STUDIA UBB PSYCHOL.-PAED., LVIII, 1, 2013, pp. 27 – 36
(RECOMMENDED CITATION)

DEVELOPMENT OF THE SELF-ASSESSMENT CAPACITY AND ITS INFLUENCES UPON HIGH-SCHOOL STUDENTS' SCHOOL PERFORMANCES

CRISTIAN STAN*

ABSTRACT. As shown by the specialist studies in the field, the perspective built by the young adolescent upon himself/herself is stronger than most value judgments from the exterior. Unfortunately, however, this perspective sometimes includes, to a variable and difficult to establish proportion, elements that are not in accordance to the factual effective state and the student's actual potential. Considering these premises, we assumed that the development of the self-assessment capacity of the students, by means of a set of methods and techniques including self-grading, controlled self-grading and reciprocal grading will determine the growth of not only the accuracy of the student's self-evaluation, and self-esteem but also of his performance levels. In conclusion, it can be said that the development of the self-assessment capacity of students induces beneficial effects not only at the level of the objectivity degree or self-esteem, but also regarding the students' performance level.

Keywords: assessment, self-assessment, school performances, independent self-grading exercises, controlled self-grading and reciprocal grading .

ZUSAMMENFASSUNG. Genau wie Studien zeigen dem Fachmann, von dem jungen heranwachsenden Sicht auf sich selbst gebaut ist stärker als die meisten extern Werturteile. Leider ist diese Sicht manchmal in einem variablen Anteil und schwierig, Artikel, die nicht im Einklang mit den Tatsachen und den Status und das Potenzial der Schüler enthalten. Unter diesen Annahmen haben wir angenommen, dass die Kapazität Selbsteinschätzung der Schüler durch eine Reihe von Methoden und Techniken wie Selbst-Korrektur, Autokorrektur gesteuert gegenseitige Korrektur und kollektive Korrekturverfahren erhöht nicht nur Selbst-Schüler selbst, aber auch, und das Niveau der Leistung. Zusammenfassend können wir sagen, dass die Fähigkeit zur Selbsteinschätzung der Schüler positive Effekte zu induzieren nicht nur auf den Grad der Objektivität der Selbsteinschätzung und Selbstwertgefühl, sondern auch in Bezug auf die Leistung der Schüler.

Schlüsselwörter: *Beurteilung, individueller Beurteilung, Selbstkorrektur, Peer-Korrektur, Auto-Korrektur.*

* Ph.D., Babes-Bolyai University, Cluj-Napoca, Romania, cristiss2004@yahoo.com

1. Introduction

It is widely recognized fact that in the school the student is influenced not only by the evaluation conducted by the teacher but teaching his own self-evaluative approach. At the evaluation level the teacher always remains prisoner of personal perspective on the peculiarities of the context in which is objectified academic performance of students and has very limited means to estimate effective level of mobilization of each student in relation to the school task. The student is interested many times, even more than the teacher, by the his scholar evolution and used relatively frequently this aspect as an important referential in learning activity. Ignoring the student's self-evaluative approach is likely to turn into a conglomerate evaluation appreciative unable to interfere with the inner student. This forces us to rethink the structure of the educational process in a manner that includes in its composition student's self-assessmen task (Stan, C. 2000, Chiş, V. 2001). Objectivity of self-assessment is able to lead not only to a better understanding of the external evaluation and optimization of the student's self-image but also increase the level of its academic performance. Moreover, we believe that the assessment of teacher can gain consistency and accuracy through a support greater student self evaluation.

2. Major research objectives and coordinates

We mention from the very beginning the fact that the research aimed not only at an experimental verification of the validity of the means of development for the self-evaluation capacity of students but also at the consequences this optimization carries within the plan of school performances. Thus the premise of the current investigation is that the systematic training of the students in independent self-grading exercises, controlled self-grading and reciprocal grading determines the increase of the self-evaluation capacity and their school performance level. Referring to the problematic of the content sampling we mention that the experimental investigation of the self-evaluation-evaluation relationship in the teaching act was conducted in the case of the subject Logics, discipline that is taught throughout a school year in four high schools. The lessons upon which the experiment was based were those from the school syllabus for the discipline. Concerning the subjects' lots there were 4 groups (2 experimental groups and 2 control groups) from 4 distinct high schools, having both theoretical and scientific profiles. The total number of subjects was 119 students.

