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STUDENTS TRAINING IN DECISION AND PROBLEM SOLVING PROCESS

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Abstract: *Simulation of educational interventions aimed at capturing relationships influencing and communication established between teacher and students, between students-students, parents, identify difficulties that may arise in managerial activities (relationship with the group, crisis management, training and student motivation). Through role play we supported comprehensive understanding of the mechanisms involved and active participation organizational issues, emphasizing the correct or incorrect management approach in certain situations, providing feedforward possibilities for future management.*

Keywords: *role play, developing negotiation skills, strategies and styles, interpersonal relationships.*

Role play - stimulating networking mechanisms

Role play is an interactive teaching method, which is based on the simulation of actual activities, mainly aiming at the development of specific behaviors in this situation is about the decision. The premise from which we started, was that the game has multiple meanings formative role, stimulating educational interactions. This method has been integrated into the initial training for the teaching profession for the purposes of achieving the following *objectives*, among which:

- facilitating socio-professional integration of active learning thanks interpretation and subsequent employment roles required of new statuses, positions;
- training and human behavior modeling based on characterizing structure interaction simulation, a relationship or social status group, the distribution among the participants of statuses very well defined and interrelated;

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- familiarity with managerial approaches, thinking, feeling, and action-specific statuses;
- capacity for empathy and understanding opinions, feelings and aspirations educational partners;
- capacity to capture, understand and evaluate opinions and value orientations of people who relate;
- build capacity to solve problem situations;
- correctness managerial behavior formats, validation learned correctly and incorrectly learned invalidation;
- basic and advanced skills in group work and collective leadership;
- obtaining a connection quickly reverse the consequences of actions, to validate the proposed solutions, which further increases the instrumental value of this method.

In the design, organization, conduct and evaluation of the role we play the following steps:

- Identifying the educational situation that lends itself to simulation using role playing and meeting objectives, or behaviors, skills, abilities, etc., that students must acquire in the interpretation and roles (as problem 1 - *relations of competition* / state issue 2 - *cooperative relationship* / situation issue 3 - *relationship conflict*).
- Design situation and scenario modeling.
- Simulated situation is analyzed in terms of status, and types of interactions involved, whichever is the scenario only essentials, respectively statuses and most important roles that serve to define an interactional model.
- The elaborate script itself, that the new structure of statuses and roles that will be used in training and being adapted, is greatly simplified compared to the real situation.
- Choice of partners and their training requirements in relation to specific and role-play, and casting those familiar with the tasks done. For each participant are described statuses and roles, in a statement.
- Individual Learning by each participant role by studying sheet: this, participants are left 15-20 minutes to internalize the role and to develop their own way of interpretation, setting objectives and strategy / way to address the situation -problem.
- Role play by all participants.
- Debate how to interpret and replay sequences that have not shown the expected behavior. Participate in discussion and role-playing observers but must be given priority direct participants (performers) to communicate what they felt playing roles.

- Develop conclusions focusing on aspects that can be exploited in educational practice.

Typology as the training activities we used:

- *game arbitraj* (mediation and conflict solving problems that occur at the school, so that was involved in conflict management officials, teachers, students, parents);
- *game competition* (performing obtaining simulation, participants are distributed in small groups, with different statuses and roles, which may receive competition objectives, then, are forced to choose between possible variables of the game, to adopt strategies and different managerial styles and identify optimal solutions);
- *negotiation game* (developing negotiation skills, students are divided into small groups that are put in a position to achieve social transactions).

Proposed role play themes - psycho impact factors and internal dynamics models of group decision making education aimed at:

- *Conformity and nonconformity;*
- *Latent and hidden tensions;*
- *Cohesion and dissociation groups.*

Pedagogical potential role plays made in the formative experiment were that led to explore new strategies to address educational issues on a "micro" students being in the position of subjects (student role), but also facilitators of this process by assuming the role of educator-manager. Using tools of observation (observation protocols) and self-evaluation (self-evaluation sheets styles of problem solving situations) has produced a self-control effective decision-making skills but also reflecting on their activation mechanisms in terms of cognitive, affective and movement-action, students are put in a position to interrelate using different strategies and styles.

Statistical analysis of the data obtained throughout the formative experiment

According to the strategic guidelines for the development of students' decision-making competencies, the focus moves from centering on results, through the generation of new meanings and perspectives addressed to problem situations, raised from different levels of interpersonal relationships within the school. We appreciate the opportunity to achive a constructive analysis of the development and implementation of actional alternatives driven by experimental group subjects. At the same time, this process of reflection and self-assessment of the personal mechanisms of involvement and participation are particularly relevant for the formative experiment.

The design and implementation of problem-situations approach models found in the human relationships within the school, the students in the experimental group have used in the formative intervention a checklist of situational modeling, together with the self-evaluation sheet of strategies efficiency and styles of problem situations approach. These tools give us some data that lends theirself to a primary processing, so we can conclude that aggregated scores for each student are normally and symmetrically distributed.

