

## THE INNOVATIVE TEACHER: A KEY FACTOR FOR IMPROVING ACADEMIC PERFORMANCE

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### ABSTRACT

Ceuta, a Spanish city located in the North area of Africa, is the city with the lowest rates of academic performance and the highest rates of school drop-out in Spain. Faced with this situation, the researchers launch in unison the alarm to the dramatic social, economic and cultural consequences that this phenomenon may have in the city. There are many factors that have been studied trying to offer a solution to this worrying phenomenon. The aim of this research is to find out the professional profile of teachers in the Autonomous City of Ceuta and to study if the teachers' responses are associated with the identification variables. The results of this study illustrate the fact that methodological innovation in the city is not a reality in the daily teaching process. We also conclude that the absence of the innovative teacher is more significant in Secondary Education, level with a higher rate of school failure.

**Keywords:** Innovation, teaching-learning process, teacher profile, academic performance.

### INTRODUCTION

The Autonomous City of Ceuta is dragging, within the Spanish territory, some figures deserving urgent action by local and national educational administrations. Teachers, parents and researchers launch in unison the alarm to the dramatic consequences that this phenomenon has in the city and its negative projection of the future if the problem does not begin to be seriously faced in a systematic and rigorous way. The percentage of the population aged 18 to 24 that does not have a certification in High School and does not follow any type of training is 29.2% in Spain while in Ceuta it is 45.7%; the gross rate of High School graduates in Spain is 70.4% and in Ceuta 53.8%; the gross rate of graduates in post-compulsory Secondary Education in Spain is 44.7% in the pre-college stage and 16.4% in Vocational Training, while in Ceuta these rates are 27.1% and 10.9% respectively; and the gross rate of graduates in higher professional training is 17.1% in Spain and 5.5% in Ceuta. The data extracted from the PISA report (OECD, 2016) are not very optimistic either, since Ceuta is well below the OECD average both in scientific - mathematical competence and in reading comprehension, obtaining in the latter 423 points, occupying again the last place among the regions of Spain. It is also interesting to note that these results are not directly connected to the investment in economic and human resources made in this city, which is higher, in relative terms, than the national average. This leads us to think that there are other factors that affect the low educational results.

### FOCUSING ON TEACHERS AS TOOL OF CHANGE

One of the great challenges before carrying out our study was to try to understand the causes that have led our students to obtain such low results. According to Sánchez (2010), the common factors that lead young people drop out of school early are the following:

- A very high percentage among the parents of these young people only have primary studies.
- This youth population comes from disadvantaged sociocultural districts.
- There is a lack of parental involvement in the life of their children's schools.

In the study conducted by Sánchez (2010) it is concluded that there is no relationship between school results and the income level of the family unit, nor is there a correlation between the variable academic performance and the level of studies of the parents. This same study establishes the causes that young people describe that led them to abandon their school education, which are in this order: the lack of interest to continue studying, the desire to start working, they want to study something else, and finally, personal problems.

We are very interested in trying to reflect on the causes of the high rate of students who have not been able to take advantage of the options that the educational system has put at their disposal and who consequently have failed, to the frustration of all, in their global education and formation. We realize how easy it is to confuse terms when talking about the students' academic failure and how difficult it is for teachers to make a self-assessment in this sense. According to Martínez (2009) it would be necessary to make a distinction between the school failure of the students and the failure of the system, which would be the one evidenced by the PISA tests, when these students representing Spain do not obtain the expected academic results. There are researches that focus on social, cultural and even linguistic factors, others focus on institutional policies (Aubert, Flecha, García, Flecha, & Racionero, 2009; Bolívar, 2008; Darling-Hammond, 2001). The present research focuses on the methodology applied in the classrooms and puts teachers at the center of the investigation. We consider that one of the possible causes of the alarming rate of school failure that we have accumulated, and that has not been explicitly explained so far, is the lack of application in the teaching practice of innovative and attractive models for the students. In the study of Sánchez (2010) the participants acknowledge their lack of motivation for study and academic work, and consider that their low motivation is caused by the lack of functionality of the learning, the unattractive that the classes were and the lack of an active and participatory methodology on the part of the teaching staff. For the participants, the learning received by the teachers was not very accessible and not very useful, consisting mainly in theoretical contents, which caused them boredom and disinterest.