After the sampling operation, the experimental research included three distinct stages: the pre-testing stage, the stage of the psycho-pedagogical intervention and the post-testing stage. The pre-testing stage, developed in the first half of the

first semester was projected and organized so that it can allow the setting of the statistic comparability degree between the experimental and control lots from the point of view of the level of students' school performance and their self-evaluation capacity.

The pedagogical intervention at the level of the experimental classes materialized in making some systematic activities of independent self-grading (each student corrects their work), controlled grading (each student corrects their work supervised by teacher) and reciprocal grading (each student corrects colleague's work). The post-testing stage, developed in the second half of the second semester, had as objective the comparative monitoring of the school evolution for the students in the experimental and control lots in the performance level (of school results) and the formative level (development of the capacity to self-evaluate). The notations used throughout the ongoing of the experiment were:

- X – statistical average;
- Xna – statistical average of the anticipated school notes to be obtained by students after they are confronted to the school task;
- Xno – statistical average of the school notes given by teachers;
- T – T-test value;
- Dx – value of the difference between statistical average;
- E –experimental group;
- C – control group.

3. Presentation and interpretation of results

The data included in Table 1 reflect the average of the grades that students expect to get after they were confronted to the school task and illustrate, through test T, the fact that there aren't any statistically significant differences between the self-evaluation of the performance of the students in the experimental grades and that estimated by the control lot students, in both cases the p value being above 0.05.

Table 1. Data regarding the relation between self-evaluation of the performance – evaluation at the level of the 9th grade – pre-testing level

Lot	**Xna**	**Xno**	**Dx**	**T**	**P**
E1	9.34	8.59	0.75	4.384	P = .002
N = 32					p < 0.01
C1	9.23	8.26	0.97	3.008	P = .006
N = 28					p < 0.01
E2	9.01	7.85	1.16	6.574	P = .000
N = 30					p < .001
C2	9.24	8.09	1.15	5.544	p = .000
N = 29					p < .001

The incongruence of the self-evaluation with evaluation is shown in the table above by the statistically significant differences , ($p < .001$), which exist between the average of the grades that students anticipated after confronting them to the school task and the average of the actual grades they got as a result of the didactic evaluation carried out by their teachers. This way, as in the situation presented above, we can notice the existence of an overestimation trend on behalf of the students of the grades they consider they would get in relation to the grades the teacher give, despite the fact that self-evaluation was accomplished after the confrontation to the actual school task.

The incongruence of the self-evaluation/grading, observed both in the case of the experimental classes and in the control ones, strengthens previous premise regarding the insufficient development of the self-grading capacity of students, these manifesting a constant tendency to overestimate the level of their school performance.

Synthesizing the previously mentioned premises, there are two main aspects: both the students in the experimental classes and the control lots manifest a constant tendency to overestimate their school performance and there are no significant differences between the experimental lots and the control ones from the point of view of the self-evaluation capacity, both categories showing errors in the self-grading process. Table 2 presents the results obtained after comparing the average of the grades got by the students in the experimental and control groups at Logics.

Table 2. Comparative data concerning the grades got by the students of the 9th grade - pre-testing level

Lot	**Xno**	**Dx**	**T**	**P**
E1	8.59			
N = 32		0.33	1.276	p = .207
C1	8.26			p > .05
N = 28				
E2	7.85			
N = 30		0.24	0.953	p = .345
C2	8.09			p > .05
N = 29				

The data presented in the table above proves, through the values of test T and the associated significance thresholds ($p > 0.05$) the fact that the level of school performance in Logics for the students belonging to the experimental group is statistically comparative to that in the control group, which confirms the correctness of the sampling and the methodological validity of the investigation procedure.

We present further on in a synthetic manner the main conclusions of the pre-testing stage, conclusions which validate methodologically speaking the continuity of the investigation procedure:

- The average of the grades obtained as a result of the self-evaluation by the students in the experimental lots are statistically comparative to those obtained by the students of the control classes, both groups showing a tendency to overestimate their school capacities;
- The level of the effective school performance for students in the experimental group is similar to that of the subjects in the control group, the average of their grades being statistically comparative.

The investigation procedure continued with the stage of the experimental intervention when the students in the experimental lot performed systematic tasks with independent self-grading, controlled and reciprocal grading.

The main reasons that convinced us to use this category of self-grading tasks were, on the one hand the fact that this way students have the possibility of authentically practicing their self-evaluation capacity, and on the other hand our presupposition that the „negotiation" of the grade with the teacher offers the student the opportunity to validate or invalidate, through arguments, his/her own self-evaluation criteria.