Statistical analysis of the data allows us to see that, after reflection on modeling quality and self-assessment on the effectiveness of the strategies used, the average scores obtained is 50.15 and the median is 50. According to these values it can be observed that the average is distributedin the center of the scores obtained from the 190 subjects of the experimental group and is close to the score with the highest frequency (module with value 48), this is relevant for the symmetry of the distribution curve. At the same time it appears that scores are less dispersed from the average, varying on average, compared to the average score with 5.23.

Between observed and theoretical average, was achieved a positive significant difference (df = 10.15), using the calculation of t for a single cohort, so we can support that the level of awareness regarding the effectiveness of the proactive involvement mechanisms and active participation is on average higher with 15.92 than the expected average (Table1).

Tabel.1. The aggregated scores of the approached models for the three type of problem situations- observed and theoretical average comparative

	Theoretical	*Observed*
Minimal score	14	37
Maximal score	68	63
Average	41,15	50,15
The significance of average difference	t= 16,470 significant for a p<.01	

It notes that, comparative reporting of the student scores, as a result of personal reflection on the process of situational modeling and the self-assessment on effectiveness implementing these alternatives addressed to problem-situations, they do not differ significantly, according to specific educational situations.

In the three problematic cases, subject of modeling and intervention simulated in role-play, was found that the standard deviation is small, the obtained scores were close to each other (Table 2).

Tabel 2. The aggregated scores of the approached models for the three type of problem situations – central tendency values

	Reflection on modeling/simulation for problem-situation 1 (competitive relationship)	*Reflection on modeling/simulation for problem-situation 2 (colaboration relationship)*	*Reflection on modeling/simulation for problem-situation 3 (conflictual relationship)*
Average	*16,18*	*16,70*	*16,75*
Median	16	17	17
Modul	16	17	17
Standard deviation	1,78	1,94	2,89

It is noted that the lowest values are recorded for central tendency, as a result of the personal reflection and self-evaluation process in developing and implementing models which address the problem-situation 1 (competition relationship). In case of self-assessment and reflection on modeling / simulation strategies and styles of approach in problem-situation 3 (conflict relationship) were obtained the highest values of central tendencies. Next we applied the t test for paired cohorts, analysing if the differences between the averages are statistically significant (Table 3).

Tabel 3. Difference calculation between the scores for the three problem-situations

	Avarege difference	*Standard deviation*	*T*	*p*
Modeling/ simulation problem-situation 1 Scores Modeling/ simulation problem-situation 2 Scores	-,52285	2,38379	2,024	025
Modeling/ simulation problem-situation 1 Scores Modeling/ simulation problem-	-,57429	2,81346	1,883	036

situation 3 Scores				
Modeling/ simulation problem-situation 2Scores Modeling/ simulation problem-situation 3 Scores	-,05142	2,53593	187	752

These differences show that approaching mechanisms differs significantly, in average (for p <.05), when students in the experimental group are developing and implementing an approaching model for the problem-situation 2 (cooperative relationships) raporting to the problem-situation 1 (relationship of competition). This can be explained by the fact that the task to develop / implement an approach model for the problem-situation 1 (relationship of competition) was perceived as more difficult, leading to obtain lower scores, on average, than the scores obtained for the problem-situation 2 (cooperative relationships).

Regarding the averages obtained after the self-assessment and reflection process in development/implementation models for problem-situation 1 (relationship of competition) and that obtained for the problem-situation 3 (relationship of conflict), there is a significant difference (for p <.05), the latter being perceived by students to be achieved easily, clearer strategy, the obtained results are more fairly valued. The differences are insignificant between the average scores obtained for modeling / simulation alternatives for the situation-problem 2 and average scores reflection on modeling / simulation for the situation-problem 3. Therefore, the students have realized the need to restructure strategies and styles involved in developing interrelations in the school organization and appreciated situational modeling as properly designed especially in cases 2 and 3, thus showing greater confidence in the potential of each decision.

Further, we found out based on test $\square$ 2, that the gender variable determines differences in the distribution of scores obtained by students in the experimental group. Note that these differences are insignificant for personal reflection on situational modeling and self-assessment of strategies and styles effectiveness used for problem-situation 1 (relationship of competition), but are highly significant for scores on other problem-situations. Between the scores obtained by people male gender and females was recorded a significant difference, the females having a higher score from reflection and self-assessment for preparation and implementation models address the situation-problem 2 and 3. In this case female individuals show an increased confidence in their decisional abilities and aptitudes, saying that the situations are not difficult and can achieve performance (Table 4).

