Bulletin of the *Transilvania* University of Braşov
Series VII: Social Sciences • Law • Vol. 8 (57) No. 2 - 2015

A COMPARATIVE STUDY ON THE OPINIONS OF STUDENTS CONCERNING THE TEACHING METHODS WITHIN THE ELT AND MT METHODOLOGY CLASSES

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Abstract: *The present descriptive research has as a main aim the identification of students' opinions on the necessary conditions in order for them to be interested in learning and obtaining good results in either Mathematics or English Language Teaching Methodology, with focus on the teaching-learning methods and techniques used while teaching these two subjects. The descriptive research was conducted on 120 students, aged 20-21 years, in their 2nd year of studies at 'Transilvania' University of Brasov, enrolled in the Teaching Methodology classes. The teaching-learning methods varied from traditional, modern and specific to either of the two subjects. The conclusions drawn, after analysing the questionnaires and the school results showed that both their interest for the subjects and their learning performances rose in direct proportion to the variety of teaching-learning methods used for each learning unit.*

Key words: *Mathematics, English, teaching methodology, teaching-learning methods, interest, learning performances, descriptive research.*

1. Introduction

According to many specialists in the field, the contemporary society needs change not only in general terms, but, more specifically, in the vast domain of the teaching science, as well. Thus, as Voinea says, "The teacher training must redefine itself according to the new standards of society and students' needs. The teacher should be able to create a learning context in which students can develop active and constructive processes of acquiring knowledge and skills that stimulate students to set their goals and take responsibility for their own learning activities and processes" [5]. We have come to live in an era in which, from the point of view of the educational system, things have evolved and have changed a lot, the development in approaches enabling the idea of e-learning, distance learning, massive open online learning, blended learning, tele-collaboration, the access to education being thus generalized and diversified. In this way, the entire teaching-learning-assessment process had to be re-evaluated, starting with the teaching methods and techniques used by the tutors, teachers, professors and any

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education providers, continuing with the individual approaches to learning that each candidate to new content acquisition must improve in order to be productive and efficient and ending with the assessment criteria and methods used in the evaluation process of the subjects that need to be tested in order to be able to measure the quality of the didactic act in an appropriate manner. Thus, keywords such as "creative teaching", and "creative teacher", all spinning around the concept of "creativity" in teaching have come to be fostered by all sorts of centres for excellence in learning and teaching, belonging to famous universities from abroad [8], which, in this way, by adopting a policy of permanent openness regarding their educational offer, they also had to re-invent themselves as both providers, facilitators and assessors of the very same educational services marketed.

The changes brought about by previous curricular reforms in recent years have led to the redefinition of the status of many disciplines as well as of the approach to the teaching styles implemented. In this way, languages have gained in status and importance and in what their teaching is concerned, the communicative approach has become the main interest in all manuals, textbooks, students' guides and so on. Therefore, the four language skills (reading, writing, listening and speaking) represent nowadays the main interest of any teacher / student / assessor when it comes to teaching / learning / evaluating the quality of the teaching process in a foreign subject. Subsequently, methodologies have also suffered a lot of updating, the obsolete grammar-translation approach, also known as the period of "Garden of Eden", or the structuralist approach, named by researchers "Vale of Tears", being thus forgotten and replaced with the "Promised Land" of the communicative era [6].

When projecting a lesson, being it a lecture or a seminar, making the right choice regarding the strategies that are to be used can prove to be of utmost importance in order for the targeted aims to be reached appropriately and efficiently. Among these strategies, a very important role is played by the methods and techniques used in the very process of teaching.

For this matter, the main purpose of the present paper is to describe the impact of the teaching-learning methods used in Mathematics / English Language Teaching Methodology classes against the interest manifested by the students in the two subjects and their learning performances and results.

