

Infrastructure and Teaching: University Students' Impressions on Completion of Their Internship in Greek Public Schools

Konstantinos Gkaravelas^{1,*}, Athina Sevi² & Varvara Lagou³

¹Department of Philosophy, University of Ioannina, Greece

²University of Patras, Greece

³University of Piraeus, Greece

*Corresponding author: Department of Philosophy, University of Ioannina, Greece. E-mail: kgkaravelas@uoi.gr

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Abstract

This paper focuses on exploring the perceptions expressed by students at the University of Ioannina, Greece, after the completion of their graduate education practice in State Secondary schools in the city of Ioannina. More specifically, it provides insight into the impact the school logistics infrastructure had on the teaching process and its valorization by the educators. The results of the research demonstrate that, except for the Model Experimental Schools, the State Secondary Schools are lacking not only in necessary technological equipment but also in special teaching classrooms, which, in turn, entails the teachers' inability to valorize technological means and upgrade the teaching process applying student-centered, experiential didactic techniques.

Keywords: secondary education, Greek public education, infrastructure, teaching, methodology

1. Introduction

The present paper aligns with the view that school, taking into consideration the crucial role information plays in contemporary society, ought to promote critical thinking and cultivate students' literacy in various fields, mainly, though, language and technology. Students, in this case, have to be seen as entities with special, personal experiences, abilities and knowledge. Thus, having the students' unique identity in mind, teachers are expected to apply techniques and practices that focus on respecting diversity and promoting student-centered learning, to ensure equal educational opportunities for all students, no matter their sociocultural capital, their learning readiness, their interests, or their preferences (Dimitriadou&Efstathiou, 2012).

Taking into consideration the fact that the contemporary economic, social and technological challenges in the global environment, inevitably, affect, among other aspects of life, education, especially as regards the educational contents, practices, or logistics infrastructure that can be valorized in schools, what this paper investigates is the extent to which school logistics infrastructure is utilized by Secondary Schools teachers, the means and the selected teaching techniques applied as well as its influence on the educational process.

To be more specific, the research was designed, carried out and demonstrated in this paper based on two axes: the existence and use of logistics infrastructure in schools and its impact on the educational process. Since, on completion of our literature review, no similar work has been recorded in Greece, we consider that this paper contributes to the scientific research by presenting new data drawn in a field so far unexplored.

The research was structured with a view to investigating the experiences of the university students in the Faculty of Philosophy Pedagogy and Psychology in the University of Ioannina, among which we drew our sample, after their optional graduate educational practice in Secondary schools in the municipality of Ioannina, as part of the course: « Teaching Language: the subject of Language in Secondary Education. Theory and Practice of Teaching».

Specifically, the objective of this research was to record the university students' perceptions of the technological infrastructure of the school units as well as the means and the selected teaching techniques applied by the Secondary Schools teachers.

To be more specific, what was examined in the present research was the extent to which:

1. school units meet the technological requirements for the performance of contemporary teaching.
2. teachers apply contemporary teaching techniques taking advantage of the available ICT school equipment.
3. the adoption of new teaching techniques by the teachers is related to the level of the school infrastructure and, finally,
4. there is correlation of the deployment of the above techniques with the status of the school.

The researchers acknowledge that in order to satisfy the evolutionary social perspective, the

contextual alternations of social reality give prominence to Didactics as a scientific field that aims at continuously researching the social phenomenon of teaching, which is both elaborate and multisensory (Fikaris, 2010). Thus, teachers opt for techniques which are not normative and are designed to engage the whole of the classroom in the learning process, highlighting “personalized learning” (Barlett και Burton 2016, Department for Education and Skills, 2004) or ‘Didactics of the active subject’ Kossyvaki (2003), so as to offer all students space to participate equally and enjoy the benefits of teamwork, without being excluded from the learning process.