We mention here the fact that the discussions between the students and the teachers within the independent/controlled self-grading procedure took place in the presence of the whole class as well as individually. For instance, the data obtained from the direct observation and the teacher discussions showed the fact that the majority of students invoke two categories of arguments in negotiating a higher grade to that obtained as a result of the teacher's evaluation: on the one hand, the effort and the time invested in preparing for the task and on the other hand the level of the grades obtained by other students considered to be of inferior performance level to the questioned ones.

Confronted to this situation which showed the fact that acceptance or lack of acceptance by students of a grade is highly dependent with the effort and time invested in preparing the task or the grades obtained by same level or inferior level students, the teachers had the chance to explain the grades and to provide clear explanations to some of the difficulties students had in understanding the evaluation system and the grading criteria.

The conditions of the success and efficiency of independent/controlled self-grading are, on the one hand, the honesty of the two subjects in the educational couple regarding the manner in which self-evaluation and didactic evaluation is performed, and on the other hand, the clear argumentation the teacher brings regarding the correctness or lack of correctness in the self-grading procedure of the student.

The second direction of action that was at the basis of the pedagogical intervention having as objective the optimization of the self-grading-evaluation relation in the didactic act was represented by the accomplishment of reciprocal grading tasks at the level of the experimental classes.

The key to this type of tasks consisted in the fact that, especially in the case of written test, the students were asked to correct and grade reciprocally their colleagues' papers and afterwards their evaluation was subjected to discussion both with the authors of the test and with the teachers.

The application of the reciprocal grading task in the case of oral answers didn't prove to be very productive due to some difficulties referring to the students' capacity of carefully following the spoken presentations of their colleagues and of remembering the positive and negative aspects of these types of answers.

The utility in using the reciprocal grading system is justified by the observation that evaluation and valorization through grades and school performances of another person gives the student the chance of liberating himself from the empire of the personal perspective upon the self and the chance to report directly and relatively objectively the personal school performance to the reference system represented temporarily by the estimated level of school performances of a colleague or group of colleagues. The dispersion of the tests in view of reciprocal grading was deliberately made between the students considered by teachers to be of an appreciatively same level but also among different level students. Thus the reciprocal grading was performed not only among same-level students but also among students who had very good school performance and students having a „low-level" label.

At the basis of this heterogeneous means of spreading the written tests in view of grading and reciprocal evaluation stood mainly two reasons. The first refers to our intention of offering this way the students the possibility to correct and grade papers that are qualitatively distinct, a fact that can lead both to the diversification of the interpretative register of the school performance and the restructuring of the personal set of self-evaluation criteria. The second reason that determined the choice of the dispersion strategy previously mentioned was to observe the potential differences occur in the grading as a result of this particular mean of spreading the tests.

The information received after speaking to the teachers of the two subjects considered within the pedagogic intervention to optimize the self-grading-evaluation relation in the didactic act showed the existence, at the level of the students, of a certain evaluative inertia regarding the controlled self-grading. Thus, for instance, there was a tendency of the student to grade their colleagues in accordance to the labels „very diligent student" or „weak student" to which students belonged.

Confronted with this situation the teacher gave adequate explanations to students both regarding the error sources that can affect the process of didactic evaluation and referring to the means of diminishing their action. The post testing stage, developed in the second half of the second semester in the school year, had as objective the monitoring and highlighting of the performance and formative difference occurred at the level of the experimental classes reported to the control group, differences occurred as a consequence of the pedagogic intervention to optimize the self-grading –evaluation relation in the didactic act.

As in the case of the pre-testing stage, the students in the experimental and control lots took written tests with identical tasks. We further present, in Table 3, the data referring to the relation between self-evaluation and didactic evaluation accomplished by the teachers, relation that was registered for students in the 9th grade.

Table 3. Data regarding the self-grading/evaluation at the level of the 9th grade - post-testing level

Lot	**Xna**	**Xno**	**Dx**	**T**	**p**
E1	9.05	8.89	0.16	0.968	P =.341
N = 32					p > .05
C1	8.92	8.17	0.75	3.136	P =.004
N = 28					p < .01
E2	8.96	8.60	0.36	1.955	P =.061
N = 30					p > .05
C2	8.80	7.93	0.87	3.944	P = .000
N = 29					p < .01

The data referring to the self-grading/evaluation relation presented in the table above reflects in a comparative manner the fact that in the case of the experimental lots there is a full congruency relation between the self-grading procedure of the students belonging to these lots and the didactic evaluation made by teacher, the significance associated to T test being over 0.05. In other words, the students in the experimental classes managed, after they were confronted to the actual school task, to forge an effective ongoing self-grading procedure, adequate to the specific school situation, a procedure that allowed them to anticipate with accuracy the actual grades given by the teachers after the didactic evaluation. Not the same can be said of the students in the control lots, in whose cases significant differences persist between the self-evaluation grades and the actual grades, the value of the T test showing a significance threshold $p < 0.05$.

