td>3,2</td>
<td>.9</td>
<td>27</td>
</tr>
<tr>
<td>Portuguese</td>
<td>CG</td>
<td>24</td>
<td>3,3</td>
<td>.7</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>EG</td>
<td>27</td>
<td>3,2</td>
<td>.8</td>
<td>27</td>
</tr>
</tbody>
</table>

* p<0.05;  ** p<0.01;  *** p<0.001;  ns = non-significant (two-tails)

Table 4. Means (M) and standard deviation (SD) in the Mathematics and Portuguese language grades in the pre and post testing for the control group (CG) and the experimental group (EG) in the 9th grade.

<table>
<thead>
<tr>
<th>Dimensions of SES</th>
<th>Group</th>
<th>Pre test</th>
<th>Post test</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>N</td>
<td>M</td>
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<td>Mathematics</td>
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<td>.9</td>
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<tr>
<td>Portuguese</td>
<td>CG</td>
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<td>3,1</td>
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<td>23</td>
</tr>
<tr>
<td></td>
<td>EG</td>
<td>25</td>
<td>3,0</td>
<td>.8</td>
<td>25</td>
</tr>
</tbody>
</table>

* p<0.05;  ** p<0.01;  *** p<0.001;  ns = non-significant (two-tails)
Table 3 shows the difference between the means (M) in Mathematics and Portuguese grades in the pre and post testing situations for the control group (CG) and the experimental group (EG) in the 7th grade. The control group (CG) had no significant differences in either subject whereas the experimental group (EG) showed significant differences in both Mathematics (T=-2.1; df=52; p<0.05) and Portuguese (T=-2.9; df=52; p<0.01).

Table 4 shows the results for the 9th grade. Significant differences between the pre and post testing situations (T=-2.5; df=48; p<0.05) are only observable in the experimental group and merely concerning Portuguese. It must be noted that the control group showed no significant differences in students’ engagement and academic performance comparing the pre and post testing situations.

6. Discussion and conclusions

The fact that there are only significant differences in the experimental group, both in engagement and in performance highlights the effectiveness of the communication methods. However, not all dimensions have benefited from it. Behavioural and agentic dimensions were the most benefited the behavioural dimension in the 7th grade and the agentic in the 9th. It is also important to state that students’ interventions were bettered in both grades. This result may very well have to do with age, in other words, with the diminishing of educational changeability as age progresses, which is in accordance with psychological and educational theories (Veiga, 2013; Woolfolk, 2014).

The results obtained in this research agree with those of a former study (Veiga, 2007b; Veiga, García, Neto & Almeida, 2009), in which the intervention was also based in the eclectic communication model (ECM). Significant differences were then pointed out in the subjects belonging to the experimental groups in situations of pre and post testing, with students benefiting when it came to asserting their rights in relationship dimensions. These results are also coherent with another research (Veiga, 2004), which used a Transactional Analysis program to promote students’ rights and their behavioural adequacy, registering significant differences. It is likely that a more extended intervention would have produced even more significant effects, affecting also other psycho educational dimensions.
The information here gathered allows enhancing the thought as well as the need for new studies on intervention on students’ engagement, promoting the teachers’ activity. The ecological model of human development by Bronfenbrenner (1986) might be a good theoretical framework for those.

Besides the improvement in students’ engagement and performance, the interviews made to the teachers show the positive effects of the eclectic communication model (ECM), in aspects such as: enhancing students’ satisfaction with their teachers, a feeling of enjoyment and of belonging to school; a better environment inside the classroom; teachers’ satisfaction with the work they have performed. In accordance with a previous research (Veiga, 2007b; Veiga, García, Neto & Almeida, 2009), teachers met with difficulty when it came to putting into practice some of the communication skills they had been trained on, especially active listening and empathy, not only because these are further away from the usual procedures expected by the students but also because there are no adequate spaces inside the schools to perform such skills. Teachers also stated that they frequently used the eclectic communication model (ECM) in other situations regarding human interactions with people other than students, which means they unconsciously transferred their learned skills in a positive way.

Further research may consider the effect that the training of teachers on the ECM may have in their professional development. Other researches could focus on giving greater importance to qualitative observations in continuous evaluation processes of all happenings registered by the teachers and reported by the students.

We recognize school as a setting where students can feel well adjusted and effectively engaged a place where the relationships between individuals are sustained by dialogue, solidarity and mutual respect. Students are the key to the future, so it is vital that they value their school and receive an education that also values them as individuals. It is, therefore, highlighted that teachers’ acquisition of communication skills to be used with their students is a useful path to better everyone’s well-being at school.

Note:
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References