Finally, what is taken for granted is that ‘educational contents’ need to be constantly updated as new knowledge increases exponentially, is more directly applied and the shrinking of its lifespan is easily apprehensible (Theofyllides, 2009).

1.1 Theoretical Frame

Concurring with Northern Ireland Curriculum (2007, 4), we believe that « Our society today needs young people who are flexible, creative, and proactive – young people, who can solve problems, make decisions, think critically, communicate ideas effectively and work efficiently within teams and groups. The ‘knowing of knowledge’ is no longer enough to succeed in the increasingly complex, fluid, and rapidly evolving world in which we live. To optimize life-long learning and potential success it is now widely accepted that young people need to have opportunities to develop personal capabilities and effective thinking skills as part of their well-rounded education». To realize these goals, students have to be the focus of attention and experience innovative educational practices in a natural, friendly classroom environment so as to develop social skills that will help them perform as active global citizens. Thus, all students are to feel self-confident and free to take initiative, design, think critically and participate in real-life communicative activities.

Additionally, we cannot overlook the fact that the overwhelming majority of students today are familiar with state-of-the-art technological devices, as they own a smartphone, a tablet, or a personal computer and they have daily internet access. As a consequence, carrying out the above-mentioned educational practices is not difficult, as long as the school is equipped with logistics infrastructure (eg. PCs, internet access and special classrooms). For instance, an array of activities, such as drama (role-playing, rehearsals) (Heyd, 1991/Gkaravelas, 2011), collaborative tasks (project assignments) (Wellham, 2013/ Larmer & Mergendoller, 2010) as well as lesson plans based on utilizing the available technological equipment (WebQuests) (Dodge, 1995/ Nárosy&Riedler, 2003/ Chuo, 2004/Gkaravelas&Sevi, 2018), could be introduced to motivate students and engage them in the learning process. Valorizing this type of techniques, students are trained to play an active role in society as productive individuals, able to make use of their knowledge, skills and capabilities to cope efficiently with common everyday hurdles.

Being able to interact successfully and demonstrate social skills is a prerequisite, as proven by considerable international research, for adults who have completed their mandatory education and are expected to be equal members in modern societies. The PISA program, one of the most reliable and broad research education projects, based on a defined and globally

accepted framework, collects information on the 15-year-old students' performance on school subjects and investigates both the effectiveness of the educational systems of the countries that participate in the evaluation and the relation of the findings to the students' social development and activity (OECD, 2018/ IEI).

Moreover, according to the instructions on 'Personalised Learning' provided to the teachers by the Department for Education and Skills (2004) in the UK: "Personalised learning demands teaching and learning strategies that develop the competence and confidence of every learner by actively engaging and stretching them. For teachers, it means a focus on their repertoire of teaching skills, their subject of specialization and their management of the learning experience. Personalized learning requires a range of whole class, group and individual teaching, learning and ICT strategies to transmit knowledge, to instill key learning skills and to accommodate different paces of learning. For pupils, this means a focus on their learning skills and their capability to take forward their own learning". This way, even the 'quiet' students are urged to get engaged in the process, cooperate and make decisions, to benefit as much as possible. In Greece, the assets of personalized learning were investigated by Kokkidou (2015) & Dimitriadou (2012) and are presented by Dimitriadou (2019). According to these recent research findings, the application of school schemes of prevention, that are featured by participatory teaching techniques and focus on students' emotional and social needs, not only affect students' performance positively but also enhance cooperation, alleviate behavioral problems and contribute to the development of social skills. The only prerequisite for the success of personalized learning strategies is the acceptance and application of specific principles.

These principles, referring to teaching and learning, are clearly demonstrated by the Department for Education and Training in Australia (2005), which, among others, highlights the following:

- All students can learn.
- Every child has a right to a high-quality education.
- Effective teachers provide engaging and rigorous learning experiences for all students.
- A safe and stimulating environment is integral to enabling students to explore and build on their talents and achieve relevant learning outcomes.
- For students with disabilities and additional learning needs, reasonable adjustments should be made where required.