It is worth mentioning the fact that, the authors of the resent paper undertook similar research, one year ago, but focused back then on assessment criteria and their perception by the individual student in relation to his / her performance in methodology classes as well, and measured against results per subjects, in order for the same internal relevance to be obtained. Thus, the interest manifested by the authors has been a constant one and the aim, in the long run, is to generate an integrated view over the entire process, from within, applying a comparative frame to the entire endeavour, in order to check and score objectivity whenever possible.

A reason for matching these two domains consists of the fact that both Foreign Languages Teaching and Mathematics Teaching can meet on a solid ground of comparison, ever since the idea of reducing the subjectivity of such productive skills such as writing and speaking has been taken into account with teaching languages, on the one hand, and the poetry of Mathematics has been acknowledged, on the other hand [7].

Another reason why Mathematics and the English Language Teaching, as

subjects, have been brought together for the sake of analysis and comparison is that, just like Mathematics is a main subject and the instrument of many profiles in the scientific field, as well as a key subject in continuous learning, the English language, as considered by Harmer, is gaining more and more field in the humanistic area as a communication medium [2].

On the professional side, one more reason might also be mentioned: the fact that the authors of this study have started a series of joint analyses in these domains and are eager to show that domains so different at first sight have a lot of things in common, especially when the basis of comparison is provided by keywords such as strategy, methodology, methods, techniques and approaches.

In this way, as mentioned in one of our previous papers, "studying these two apparently unrelated fields and correlating them was a great challenge, but also a great interdisciplinary exercise, especially because the attempt was made less at a content level (Mathematics or English properly) but more at the level of teaching these two subjects, i.e. at the didactic level" [4]. The Didactics of Mathematics, or "Mathematics Education" [3], stands for a combination of areas and subjects such as Mathematics learning theories, the Psychology of Education and Pedagogy, being the canvas on which "the organisation, communication, and evaluation of mathematical knowledge" [1] unfold. Therefore, "it covers the set of knowledge, processes and conditions that allow the student-teacher interaction about mathematics topics to take place in the Mathematics class, thus, making the teaching and learning of this subject feasible" [3].

2. Purpose and methodology

One of the aims of the present descriptive research consisted of identifying the students' opinions on the role of the teaching-learning methods used within the MT Methodology and the ELT Methodology courses in order to enhance students' interest and to improve their learning performances in these two subjects.

Another aim focused on identifying, according to the students' opinion, which of the methods and techniques used in the teaching process were more efficient in their understanding and learning faster the content of the two subjects.

The metacognitive level of the present endeavour was also met, as the methods under discussion and analysis, used here and now with aim of assessing performance and interest in our students, are the very same methods and techniques that they will use, in their turn, when they are framed by the exact same context, as manipulators of all these similar items, in their future careers as teachers / professors.

The main objectives of our descriptive research, were: 1. the identification of the students' opinion regarding the importance of the teaching-learning methods used in Mathematics / English Language Teaching Methodology with the intention of raising their interest in the two subjects; 2. the identification, according to the students' opinion, of the degree of efficiency in using different teaching-learning methods by the students taking Mathematics / English Language Teaching Methodology classes, the aim being that of improving students' results in these two courses; 3. the identification of the students' opinion on the degree of efficiency of each and every method used in the teaching-learning process of Mathematics / English Language Teaching Methodology.

The research sample comprised 120 students enrolled into two different full-time study programmes for initial training,

as follows: 60 students from the BA full–time the Pedagogy of Preschool and Primary School Education profile, in their 2nd year of studies, further referred to as group 1 (G1); and 60 students from the BA full–time Philology profile, still in their 2nd year of studies, enrolled for participating in the Psycho-Pedagogical module, level 1, further referred to as group 2 (G2), used only for comparison.

The research has been undertaken over a period of one semester, i.e. the second semester of the 2014-2015 academic year, meaning over the time span of the two fully developed courses: MT Methodology, on the one hand and ELT Methodology, on the other hand, running in parallel all throughout the semester.