The existence of a congruency relation between self-grading-evaluation and didactic evaluation can be explained only at the level of the experimental lots, through the positive effects that pedagogic intervention in the case of these students had upon the development of their capacity of self-appreciation and self-evaluation. By correlating this observation with the existence of significant difference between the average of the grades and the average of the grades obtained after the self-grading procedure was completed in the control lots, the conclusion is that these students manifest an obvious tendency to over-appreciate their school potential, appreciation which, as shown by the level of the actual grades, is not in accordance to the educational reality. In contrast to the situation presented before, the students in the experimental classes have a superior self-grading capacity to the one of the students in the control lot. Thus, even if the average of the grades obtained in the self-evaluation procedure are ranked at a statistically comparative level for both students in the experimental lot and those in the control lot, the average of the self-grading procedure in the experimental lots is, by comparison to that of the students in the control lots, statistically similar also to the actual grade. Likewise, the control lot students show systematic difference from the point of view of the ratio between the grades obtained from the self-grading procedure and the teacher evaluation grades.

Therefore, even if the average grades of the self-grading procedure doesn't differ consistently from those of the control lot students, the average of the grades resulted from the self-grading differ from the average grades obtained by students in the control lot, while experimental classes register a closer result between anticipated and obtained grades. Unlike the students in the control lots, the experimental lot students show a higher evaluation capacity. In other words, even though the average grades of the self-grading procedure are situated at a statistically comparative level for those in the experimental lots and those in control lots, the average grade of the self-grading procedure by students in the experimental lot is statistically similar to the average grade of the actual grades, while in the case of the control lots there are major differences.

The second objective intended in the post-testing stage was the study of the effects that the optimization of the self-grading/evaluation procedure brought in the evolution of the students' grades. We can mention at this stage the fact that one of the initial hypothesis in the investigation procedure was that the optimization of the self-grading evaluation procedure can lead, through its formative valences, to more effective learning and implicitly to the increase of students' school performance. The specific means of verifying the previously mentioned premise was made in the statistic comparison, in test T, of the significance of the difference between the average grades obtained in the

written test by the students in the experimental lots and those in the control lots, knowing the fact that both at the sampling level and the pre-testing level the two categories obtained statistically comparative results. In this sense, table 4 shows the results obtained by the students in the experimental lots and the students in the control lots in the case of a written examination with identical tasks in Logics.

Table 4. Comparative data regarding the grades the level of the 9thth grade - post-testing level

Lot	**Xno**	**Dx**	**T**	**P**
E1	8.89			
N = 32		0.72	2.466	p = .017
C1	8.17			p < .05
N = 28				
E2	8.60			
N = 30		0.67	2.765	p = .008
C2	7.93			p < .01
N = 29				

The data presented in the table above proves that, through the significance thresholds associated to the values of the T test ($p < 0.05$ respectively $p < 0.01$), the grades obtained by the experimental lot students are significantly higher than the grades of the control lot students. We consider that the main difference that were statistically registered between the experimental lot subjects' school performance and that of the control lot performance-difference that indicate superior school capacity of the experimental classes-represents an indicator that proves the positive influences that the optimization of the relation between the didactic evaluation and the self-grading procedure bring in the plan of the students' school evolution.

4. Conclusions

Summing up the previously mentioned, we can observe the fact that the results students got indicate a significant increase of the school performance from a statistic point of view, in the case of the students belonging to the experimental lot by comparison to students who belong in the control lot.

Considering the fact that, both in the sampling operation and the pre-testing stage, the experimental classes of students and the control classes students registers school results that were statistically comparative, the manifestation of the increase in the performance level with experimental lots in the post-testing stage can be interpreted as occurring in the background of the self-grading-evaluation relation in the didactic act, which confirms the effects of the harmonizing

of this relation. In a synthesis of the previously mentioned facts, we can claim that the optimization of the self-grading-evaluation relation and the specific procedures carried out in this respect represent elements that can lead, on the basis of better self-appreciation and a more effective mobilization of the subjects' school potential, to the improvement of the school performance and a better self-appreciation capacity.

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