The above principles acknowledge that every student has their own aspirations, learning needs, strengths and interests and it is the responsibility of schools to respond to every student and their unique characteristics, with high expectations for achievement.

As regards the second axe of our research, namely the infrastructure, we consider it essential both for valorizing experiential techniques and for realizing student-centered practices. Concerning infrastructure, we refer both to the available space (teaching classrooms, playground, sports facilities, libraries, scientific labs, computer rooms, foreign languages

room, staff room, canteen, hygiene rooms) and the equipment (furniture, lab equipment, supervisory instruments). Following Zogopoulos (2013), we consider the arrangement of the place and the setting of special quality requirements to be of utmost importance, as it contributes to the positive ecology of the classroom and to the performance of educational activities that lead to active teaching and learning. Commenting on the equipment, the same author (Zogopoulos, 2013) states that due to the technological explosion of our times, the infrastructure and the equipment (furniture, lab equipment, supervisory instruments) should be adequate and live up to contemporary teaching and learning processes.

What we could add is that in case there is a shortage of infrastructure and equipment, the learning experience falls short of the real-life situations the learners have to face. On the other hand, as Stamatis (2006) contributes to the discussion, in Greece, most of the times, little attention is paid to the school buildings and their equipment, even though they, undoubtedly, help to transform theory into practice, they turn the abstract into concrete. As a result, teachers and students are simultaneously affected by this insufficiency, which determines, to a great extent, the effectiveness of the educational effort (Matsagouras, 2001).

1.2 The Model Experimental Schools

It is worth mentioning at this point that the research was carried out both in Conventional and Model Experimental Public Secondary Schools. The Model Experimental Schools are selected school units of the Greek public secondary education, which aim at cultivating the idea and practices of excellence in the Greek educational system. Teachers who have increased formal qualifications and teaching experience are employed and systematically evaluated in these schools, while students are selected through examinations.

As mentioned in the Institutional Framework for the Operation of the Standard Model Experimental Schools (Government Gazette 118-2011 - Law 3966/2011, Chapter C, article 36), the purpose of the Standard Experimental Schools (PPS) is:

- a) the provision of public and free high quality education for all, which contributes to the comprehensive, harmonious and balanced development of students;
- b) the promotion of educational research in practice, in collaboration with the respective Schools and Departments of the Universities, in the teaching of the individual cognitive subjects, in the psycho-pedagogical field, as well as in the organization, administration, evaluation and management of relations in school unit level;
- c) the practical training of the undergraduate students of the University Departments, in particular, Pedagogical Departments and Departments of Faculties of Science and Philosophy, as well as postgraduate students in the sciences of education, in collaboration with the respective Faculties and Departments, as well as the professional development of teachers of the wider educational community, in cooperation with Universities and the Institution of Educational Policy;
- d) the enhancement of the goal of creativity, innovation and excellence, by creating groups, in which students from all schools of public education can participate, promotion and education

of students with special learning abilities and talents and also the support of students with learning difficulties

e) the experimental application of :

- curricula, study programmes and teaching methods,
- educational material of any kind,
- innovative teaching practices,
- innovative and creative actions,
- programs for evaluation of the quality of the educational work and the material and technical infrastructure of the school units

and

- new models of school administration and operation.

2. Method

This optional education course, which was realized during the spring semester of the academic year 2018/19, required not only the university students' physical presence during the lessons in Secondary Schools in Ioannina but also their engagement in participant observation. All students who had enrolled in the course «Teaching Language: the subject of Language in Secondary Education. Theory and Practice of Teaching» were permitted to participate in the practice.

