ENHANCE THE QUALITY OF THE UNIVERSITY TUTORING SERVICES TO COUNTERACT UNDERGRADUATE STUDENTS’ EDUCATIONAL FAILURE: A FOCUS ON THE DEPARTMENT OF EDUCATION OF ROMA TRE UNIVERSITY

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Abstract
Tutoring services are one of the variables which educational research investigates to counteract the educational failure of universities (Topping, 1996; Falchikov & Blythman, 2001; Da Re, 2017). An effective strategy, in order to counteract dropout and delay in achievement of a degree and to promote a positive continuation of studies, is to enhance the quality of the university tutoring services which could support students in their studies with personalized and interactive educational process, providing them with support both on the educational and emotional-motivational levels (Felice, 2005; Álvarez & González, 2008).

This paper presents the results of longitudinal research developed at the Department of Education at the Roma Tre University. The research analyzed the academic careers of three cohorts of students (academic years: 2013, 2016 and 2017) with what are defined “Additional Educational Obligations” (OFA) because they had scored an insufficient grade in the admission test and so attended “S.Tu.Di OFA” tutoring service. The objective was to reduce undergraduate students’ educational failure. The results of the research have shown how the innovation of the didactic design has proved to be effective in helping to counter the university students' educational insufficiencies. Both qualitative and quantitative tools were used (Trinchero, 2002; Pellerey, 2011; Semeraro, 2014). Data analysis highlighted the effectiveness of the tutoring actions proposed for students with initial difficulties in studying. Also, the reflections advanced by tutors and students confirmed the importance of continuing to strengthen the university’s offering of formative tutoring.

Keywords
Active didactic, Educational failure, Instructional design, Tutoring, University.

1. Context of the research
Many researchers of the educational field focus on tutoring as an effective strategy to support students of all types and levels of education and to counter educational failure (Topping, 1996; Falchikov & Blythman, 2001). The phenomena of dropout and of delay in obtaining qualifications, which increasingly affect universities, have led us to reflect also in Italy on the effectiveness of the practice of tutoring in the academic field (Pedicchio & Fontana, 2000; Lucangeli et al., 2009; Da Re, 2017).

In this regard, the Italian universities are also going through a difficult time. Although the most recent official documents indicate a slight decrease in the extent of the phenomena of dropout in obtaining degrees, on the other hand several scientific studies indicate the need to investigate possible causes and propose strategies of containment (Schizzerotto & Denti, 2005; Burgalassi et al., 2017; AlmaLaurea, 2018; ANVUR, 2018). Supporting students in their studies with personalized and interactive educational itineraries, and providing them with support both on educational and emotional-motivational levels, seems to be an effective strategy in this regard in promoting an affirmative continuation of studies and counteracting abandonment and delays in achieving academic titles (Felice, 2005; Torre, 2006; Álvarez & González, 2008; Magnoler, 2017).

1 The authors shared the drafting of the article in all its parts.
In particular, M. Burgalassi wrote § 1, A. Giuliani wrote § 2, A.L. Morini wrote § 3 and G. Moretti wrote § 4.
In implementing these strategies, it’s important to requalify and innovate university teaching and it’s equally important to reflect on the teaching methodology that can be useful in tutoring services to counter student educational failure (Gordon, 2009; Galliani, 2011; Giuliani et al., 2015; Felisatti & Serbati, 2018).

Designing study itineraries aimed at encouraging student educational success implies different commitments and responsibilities for those involved in education. In preparing tutoring services that support and accompany incoming students, both up-to-date and behind in their studies, for example, it is essential to pay close attention to the organizational and didactic planning that is intrinsic in them.

Engaging with students in potential situations of difficulty it is more than ever important for tutors to have adequate skills to accompany students in their recovery process. The training of tutors, the continuous updating of the practices involved and comparison with experts and students, in this regard, are crucial in guaranteeing over the years an annual re-engineering aimed at improvement.

This paper focuses on the experience of the "S.Tu.Di OFA Tutoring Service", employed in the Department of Education of the Roma Tre University. The Service is aimed at university students who start Degree Courses (DC) with Additional Educational Obligations (OFA), that is to say that they get an insufficient score in the admission test and must perform supplementary remedial activity during the first year of the course. Among the reasons why "OFA Tutoring Service" has seemed to be a privileged area in which to investigate the effectiveness of certain techniques to support students and counteract education failure is the fact that its design is based on tutorial actions managed by experts but which enhance the relationship between peers. The tutors of "S.Tu.Di OFA Tutoring Service" are senior students who, selected according to their skills, plan activities together with the Co-ordinator for the students both in class and online. Face-to-face meetings allow for the establishment of a positive interpersonal relationship with the students, allowing them to familiarize with and assimilate the lessons in a dialogical and interactive way. In the online environment it is possible to find theoretical materials, self-assessment activities following with personalized and formative feedback, chat and forums for synchronous and asynchronous communication.