In some previous researches some punctual mentions to the teaching practices can be found. Gámez, Sánchez, García, and Cotrina (2011) give a brave step when they affirm that the methods used by teachers are key elements on which it is necessary to fall in order to palliate such a high school failure. However, they are not given the priority that it is claimed. The same authors take a big step in this regard by claiming new methodological initiatives and they complaint explicitly that teachers find it very difficult to recognize that their methods are not adequate or respond to the real context in which teachers work.

We believe that part of the enormous rate of school failure is due to the obsolete practice of methodologies applied in the classroom. We are aware of the difficulty of positioning ourselves in this sense and how difficult it is to assume that student's failure and teaching failure are parts of a whole. We understand the huge professional maturity required to assume that the classroom actions may be not correct or adequate enough to respond to the students and get them the necessary motivation to continue their training.

## **OBJECTIVES**

The research we carried out had a well-defined purpose. We intended to find out the attitudes exhibited by the teachers of Ceuta in the face of methodological innovation and its application as a recurrent element in their daily teaching practice. Also, we wanted to discover if their attitudes were associated with the descriptive variables. For this, we asked them about different educational aspects that touch the daily teaching practice, management teams and leadership, school organization, new methodologies and technologies, inspection, training and research, with the main objective of describing the teacher profile that we found. Likewise, we compared what happened in the stages of Middle and High Schools. In this way we were able to find out if teachers in this city had an innovative profile, which the common characteristics shared by these teachers were and in which of the educational stages innovation had a more relevant presence.

**METHODOLOGY**

The present study was incardinated within the quantitative descriptive methodology.

**Sample**

The sample was constituted, finally, by a total of 357 teachers of the city of Ceuta, Spain, belonging to the stages of Primary Education and Secondary Education. This sample corresponds to 30.54% of the total teaching population of Ceuta, formed by 1,169 professionals (587 Primary and Elementary teachers and 582 Secondary and Vocational Training teachers). Of the total of the sample, 161 belong to the Primary body, representing 27.43% of this population, and 196 belong to the body of teachers of Secondary Education, which represents 33.67% of the total of this other population. Regarding the representativeness of the sample, considering a reliability level of 95%, the estimation error was only 4%. Thus, for each one of the study blocks, a response percentage of more than 25% of the total population was achieved, as shown in Table 1.

Table 1. Population and sample

Level	Stage	Total population	Sample	%
Elementary/Middle School	Primary Education	7	1	43%
High School	Secondary Education	2	6	67%

The list of the seven variables that we determined for this study were: gender, age, teaching experience, work situation, having held a position of responsibility in the management team, having held a position of responsibility in the coordination of stages or projects, and teacher development and training.

Considering the variable sex, in Figure 1 it is observed that for both Primary and Secondary Education the female population participating in the sample exceeds the male population.