The following methods were used in order for the aims of the paper to be achieved: a questionnaire based survey, and the analysis of a series of relevant school grades. The instruments of these methods were, as follows:

The first instrument was a questionnaire with 8 multiple-choice closed questions (Q1-Q8) based on students' opinion, regarding the efficiency of the teaching-learning methods used in Mathematics / English Language Teaching Methodology with the intention of improving their interest and their results in the two subjects, as well as the efficiency of each and every different method used on the occasion of each and every unit, in turn. The items were organised around three themes: 1. students' perception regarding the connection which might exist between students' interest in the study of Mathematics / English Language Teaching Methodology and the methods and techniques used for teaching-learning these two subjects (Q2, Q4, and Q6); 2. students' perception regarding the connection which might appear between the results obtained in the Mathematics / English Language Teaching Methodology courses and the teaching-learning methods used by the course coordinator / teacher of these two subjects (Q5 and Q7); 3. students' perception regarding the efficiency of each teaching-learning method used by the course coordinator / teacher in understanding and learning faster the notions related to Mathematics / English Language Teaching Methodology) (Q1, Q3 and Q8). The questionnaire was distributed to the participants at the end of the semester in order to be filled in.

The second instrument was based on the students' results in different evaluations made either during the semester or at the end of it, in the Mathematics / English Language Teaching Methodology courses.

One last mention needs to be made regarding the methods used while teaching, consequently the methods which were assessed by the students, qualitatively speaking, as being more or less efficient in their process of learning the specific content of the specialised class attended. First, there were the traditional ones: lock-step, conversation, drilling and using the manual and other auxiliary materials; second, there were the modern methods: problematizing, discovery learning, group work, algorithmization; third, there came the active-participative ones: project based learning, and the didactic game; fourth, the list counts the active and interactive group methods: jigsaw, cube, brainstorming, cluster analysis, the Venn diagram, the quadrants, the gallery tour, reciprocal teaching-learning, Round Associated Ideas; and last, but not least, there were some methods specific only to Mathematics: the analytical-synthetic method, the analytical method, the synthetic method, and some special arithmetic methods.

Regarding these methods and the entire perspective of cross-working with them, represented, from the very beginning an audacious attempt, as sometimes, i.e.

especially when G2 had to cope with methods specific to teaching in G1, the study seemed jeopardised, the approach considered being too much of a challenge for many participants in the whole endeavour.

3. Study focus

The primary analysis of the results of the questionnaire related to the items regarding the connection between the interest of the students in the study of Mathematics / English Language Teaching Methodology and the teaching-learning methods used in these two subjects needs to be analysed.

Thus, when the students were asked, as a result of administrating the Q4 item, if the teaching-learning methods used in the Mathematics / English Language Teaching Methodology had contributed to the raise in their interest for the study of these courses, 83.4% from the G1 students and 85.06% from the G2 students answered: to a great extent and to a very great extent.

In what the Q2 item is concerned, regarding the degree up to which they like Mathematics / English Language Teaching Methodology as courses, 98.34% of the students belonging to G1 and 91.7% of the students belonging to G2 answered: much and very much. It is thus worth mentioning the fact that the answers of both G1 students and G2 students are sensitively equal.

Asked to pass their opinions on the teaching-learning method which was the least challenging for them in the study of Mathematics / English Language Teaching Methodology (item Q6), from G1, 38.18% of the students placed the analytical-synthetic method on first position, 28.22% had a negative opinion about using the manual, 14.94% valued less the Venn diagram, 9.96% had a negative opinion about jigsaw, and 8.7% placed Round Associated Ideas on first position; while from among the students in G2, 34.86% ranked the quadrants on top of the options, 33.2% had a negative opinion about the Venn diagram, 28.22% valued less to work in groups and 3.72% placed Round Associated Ideas on first position.