The tutoring services that promote an effective teaching planning would promote in students the capacity to develop skills, to accommodate the insufficiencies with proactivity, to transforming the initial difficulties in opportunities for learning. Moreover, the more relaxed periods that the planning activities of the Service can make use of compared to the normal teaching activity of the degree courses increase the possibility of establishing a more confidential relationship with the students and involving them in long-term laboratory activities.

The experiences that students incur in the course of their studies, including those in tutoring services, are crucial due to the influence they may have on the decision to abandon studies, on the persistence of the commitment dedicated and on more general educational success (Berger, 2002; Belloc et al., 2011; Moretti et al., 2017). We should reflect and work, therefore, on itineraries aimed at promoting the development of features such as self-regulation, motivation, engagement, thoughtfulness and critical spirit (Moé & De Beni, 2000; Pintrich & Zusho, 2002; Dinsmore et al., 2008; Brophy, 2013). Such a commitment cannot be separated from the continuous updating of those who work and plan in the educational field and, above all, from the knowledge and diffusion of techniques used to detect the nature of the variables that need to be strengthened in students.

The identification of the teaching techniques to be used, of course, is strictly connected to the needs of the students to which they are addressed and to the objectives to be reached. In this sense, it is important to remember that strategies do not necessarily have the same effectiveness in different settings, so it is important to consolidate an educational-evaluative culture that adapts flexibly to the various needs (Baladacci, 2004; Lea & Nicoll, 2013; Lucisano et al., 2013; Domenici, 2017). Over the years, for example, the design of the "S. Tu.Di OFA Tutoring Service" service has also been monitored and improved, and this will be discussed in the following paragraphs.

Deepen possible strategies to counteract the educational failure should be the major challenge for universities, but to do so it is essential to consider deploying all the protagonists involved in the formative courses. In addition to the tutoring services, therefore, to truly involve the students it is important to listen to their input to understand their point of view of their study experience and, with a view to continuously improve the educational offer, to take decisions on actions that will involve them as subjects in learning. Paying attention to these processes of educational itineraries can support both individual students and the university system as a whole.

2. Research design

The research presented in this contribution focuses on a longitudinal study developed at the Department of Education of Roma Tre University.

One of the main objective of the research was to identify educational techniques effective in countering the educational failure of academic students who access a DC with OFA, and to verify their effectiveness.
It’s important to note that in the Italian university system the Ministerial Decree 270/2004 (art.6, Ministry of Education, Universities and Research - MIUR) defines the OFA as “Additional Educational Obligations” to be assigned to the students who have scored an insufficient grade in the admission test. Those who have OFA are required to carry out supplementary and recovery activities in order to recuperate the “inadequacy” within the first year of the course. The didactic planning of the "S.Tu.Di OFA" tutoring service involved in the research is specifically dedicated to the students with OFA and designs teaching activities in the presence and online. The focus of the Service has been concentrated on the importance of encouraging the active participation of the students with OFA as regards the proposed activities. To this end, the coordination between the head of the Service and the senior tutors was crucial, and they consciously collaborated in the development of didactic methods to be subjected to scrutiny and analysis with a view to future annual upgrades.

The research was carried out on three classes of students enrolled in DCs of the Department of Education (Roma Tre University). The students involved in the analyses are those who in the years 2013, 2016 and 2017 have enrolled in DCs requiring OFA and have availed themselves of the activities proposed by the "S.Tu.Di OFA” tutoring service. Each of the classes of students whose academic career was analysed was supported by the same tutoring service but with different strategies. In fact, over the years the didactic planning of "S.Tu.Di OFA” has been enriched with techniques aimed at progressively enhancing the interaction, dialogue and expression of critical judgment.

The first phase of the research was conducted with a retrospective analysis about the didactic planning of the "S.Tu.Di OFA” Service of the academic years 2013 and 2016. With this aim many documents were consulted, including the guidelines of the annual planning, the minutes of the coordination meetings between tutors and the meetings with the students and the final report of the activities carried out during the academic year.

In the second phase of the research was actively enriched the didactic planning of the academic year 2017. Based on the research objectives, the activities of the previous years were implemented with some innovations aimed at involving students even more in both individual and small group activities. In particular were projected: dialogue and interactive lessons, activities in small groups, written answers to critical reflection presentations, study of theoretical materials and on-line research, self-evaluation tests (with personalized and formative feedback), replies to questionnaires and interviews with subsequent delivery of the results and discussion thereof and participation in the final follow-up together with tutors and researchers.