2.1 Sampling Procedures

This research aimed to record all participants' views and experiences after their course had been completed. 102 out of the 320 university students who had enrolled in the course took part in the practice phase while 88 of them (86,27%) filled in the anonymous survey questionnaire, that was forwarded to them on completion of their course. Google forms, which is among the Cooperative internet tools and the Cloud computing technologies for the constructive collection of data, was applied in this research. Google forms is a significant tool for the realization of both qualitative and quantitative research, since it allows the sample to provide information without exposing their personal details. (Andreatos et al., 2015). The questionnaire, compiled to serve the needs and the research goals of this research, comprised two parts, namely seven demographic questions and thirty-nine specific statements investigating issues of General Pedagogy and Didactic/Methodology. The university students were asked to state the degree to which they agree or disagree with the particular statements on a five-point Likert scale. This type of rating scale allows for degrees of opinion and even no opinion at all. In this paper, we present part of the findings, after performing the analysis on Likert scale data. More specifically, this paper presents the results that are related to the technological infrastructure of the school units, the teaching means and the way the teaching process is realized.

2.2 The research Statements

These were investigated addressing the sample the following statements:

Teachers engage the whole classroom in the learning process and not only some of the students.

I would define the teaching process, in most cases, as student-centered.

Teachers applied experiential teaching methods (projects, role-playing, WebQuests, etc)

The secondary school teachers used worksheets during their lessons

The secondary school teachers used ICT equipment in their lessons (e.g. h/y, projector, interactive whiteboard, etc.)

The school I visited provides a special classroom for each one of the subjects

The school has the equipment needed to allow teachers to perform the teaching process effectively

The school classrooms were equipped in most cases with at least a PC

2.3 The Analysis of the Data

IBM SPSS Statistics 26 up to 5% level of significance was deployed to perform the statistical analysis. To explore the independence among the sample's answers and their characteristics, we applied the X2statistic test (chi-square test), while the Spearman rank correlation coefficient was used to meet the statistical significance of the correlation of the answers.

2.4 The Sample

The sample of the present quantitative study consists of 88 students at the Philosophical School of the University of Ioannina. As table 1 displays, the first half realized their practice in the Model Experimental School, while the second half in other State Secondary Schools that contributed to the conduct of the students' practice.

Table 1. Student Distribution according to the Realization of Their Practice in the Experimental School of Ioannina

<i>Practice in the Model Experimental School</i>	<i>N</i>	<i>%</i>
<i>Yes</i>	44	50,0
<i>No</i>	44	50,0
<i>Total</i>	88	100,0

3. Results

3.1 Descriptive Approach

The following tables display the students' responses to the given statements. Table 2 shows the degree of the students' agreement or disagreement with the utilization of worksheets by the teachers. According to this table, the majority of the teachers used worksheets to perform the teaching process. What is of statistical importance is that 52,1 % of the sample agree with the statement, which allows us to infer that in the students' opinion, the majority of the teachers had prepared their teaching material, since they had designed and valorized worksheets, to make the process more productive.

Table 2. Student Distribution according to Their Agreement with the Statement: «The Secondary School Teachers Used Worksheets during Their Lessons»

Statement 13	<i>N</i>	%
Strongly disagree	12	13,6
Disagree	7	8,0
I'm not sure	24	27,3
Agree	25	28,4
Strongly agree	20	22,7
Total	88	100,0

The next table (table 3) shows that the great majority of the students (68.2%) either agree or strongly agree with the use of technological equipment in the classrooms. Based on this finding, we conclude that the majority of the teachers in the Secondary Schools the students visited apply the technological means available to them to facilitate learning.

Table 3. Student Distribution according to Their Agreement or Disagreement with the Statement: «The Secondary School Teachers Used ICT Equipment in Their Lessons (e.g. H/Y, projector, interactive whiteboard, etc.) »

Statement 15	<i>N</i>	%
Strongly disagree	5	5,7
Disagree	7	8,0
I'm not sure	16	18,2
Agree	18	20,5
Strongly agree	42	47,7
Total	88	100,0

The table that follows (table 4) presents the students' agreement on the statement: «*Teachers engage the whole classroom in the learning process and not only some of the students*» Based on these data, we conclude that the great majority of the sample believe that teachers engage the whole of the classroom on the lesson. Only ten participants in the survey expressed their disagreement. What is interesting, in our opinion, is the fact that quite a lot of students (16) were uncertain, which, probably indicates that the statement ought to have been addressed to the sample more clearly.