As a mini-conclusion, it can be noticed that the students in the MT Methodology course considered they were least stimulated by a teaching method-learning which is specific to their field, i.e. the analytical-synthetic method, which represents a less expected result because this is a basic method used in problem solving situations. In contrast, the opinion of the ELT Methodology course students is more predictable, as they ranked the quadrants method on first position as the least attractive, which is expectable, considering that this one is, again, a method specific to problem solving. There can be noticed some common opinions, as well, such as: the students of both groups considered that the Venn diagram and the Round Associated Ideas methods didn't raise their interest too much.

The primary analysis of the results obtained from the items shows, in the students' opinion, the connection which might exist between the results the students had in Mathematics / English Language Teaching Methodology and the teaching-learning methods used in their courses or seminars.

Regarding the Q5 item, which consisted of the following question: "To what extent do you consider that the teaching-learning methods used in Mathematics / English Language Teaching Methodology have contributed to the improvement of your learning performances in these subjects?", 81.74% from the students belonging to G1 and 78.42% of the ones belonging to G2 answered "to a great extent" and "to a very great extent". In this way, another striking similarity between the two groups could be identified.

The same connection between students' results and the teaching-learning methods used are obvious when analysing the Q7 item, which asked them to state what teaching-learning method led the least to the improvement of the results they had in the Mathematics / English Language Teaching Methodology courses. Thus, the students in G1 didn't prefer the following teaching-learning methods, in this exact order: 28.22% - the analytical-synthetic method, 21.58% - using the manual, 19.92 - gallery tour, 16.6% - algorithmization, 13.68% - jigsaw, while for the students in G2, the ranking, accompanied by the percentages, looked like this: 29.82% - Round Associated Ideas, 28.22% - quadrants, 21.58% - gallery tour, 16.6% - the Venn diagram, and 3,78% - the project based method.

Here again, for the second time in this research, it can be noticed that the students enrolled in the MT Methodology course considered the analytical-synthetic method as the least helpful in obtaining good results at this subject., but this time there can be established a connection between their opinion and their weak results / low marks actually obtained by these students when asked to use this method in solving 10 arithmetic problems during the semester. The explanation can be related to the fact that the analytical-synthetic method is used when teaching the most difficult specialised scientific content part of the course.

The opinion of the students attending the ELT Methodology course was, once again, that the Round Associated Ideas and the quadrants methods were the ones that helped them the least to obtain better results in this subject. As a common opinion to the two groups for this item, the method that was the least helpful in making students obtain good results in the methodology classes was the gallery tour.

The analysis of the Q3 item meant to emphasise the students' point of view concerning the teaching-learning methods which were considered the least efficient, meaning the ones that contributed to their understanding more difficultly new content in Didactics. Thus, in equal percentages of 33.3 students of the G1 indicated, on an a par, that using the manual, applying the cube method, as well as the group work approach were not very helpful to them, while 41.5% from the students belonging to G2 underlined the lack of relevance in point of their teaching-learning methods when the group work method was used and 41.5% when The Venn Diagram was applied, the rest of them considering the project based approach less efficient in understanding teaching related concepts.

The analysis of the Q8 item meant to emphasise the students' point of view concerning the teaching-learning method which was considered the most useful, the most efficient and the one that helped them understand easier and learn faster new knowledge in Didactics

Here again, the opinions differ a lot: 38.18% of the G1 students pointed out that the special arithmetic method was very helpful to them, followed by Brainstorming and problematization with an equal percentage of 18.26% each, and by jigsaw with 16.61, on last position being conversation with 8.69%, while the students belonging to G2 ranked on first position, as the most efficient methods conversation and Brainstorming, both with 29.88%, on the second position being the cube method with 19.92%, while on the third and fourth positions there were placed the didactic game with14.94% and the jigsaw, with 5.39%.

However, the percentages obtained as a result of the analysis of the Q8 item prove that, at least on one occasion, students' opinions can vary drastically depending on the group they belong to. Consequently, the same teaching-learning method, i.e. the

cube, can be placed by the students from G2 on a leading place and by the students from G1 on the last position.