The research also provided a specific formative process that involved the "S.Tu.Di OFA” tutors. With the aim of encouraging greater sustainability in the integration phase of the teaching techniques in the day-to-day activities of the Service, systematic training and update meetings were planned.

In the final phase of the research was scheduled a follow-up phase in which everyone was able to express their point of view on the strategies in use and the effectiveness of the teaching techniques proposed in the academic year 2017. The main objective of this phase was to increase the involvement of student tutors and students with OFA and give a real voice to the subjects involved in the Service.

In the research were used both qualitative and quantitative tools (Trinchero, 2002; Pellerey, 2011; Semeraro, 2014). In particular, various questionnaires, a semi-structured test and a written interview were used with students and tutors in 2017. To monitor the actions proposed in the three academic years subject to analysis, were used also observation grids, a logbook and online reporting systems. The semistructured test administered to the class of 2017 at the end of the annual course was essential to verify the fulfillment of the OFA and, above all, to understand who in addition to having participated in the recovery activities had also completed the path by sitting the final test. As well as the didactic planning, the OFA fulfillment test also included an integration with two additional sections compared to previous years. The first section required students to answer to a semistructured question aimed at detecting the ability to resolve problematic situations by formulating hypotheses and deliberating their choices. The second section contained two questions for critical reflection on the course. By analyzing the answers provided in this last section, key words have been identified that will be discussed in the paragraph dedicated to the results of the research.

During the research was used the Motivated Strategies for Learning Questionnaire (MSLQ - Pintrich et al., 1991), a questionnaire translated and adapted to the Italian context by the research group. This tool was useful to detect incoming and outgoing data on relevant aspects of the OFA student profile (Self-effectiveness and intrinsic motivation, Self-regulation in study, Approach to profound and critical study, Willingness to collaborate with peers, Thoughtfulness).

In the following paragraph the main results of the research are presented and an overall interpretation of the data collected is provided. The collected data have been processed and analyzed with dedicated software.
3. Major findings of the research

The longitudinal research developed at the Department of Education at the Roma Tre University involved the academic careers of three cohorts of students attended the academic years: 2013, 2016 and 2017. These students had what are defined “Additional Educational Obligations” (OFA) because they had scored an insufficient grade in the admission test and so they had to attend the tutoring service called “S.Tu.Di OFA”.

In the first phase, we analysed the percentage of students showing initial short-comings who entered the university over the years. Considering the results obtained by the students in the entrance test, it emerges that the students who need support in the recovery path are on the increase, not having obtained a sufficient grade in the test.

We found out that in 2013, 25.1% of the students did not pass the test, while in 2017 they were 34.9% (Graph 1). Students with difficulties are therefore assigned Additional Educational Obligations - OFA.

Graph 1: A comparison between the students with and without OFA for the classes of years 2013, 2016 e 2017.

The Universities have a very important role to help counter the difficulties that students may encounter in their studies. In particular, the students that lack the transversal skills deemed indispensable to successfully confront their academic career, need to be supported by the Universities’ services. The data once again suggest the importance of reflecting on the techniques that Universities should use.

In order to deep the analysis of the profile of the students, we compare the academic path of those with OFA and those without.

In the Table 1 it is possible to see the difference in the three academic years (2013, 2016 and 2017). From the data emerges that in the number of university credits gained, in the number of exams passed and in the average grade of examinations, students with OFA always get a lower result compared to their peers (Table 1).

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2016</th>
<th>2017</th>
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<tbody>
<tr>
<td></td>
<td>OFA</td>
<td>NON OFA</td>
<td>OFA</td>
</tr>
<tr>
<td>Average ECTS</td>
<td>117,5</td>
<td>121,8</td>
<td>55,8</td>
</tr>
<tr>
<td>Average # exams</td>
<td>15,3</td>
<td>15,8</td>
<td>6,9</td>
</tr>
<tr>
<td>Average exam grades</td>
<td>25,3</td>
<td>25,4</td>
<td>23,9</td>
</tr>
</tbody>
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Table 1: Average ECTS, average number of exams and average exam grades for the years 2013, 2016 e 2017, distinguishing between students with and without OFA.

These data confirm that the students with initial insufficiencies, and so with Additional Educational Obligations – OFA, show difficulties during their studies. One of the aim of the present research was to investigate the effectiveness of the activities proposed by the “S.Tu.Di OFA” tutoring service, that support these students.