Table 4. Student Distribution according to Their Agreement or Disagreement with the Statement: «Teachers Engage the Whole Classroom in the Learning Process and not Only Some of the Students. »

Statement 16	N	%
Strongly disagree	2	2,3
Disagree	8	9,1
I'm not sure	16	18,2
Agree	24	27,3
Strongly agree	38	43,2
Total	88	100,0

The table that follows (table 5) presents the students' agreement on the statement: «*I would define the teaching process, in most cases, as student-centered*». The great majority of the participants in the survey (70.5%), according to the findings displayed in the table, agree with the above statement. However, five (5) participants expressed their disagreement. A finding that is worth commenting on, in this case, is that 23.9%, a quite high percentage of the sample, were uncertain. This could be attributed to the students' lack of knowledge of the features of a student-centered lesson.

Table 5. Student Distribution according to Their Agreement or Disagreement with the Statement: «I Would Define the Teaching Process, in Most Cases, Student Centered. »

Statement 17	N	%
Strongly disagree	0	0
Disagree	5	5,7
I'm not sure	21	23,9
Agree	33	37,5
Strongly agree	29	33
Total	88	100,0

The following table (table 6) shows the students' agreement on the statement: «*Teachers applied experiential teaching methods (projects, role-playing, WebQuests, etc)* ». What we first notice studying the next table is that there is quite an equal number of answers to four out of the five questions, since the same number of students (approximately 20) stated that they totally agree, disagree, or is uncertain about the statement, while seven people express total disagreement. This finding indicates that experiential teaching methods are applied probably in low frequency, not providing a clear view to the observant students. Also, in an attempt to interpret the relatively high percentage (22.7%) of uncertainty expressed by the sample, we could infer that a lot of the participants have no previous knowledge or experience in experiential classroom activities, which, as a consequence, deprives them of the ability to have a clear view and respond to the statement we are investigating. What should not be overlooked is the fact that almost half of the respondents (46,6%) state that they either totally agree or agree with the statement, allowing us to conclude that experiential didactic techniques were applied in the lessons they attended.

Table 6. Student Distribution according to Their Agreement or Disagreement with the Statement: «*Teachers Applied Experiential Teaching Methods (Projects, Role-playing, Web Quests, etc.)* »

Statement 18	N	%
Strongly disagree	7	8
Disagree	20	22,7
I'm not sure	20	22,7
Agree	21	23,9
Strongly agree	20	22,7
Total	88	100,0

Table 7. Student Distribution according to Their Agreement or Disagreement with the Statement: «*The School I Visited Provides a Special Classroom for Each One of the Subjects*»

Statement 23	N	%
Strongly disagree	13	14,8
Disagree	16	18,2
I'm not sure	12	13,6
Agree	17	19,3
strongly agree	30	34,1
Total	88	100,0

The table that follows demonstrates the extent to which the sample agrees or disagrees with the statement: «*The school I visited provides a special classroom for each one of the subjects.* » Studying the table, we understand that the majority agrees or strongly agrees with the

abovementioned statement (53,4%). This percentage, however, is quite equal to the one provided by the students who realized their practice in the Experimental Secondary School. The deductive analysis of data that follows the presentation of the findings explores whether there is a correlation between them.

Table 8, which follows, demonstrates the extent to which the sample agrees or disagrees with the statement: « *The school has the equipment needed to allow teachers to perform the teaching process effectively*». The table depicts that a quite big percentage of students 69,3% agree with the statement that the school they realized their practice in has the equipment needed to allow teachers to perform the teaching process effectively. We consider it important to apply deductive analysis to data, in this case as well, to draw safer conclusions.