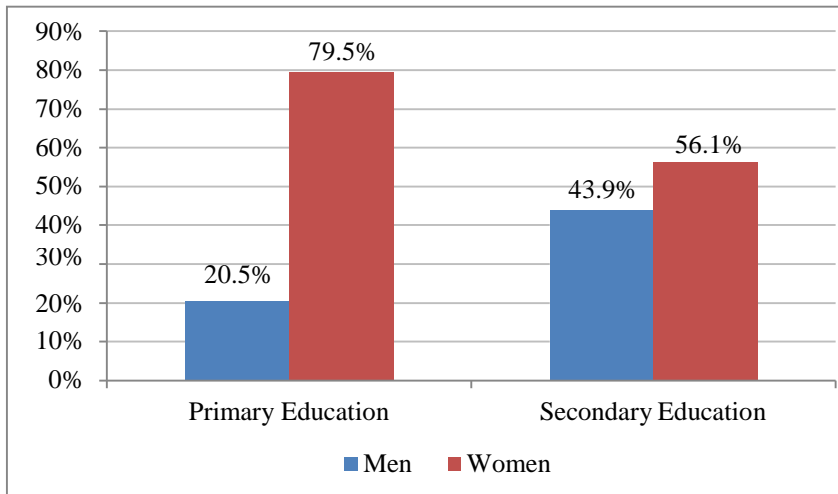
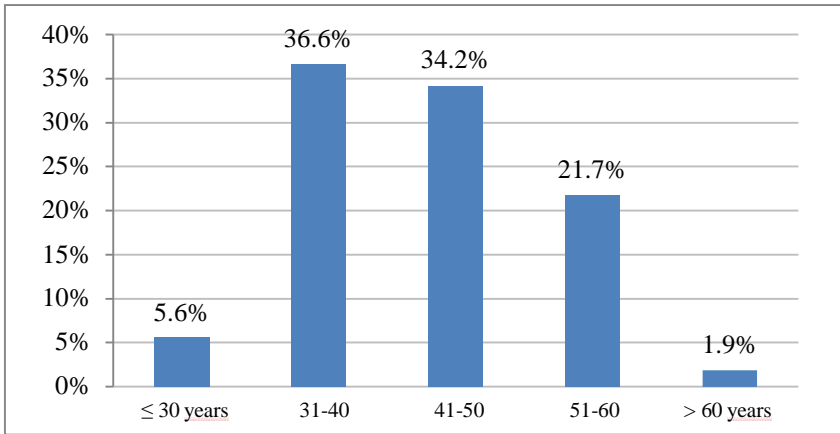


Figure 1: Distribution of sample by gender and educational stage

Secondly, the distribution of the sample according to the age of the respondents is reflected in Figures 2 and 3:

Figure 2: Distribution of Primary teachers by age group



In the sample of teachers surveyed in the Primary stage there is a 5.6% that is below 31 years; between 35 and 45 years old we find the majority of the teachers surveyed, representing 45.9% of the total. Teachers over 55 years old represent 10.54%.

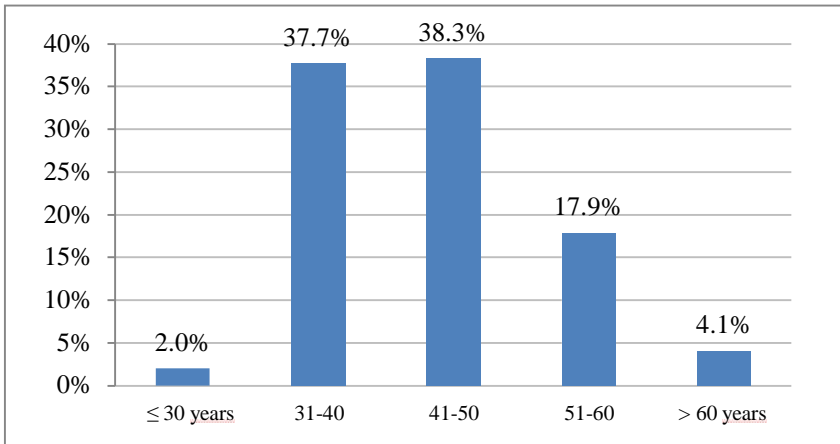


Figure 3: Distribution of Secondary teachers by age group

Regarding the Secondary teachers, only 2% of the sample is 30 years old or less. The range between 34 and 40 years is made up of 16.32% of the sample. The largest group corresponds to teachers who are between 42 and 46 years old, reaching 40.8% of the total.

Moreover, in relation to the years that participants have been carrying out their teaching, both in Primary and Secondary Education the sample is distributed as can be seen in Figure 4.