The “S.Tu.Di OFA” tutoring service contacted the students with OFA and involved them in recovery and support activities all over the year. The students took part in different kind of actions. The path was considered both face-to-face and distance meetings. In the online platform the students were able to use study materials and self-assessment tools.

The research analyzed and compared the profile of the students that actively participated in the activities and those who had not yet fulfilled the Additional Educational Obligations. From the analysis of the data it was possible to
establish that the first group obtained a higher results in the average of university credits gained, the number of examinations taken and the exam grade (Table 2). So it emerges that the tutoring actions implemented were effective.

<table>
<thead>
<tr>
<th></th>
<th>2013 fulfilled</th>
<th>2013 unfulfilled</th>
<th>2016 fulfilled</th>
<th>2016 unfulfilled</th>
<th>2017 fulfilled</th>
<th>2017 unfulfilled</th>
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<tbody>
<tr>
<td>Average # ECTS</td>
<td>124.2</td>
<td>100.8</td>
<td>57.8</td>
<td>40.9</td>
<td>12.1</td>
<td>5.8</td>
</tr>
<tr>
<td>Average # exams</td>
<td>16.2</td>
<td>13.2</td>
<td>7.2</td>
<td>5.1</td>
<td>1.7</td>
<td>0.8</td>
</tr>
<tr>
<td>Average grade</td>
<td>25.3</td>
<td>20.8</td>
<td>24.4</td>
<td>19.9</td>
<td>21.7</td>
<td>11.1</td>
</tr>
</tbody>
</table>

Table 2: Students with OFA, who fulfilled and did not fulfill their obligations, by average number of ECTS, average number of exams and average grades

These data make us reflect on how support provided to students entering a university course can produce effects in the immediate and medium-to-long term. By supporting incoming students who present situations of potential difficulty in terms of learning and transversal skills, therefore, the planned interventions of the Services may constitute effective didactic techniques.

In the period from the academic year 2013/14 to the academic year 2016/17 the “S.Tu.Di OFA” tutoring service implemented its own design with additional face-to-face meetings, overseen by both teachers and senior tutors, aimed at involving students in workshop activities on the specific areas covered by the OFA. The areas of competence covered by the entrance exam are "Reading comprehension", "Reading and analysis of graphs and tables", "Deductive analysis and problem situations". It is therefore on the development and strengthening of these that the “S.Tu.Di OFA” Service focuses its support plan for students who must fulfill OFA.

Of the 845 total registrations for 2016/17 courses, 209 were tasked with OFA. Of these, 33.3% abandoned their studies during the first year of the course (the rate of dropout for students who did not have OFA was on the other hand 21.8%) but observing the sub-section of students with OFA who fulfilled their obligation, the figure drops to 14.1%. Although the dropout phenomenon persists, the actions of the “S.Tu.Di OFA” tutoring service seem to have been effective in favouring a favorable continuation of their studies.

In order to monitor some strategic competence useful for the students to enrich their profile, the “S.Tu.Di OFA” tutoring service introduced the Motivated Strategies for Learning Questionnaire at entry and upon termination of the OFA recovery path. The delivery of the Questionnaire permitted the verification of the increased competence of the students in relation to areas essential for the development of a path of quality study.

The questionnaire collected data on the following factors: “Self-effectiveness and intrinsic motivation” (F1), “Self-regulation in study” (F2), “Approach to profound and critical study” (F3), “Willingness to collaborate with peers” (F4), “Thoughtfulness” (F5). For each of the categories, comparing the data collected before the start of the OFA recovery path and at the end of the OFA test, the students obtained higher scores than at entry. Graph 2 shows the average values calculated for the two surveys.

![Graph 2: Average MSQL entry-exit scores (student class 2017)](image-url)
During the academic year 2017/18 the “S.Tu.Di OFA” the tutors of the service were trained in a systematic manner so that they could learn how to plan workshop meetings with the students autonomously, to be merged in an integrated way with the usual dialogue and interactive lessons coordinated by the teachers and with the online self-assessment activities inclusive of personalized feedback. The tutoring service has improved its annual planning with ad hoc interventions aimed at enhancing the students' ability to study, collaborate and communicate, based also on the theoretical and methodological contribution provided by the present research.

Over the year the students were given different tools as questionnaires aimed at identifying opinions, study strategies and study motivation.

At the end of the year, in the final test, the students were asked to answer a particular question that asked them to reflect on and identify one or more elements that they felt were effective in supporting them in the development and consolidation of the skills they need to develop. The data collected allowed the reflection on the level of awareness of the students on the path in which they had taken part.