Table 8. Student Distribution according to Their Agreement or Disagreement with the Statement: « The School Has the Equipment Needed to Allow Teachers to Perform the Teaching Process Effectively. »

Statement 24	N	%
Strongly disagree	3	3,4
Disagree	7	8,0
I'm not sure	17	19,3
Agree	25	28,4
Strongly agree	36	40,9
Total	88	100,0

Table 9 shows the degree to which the sample agrees or disagrees with the statement: « *The school classrooms were equipped in most cases with a PC*». The majority of the students (56,8%) agree or strongly agree with the statement that the school classrooms were equipment in most cases with a PC.

Table 9. Student Distribution according to Their Agreement or Disagreement with the Statement: « The School Classrooms were Equipped in Most Cases with a PC»

Statement 25	N	%
Strongly disagree	19	21,6
Disagree	17	19,3
I'm not sure	2	2,3
Agree	12	13,6
Strongly agree	38	43,2
Total	88	100,0

Examining closely the findings of the last three tables we comprehend that the School units the sample had experience in were adequately equipped to make both teaching and learning more advanced and intriguing. Nevertheless, the Model Experimental Secondary School of Ioannina was among the schools that were evaluated by the students. Model Experimental Schools are units that, among other criteria, have been evaluated by the Ministry of Education, concerning their logistics infrastructure. Taking this restriction into consideration and aiming at drawing safe conclusions, we applied the deductive approach to data as shown below.

3.2 Deductive Approach

The deductive analysis was performed on two axes. At first, we examine the correlation of the school where the students' practice was conducted with its infrastructure and the specific teaching methods applied by the teachers. More specifically, what we focus on, studying the students' answers, is whether there is a latent association with the place they realized their practice: The State Model Experimental Secondary School or another State Secondary School in the same city. Secondly, we are exploring the correlation among the students' answers.

The main conclusion drawn after the study and statistical data analysis of the table below is that, except for two cases (statements 13 and 17), there is a significant correlation between the school the education practice was realized and the students' answers. To be more specific, the students who attended the classes in the Model Experimental Secondary School answered that the teachers quite frequently ($p=0,000$) used ICT equipment in their lessons (PCs, projector, interactive whiteboard, etc), the school they visited provides a special classroom for each one of the subjects ($p=0,000$) and it has the equipment needed to allow teachers perform the teaching process effectively ($p=0,000$) since most of the classrooms were equipped with at least a PC ($p=0,000$). On the contrary, the statistical analysis of the data reveals that in the State Secondary schools in the broader area of the city, where the students' practice was conducted, there is a shortage of logistics infrastructure, lack of special classrooms and limited valorization of ICT in teaching. Moreover, what is inferred is that in the Experimental Secondary School the teachers engage the whole classroom in the learning process and not only some of the students ($p=0,000$) while, in contrast with the rest of the Schools in the city, experiential teaching methods (projects, role-playing, WebQuests, etc) are applied during the teaching-learning process ($p=0,000$). However, no correlation between the School and the student-centered teaching process is recorded. This finding contradicts the one discussed above, namely the valorization of experiential teaching methods (projects, role-playing, WebQuests, etc) which enhance the student-centered learning process. This contradiction can be interpreted as follows: either the students have not fully realized the dimensions of the student-centered lesson or there was a low frequency of the utilization of the abovementioned experiential methods by the teachers. Finally, there seems to be no association between the school and the worksheets used by the teachers (statement 13). This finding, probably, indicates that lesson planning is not directly related to the school the teachers are employed in but to their preparation and performance.

To add complementary data based on the research findings and draw well-grounded conclusions, we have applied the second analysis which aims at investigating the correlation

between the answers given to statements 13,15,16,17,18,23,24 and 25 in the questionnaire. Since the data is ample, we are presenting the findings which are statistically significant without them being displayed in a table.