In what the analysis of the Q1 item is concerned, a considerable symmetry can be identified: 100% of the students from G1 and 93.36 % of those from G2 are satisfied with the teaching-learning methods used in Mathematics / English Language Teaching Methodology.

In order to carry the interpretation of the data to an ultimate result and also to render a correct research perspective to the approach we had for this paper, we also took into account the results of the students all throughout the semester (from their portfolio, each paper was assessed in the immediate next week that followed the moment of teaching and using a new method) and in the final evaluations of the two subjects: the Mathematics / English Language Teaching Methodology classes, which were meant to evaluate the knowledge gained by the students in these disciplines, at the end of the semester.

Thus, the results for the MT Methodology students in the written exam were: 18 grades of 10 (30 %), 15 grades of 9 (25%), 10 grades of 8 (16.67%), 8 grades of 7 (16.67%), 6 grade of 6 (10%), and 3 grades of 5 (5%). The results for the ELT Methodology students were: 13 grades of 10 (30 %), 14 grades of 9 (37.5%), 5 grades of 8 (17.5%), 3 grades of 7 (7.5%), 4 grades of 6 (5%), and 1 grade of 5 (2.5%). The results obtained by the students in the MT Methodology course regarding the assessment based on portfolio evaluation consisted of 50 grades of 10 (83.33%), 6 grades of 9 (10%), 3 grades of 8 (5%), 1 grade of 5 (1.67%). The results for the ELT Methodology students based on the same portfolio evaluation system consisted of 24 grades of 10 (67.5%), /7grades between 9 and 10 (12.5%), 5 grades between 8 and 9 (10%), 2 grades between 7 and 8 (5%), 1 grade between 6 and 7 (2.5%) and 1 grade between 5 and 6 (2.5%).

4. Conclusions

As a first conclusion, the interest and performance of the students enrolled in the Mathematics / English Language Teaching Methodology courses are influenced to a great extent by the teaching-learning methods used in these two subjects and, more importantly, by the emotional attachment that the students may develop in relation to a certain teaching-learning method they may feel more comfortable with.

As a second conclusion, with both Mathematics and English Language Teaching Methodology, the interest of the students is not stimulated by the usage of the same teaching-learning method: Round Associated Ideas. For example, in order to improve students' performance and results in Mathematics Teaching Methodology, the gallery tour can't be used, as a teaching-learning method.

As another conclusion of the present paper, which is related to the efficiency of the teaching-learning methods used in the present research, for both Mathematics and English Language Teaching Methodology, brainstorming, conversation and jigsaw are the most efficient from the students' point of view. The teaching-learning methods which were placed on first positions from the point of view of their efficiency in making students understand faster the notions taught were: the special arithmetic methods for Mathematics and conversation for English Language, as expected, considering that they are the methods the most used in teaching the two subjects.

Conversely, there is still one extremely unexpected result and, to a certain extent, strange: the students enrolled for the MT Methodology course appreciated the jigsaw method more from the efficiency point of

view, as this one was a method which, even if it didn't raise their interest too much and it also didn't help them improve their performance in this subject by getting them a higher mark, it clarified them, at a certain moment, in the best possible way, the specialised content taught to them.

An important and interesting observation is worth making: all throughout the semester during which this entire study developed, the students showed special interest in working with and implementing as many and varied group interactive methods as possible as compared to the interest manifested by them when these methods were not used.

The limits of the present descriptive research are set with the impersonal questionnaire used for the survey, as well as with the low number of students (120).

As a general conclusion, the present descriptive research proved extremely useful first to the authors of the paper, enabling them to reconsider the methods they use in the very teaching process of the subjects they framed for the purpose of this study and which happen to be meta-courses specialised in teaching methodologies, and second to the students who participated in the research, as future teachers who will know what types of methods can work better for their specialisation and why. Nonetheless, future generations of students will benefit as well from the results of this paper, as their interest will be considered and catered for even better by the tutors of these classes.

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