Specifically, the presence of personalized feedback in the online platform and the possibility of working closely with tutors and classmates were considered by the students, two of the most effective teaching devices of the Service. The students underlined that the ability to understand the reasons for the accuracy or otherwise of the answers provided in the self-assessment tests online and the opportunity to participate in "peer workshops" coordinated by the tutors were essential for the acquisition of a thorough and critical study methodology and for their initial introduction into the university world.

We also asked the students to reflect about how they themselves were supported by the tutoring actions of the Service, and to describe the tutoring path offered by the “S.Tu.Di OFA” Tutoring Service. The answers provided by the students were analysed and we figure out some recurring key words. The Graph 3 shows the most-used words.

Graph 3: Keywords identified by students to describe the tutoring path offered by the “S.Tu.Di OFA” Tutoring Service

Among the key words identified, the ones that seem most significant and which most closely reflect the integrations proposed in the service are: Awareness (53), which was intended to be implemented through the introduction of the MSLQ questionnaire, Study strategies (28), promoted through the questionnaire and developed both through the small-group activities and through the activities proposed online, Personalized feedback (26) that is provided to students with self-assessment tests online and which is one of the most effective techniques to re-position the learning path and improve student results. It is important to point out the presence of words such as Tutor availability (26), Positioning (26) and Security (18) that highlight the emotional-motivational aspects that have been encouraged, above all, by insisting on further in-depth training of tutors.

Furthermore the “S.Tu.Di OFA” Service tutors of the 2017/18 academic year were also involved in the research. They were trained to develop effective design and action strategies for students, in line with the research objectives. At the end of the OFA path, a review phase was also foreseen with them, and in particular 6 senior tutors were involved who were given a structured interview. From their responses emerged the sense of responsibility and awareness they had acquired over the years regarding their functions as OFA tutors. What they highlight as important for enhancing the effectiveness of support for students with OFA is “providing support by working towards an
inclusive perspective”, enhancing a "peer information exchange" and “not leaving students feeling alone”. An interesting aspect is the transferability of competencies and the attitude towards study developed within the OFA path.

From the interview conducted with two senior tutors emerges that:

- "the S.Tu.Di OFA Service contributes to improving the quality of the training offer of the Department because it permits deepening and completing learning areas essential to facing degree courses” (I.G.)
- "the individualized paths make it possible to work more effectively on the insufficiencies and anxieties of each individual student, who will then have to pursue his/her course of study independently”. (C.M.)

In conclusion the OFA tutoring service and the teaching devices integrated in its didactic planning seem to be effective in supporting students with OFA in their insertion path in an academic context and towards further study. These statements come from the observations of the students, those of the tutors and the data recorded diachronically in the three classes involved in the research.

4. Discussion

The major findings of the research confirmed tutoring as a very important practice, also at university level, to support the students' education path and to steer them towards success in their studies, making the most of the “being amongst peers” aspect.

Deepening the results of the data collected, it was particularly important to design actions that could be effective both on an educational level and on an emotional-motivational level. In particular, the introduction of valid and reliable tools, as is the case of the MSLQ, allowed to further work on the development of certain strategic aspects. Measuring the differences between the entry and exit scores showed that the didactic support offered by the Service led to an increase in the factor called "Approach to profound and critical study” (F3), which for the students involved in the research increased by an average of 3.8 points. In this context, the continuous training of tutors is essential to introduce innovations and, consequently, is one of the keys to improving the quality of the service.

Moreover, one of the most interesting issues raised concerns the active involvement of students and the triangulation of points of view to gather evidence with the finality of taking decisions. The request made to the students to reflect from a critical standpoint on their course, not only allows them to develop greater awareness, but contributes to making them protagonists in their education and places them at the centre of the university system.

The results of the research carried out on the three classes of students who used the "S.Tu.Di OFA” didactic tutoring service have shown how the innovation of the didactic design has proved to be effective in helping to counter the university students' educational insufficiencies.

The project actions and the devices used to allow students to develop their skills and their study strategies, have partly curtailed university drop-out and have improved the university career of the students who had difficulty upon entering.

In fact, considering the data on the academic career of the students who fulfilled their OFA - graduation, number of examinations and ECTS and average grade – it has become clear how the design of the service over the years has been able to effectively counter certain risk factors that may lead students to abandon their studies. Those who complete the path of recovery of OFA obtain better results in their academic career than those who, with the same initial insufficiencies, do not complete the activities suggested by the tutoring service.

Finally, it is necessary to underline that starting from 2013, according to the data collected by the Department of Education, students arriving at the University with initial insufficiencies appear to be increasing. Then, it is very important on one hand, that the researchers continue to deep the investigation over the techniques needed to strengthen the university teaching offer and, on the other hand, that the universities should improve the tutoring functions to counteract undergraduate students’ educational failure.

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