Tabel 4.Differency significance between frecvencies for the variable-gender

Variable		□2value	*Significance level*
Gender	Modeling/ simulation for situation-problem 1	9,633	0,267
	Modeling/ simulation for situation-problem 2	18,998	0,005
	Modeling/ simulation for situation-problem 3	23,182	0,005

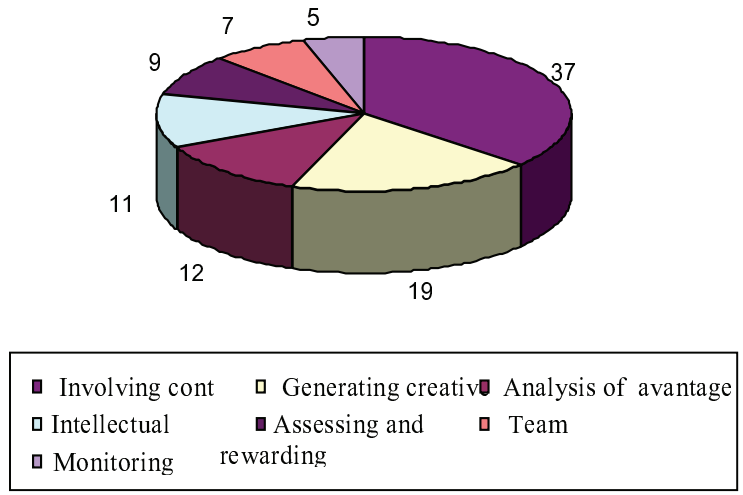
The □ 2 test shows that there are not significant differences between the observed and theoretical frecvencies regarding the distribution of scores, depending on the area of specialization of the students involved in the formative experiment at p> .05 (Table 5).

Tabel 5. Differency significance between frecvencies for the variable – proffesional development level

Variable		□2 value	*Significance level*
Specialization domain	Modeling/ simulation for situation-problem 1	21,638	0,565
	Modeling/ simulation for situation-problem 2	23,983	0,289
	Modeling/ simulation for situation-problem 3	29,952	0,408

For the variable strategy to approach situations / problems, it appears that subjects scores did not differ significantly from one type of situation-problem to another. Calculating the average percentage for the three types of problem-situations, shows that strategies addressed to situations / problems are preferred by students (Figure 2) involving contextual and situational analysis (37%), generating creative solutions (19 %), analysis of advantages / disadvantages in actionable alternatives (12%), intellectual stimulation (11%), assessing and rewarding performances (9%),team motivation (7%), monitoring errors (5%).

Figure 2. Approaching strategies prefered by subjects in modeling/simulation of the intervention for three problem-situation



In what follows we analyzed subjects conscience outlet on the design and implementation of situation addapted strategies and styles, within the meaning of the awareness that they were correctly or incorrectly selected and adapted. Students in case of reflection on modeling / simulation approach situation- problem1 (relationship of competition) found in large numbers, have chosen and adapted their strategy and styl which works correctly and doesn't needs to be restructured (43.41%).

For the situation-problem 2 (cooperative relationships), decreases the number of students who believe that they have correctly chosen and adapted their strategy (40.83%), and for situation-problem 3 (relationship of conflict), only 38.99% of subjects said that those initial strategys and styles are correct, while 30.14% have restructured along their approach (Table 6).

Tabel 6. Variable – action strategies and styles – percentage values for appreciation of the correctness/ incorrectness in selection and adaptation to a problem-situation

Variable		*Correct Selection/ adaptation*	*Incorrect Selection/ adaptatio n*	*Restructuring/ alternative action/ professional*

				development
Managerial strategies	Modeling/ simulation situation 1	43,41%	29,34%	27,25%
	Modeling/ simulation situation 2	40,83%	26,88%	32,29%
	Modeling/ simulation situation 3	38,99%	30,87%	30,14%

It is noted that in the development and implementation of strategies addressed to problem-situation 1 (relationship of competition) safety on the choice of actionable strategies is higher than for problem-situation 2 and 3. We can appreciate that this is due to the formative effect of observation protocols, in which students were oriented to capture and analyze strategies and styles, varied and complex, more or less used in educational practice. In figures we presented a chart with the scores of the belief that they chose working styles and strategies correctly / incorrectly, depending on the professional development level.

Conclusions

Data statistical analysis reveals that in terms of the extent to which the variable self assessment predicts the evolution of the variable management performance assessment, just for modeling / simulation strategies and styles case-management problem-situation 1 (relationship of competition) with conviction is higher as it is selected / adjusted correct management strategy, the more it is considered a higher level of performance.

Qualitative analysis of these results highlight the formative valencies of the instruments used in the experiment, the teachers in the experimental group appreciated their usefulness in developing alternative act, with awareness of the role and importance of managerial mechanisms of involvement and participation in school management.

Simulation of educational interventions aimed at capturing relationships influencing and communication established between teacher and students, between students-students, parents, identify difficulties that may arise in managerial activities (relationship with the group, crisis management, training and student motivation). Through role play we supported comprehensive understanding of the mechanisms involved and active participation organizational issues, emphasizing the correct or incorrect management approach in certain situations, providing feedforward possibilities for future management.

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