Table 10. Examining the Independence of the Degree of Agreement among Statements Referring to the School the Practice was Realized

Statement	Factor	Statistic (Linearbylinear)	Mean p - value
13. The Secondary school teachers used worksheets during their lessons	Practice in the Experimental Secondary School or not	2,181	140
15. The Secondary school teachers used ICT equipment in their lessons (eg. PC, projector, interactive whiteboard etc)	Practice in the Experimental Secondary School or not	31,910	0,000
16. Teachers engage the whole classroom in the learning process and not only some of the students	Practice in the Experimental Secondary School or not	12,320	0,000
17. I would define the teaching process, in most cases, as student centered	Practice in the Experimental Secondary School or not	1,413	0,235
18. Teachers applied experiential teaching methods (projects, role playing, webquests, etc)	Practice in the Experimental Secondary School or not	18,274	0,000
23. The school I visited provides a special classroom for each one of the subjects	Practice in the Experimental Secondary School or not	42,845	0,000
24. The school has the equipment needed to allow teachers perform the teaching process effectively	Practice in the Experimental Secondary School or not	21,126	0,000
25. The school classrooms were equipped in most cases with at least a PC	Practice in the Experimental Secondary School or not	61,143	0,000

The foremost conclusion we drew on completion of this analysis is that there is a relatively strong correlation among students' responses to the statements, allowing us to infer that the students portray the overall situation. For example, we are presenting the correlation of the responses to statement 15 with the rest of the responses. The ones who answered that the

teachers made use of ICT to perform their teaching process usually agree with the following statements: teachers apply experiential teaching techniques ($p=0,000$), the school provides a special classroom for each one of the subjects ($p=0,000$), the school has the equipment needed to allow teachers perform the teaching process effectively ($p=0,000$) and most of the classrooms were equipped with at least a PC ($p=0,000$). Following statement 15, data analysis reveals a statistically significant correlation among the answers provided by the sample to statement 16 as well. In particular, the students who advocate that the teachers engage the whole classroom in the learning process and not only a few students agree with the statements: the teaching process, is, in most cases, student-centered ($p=0,000$), teachers applied experiential teaching methods ($p=0,008$), the school provides a special classroom for each one of the subjects ($p=0,000$) and the school has the equipment needed to allow teachers perform the teaching process effectively ($p=0,001$). Furthermore, the equipment is significantly related to the student-centered teaching process ($p=0,002$), while agreement on the statement: teachers applied experiential teaching methods (projects, role-playing, WebQuests, etc) entails agreement on the statements: the school provides a special classroom for each one of the subjects ($p=0,000$), the school has the equipment needed to allow teachers perform the teaching process effectively ($p=0,000$) and most of the classrooms were equipped with at least a PC ($p=0,000$). Finally, when the participants answer that there is a special classroom for each one of the school subjects (statement 23) in the school they realized their practice, they concur with the statements: the school has the equipment needed to allow teachers to perform the teaching process effectively ($p=0,000$) and most of the classrooms were equipped with at least a PC ($p=0,000$). This correlation allows us to infer that special classrooms are equipped with the technological products needed to make the lesson more attractive and effective.

To sum up, what is worth mentioning is that in all cases of the second analysis the rate value is always positive, which means that the statements addressed to the sample are positively related to each other since their rates are increasing simultaneously.

4. Conclusions

This paper presents part of the data collected in terms of a broad research which aimed at investigating the impact the school logistics infrastructure had on the teaching process and its valorization by the educators, as this was perceived by university students in the University of Ioannina, who completed their graduate preservice education practice on the course: «Teaching Language: the subject of Language in Secondary Education. Theory and Practice of Teaching». The practice was realized in schools in the city of Ioannina.

The findings of the research align with the objective set by the researchers, namely to record the university students' perceptions of the technological infrastructure of the school units as well as the means and the selected teaching techniques applied by the Secondary Schools teachers.

The first general conclusion, directly related to the first goal of the research, is that the

students observed an important difference in the logistics infrastructure between the Experimental Secondary School and the rest of the Secondary Schools in the city of Ioannina. More specifically, except for the Experimental Secondary School, statistical analysis of the data highlights the shortage of the logistics infrastructure in the State Secondary schools where the practice was conducted. Only the participants who were present in the Model Experimental Secondary School classrooms affirm the existence of infrastructure.

This is considered to be a significant, thought-provoking finding as it features schools located in the capital of a municipality in Greece. Furthermore, concern has been raised about the university students' opinions in case the schools they were called to visit were mainly regional or even some Secondary or High schools in the mainland or on islands, where the enrolled students are very few.

The above-mentioned finding is relevant to the second finding of this research, which focuses on the next three goals of the research, the valorization of the existent logistics infrastructure by the teachers, where this is available. The findings reveal that the teachers are keen on performing either in specially made classrooms or using the available logistics infrastructure to improve both the quality of their teaching and the learning outcomes (goal 2).

Additionally, the sample seems to relate the school infrastructure to a more innovative lesson. To be more specific, the experiential didactic choices made by the teachers, the student-centered teaching-learning process and the participation of the whole classroom in the lesson are related to the existence of special classrooms for the school subjects, to the school infrastructure, or both of them, verifying, this way, the importance of the infrastructure of the school unit (goal 3).

As regards the fourth goal of this research, it is verified by the findings that the required infrastructure is offered only in the Model Experimental Secondary State School in the city of Ioannina, while there is lack of it in the other schools in the area, influencing the teachers' didactic choices (goal 4).

Since the 1980's various curricula have been applied in Greek Secondary Education bringing about lots of changes, not only in terms of goal setting but also in didactic approaches. At the same time, European Programs have offered the schools the opportunity to enrich their infrastructure. Taking into consideration the above, we conclude that the portrayal of the schools as this has been made by the university students who took part in this survey is not satisfactory. Thus, it is important to intensify the effort to improve the infrastructure of the Greek Secondary Education Schools.

Moreover, since the teaching practices discussed above are meticulously described in the curricula, we align with Gotovos (2003) and Gkaravelas (2010) views, according to which there is lack of supervision on the implementation of the curricula. This is because there is either insufficient or absent monitoring even in the very few cases that the teachers are trying to follow the curriculum, designing their lessons accordingly.

Last but not least, what should be taken into account, is that the teachers who are employed in the Experimental Schools have been evaluated following state-run procedures and applying a

certain set of criteria. These teachers have deep knowledge of the subjects they teach and further studies, academic qualifications and certified skills.

For this reason, we believe that the quality of the teaching-learning process can be enhanced on condition that not only all State Secondary Schools in Greece are equipped with infrastructure in special classrooms but also teachers are educated to apply effective, contemporary didactic practices.

5. Potential Future Research and Suggestions

The issue of the logistics infrastructure and its valorization in our schools is an exceptionally significant matter, since it is a prerequisite for the improvement of the quality of the educational effort. This survey was realized at schools located in the prefecture of Ioannina, Greece. Thus, its findings cannot be generalized. As a consequence, what is suggested is a more extended, two-dimensional research attempt, which will include both Primary and Secondary Education Schools in all areas in Greece (mainland, islands, urban and rural areas), in combination and comparison with the teachers' views on the way their lessons are facilitated by their schools' logistics infrastructure.

Finally, we acknowledge the significant contribution of the European Projects to continuous Teacher Education. These projects, first launched in 2006, have been educating teachers on valorizing and implementing new technological tools in the classroom. Professional education, though, has to be constant, mandatory and addressed to all teachers employed in State Schools, no matter their specialty. As regards the content of the educational schemes, we think that it should be enriched, including fields such as experiential learning, real-life learning, diversity, etc., to support the teachers perform their demanding tasks.

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