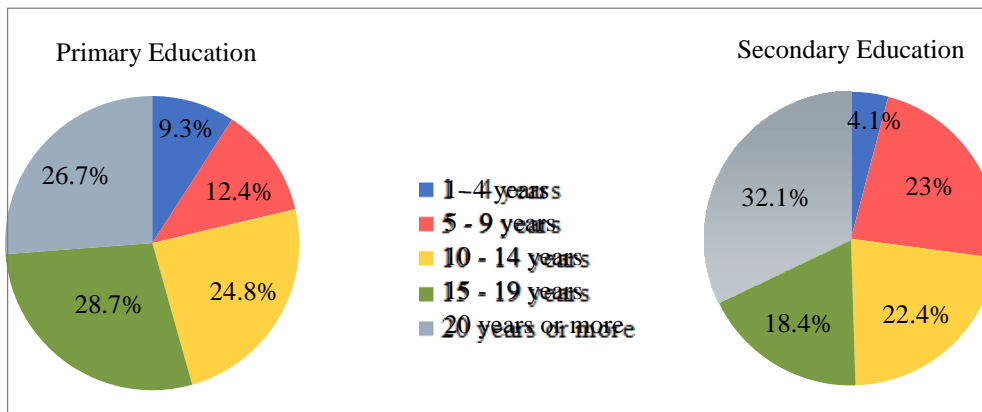


Figure 4: Distribution of sample by years of experience and educational stage

It is observed that in Primary Education most of the respondents have a teaching experience of more than fifteen years, exactly 28.7% have been exercising between fifteen and nineteen years, and 26.7% have been doing so for twenty years or more. In Secondary Education, the majority of respondents have a large experience in teaching. Exactly, 32.1% have twenty years of teaching experience or more, and 18.4% declare to have between fifteen and nineteen years of experience.

Regarding the distribution of the sample considering the labor situation of the respondents, Figure 5 shows that in the Primary stage there is 74.5% that are teachers who belong to the school staff, as opposed to 25.5% who are in eventual professional situation. In Secondary, the number of respondents in this situation is lower, 67.3%, with the percentage of substitute teachers standing at 32.7%.

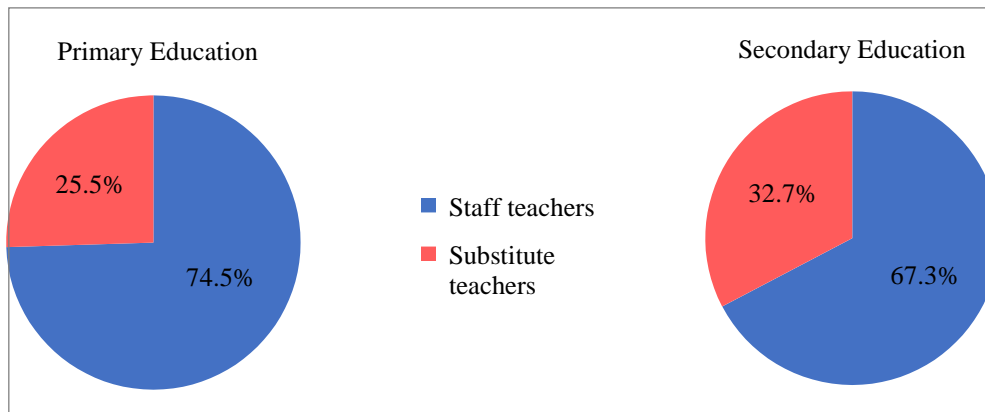


Figure 5: Distribution of sample by professional situation and educational stage

As shown in Figure 6, according to the positions of responsibility exercised, among the teachers of Primary Education surveyed 18% have been part of a management team at some point in their professional career while 82% have never done so. On the other hand, among the participants surveyed in Secondary Education the number of those who have ever been part of a management team is 22% while 78% have not had this work experience.

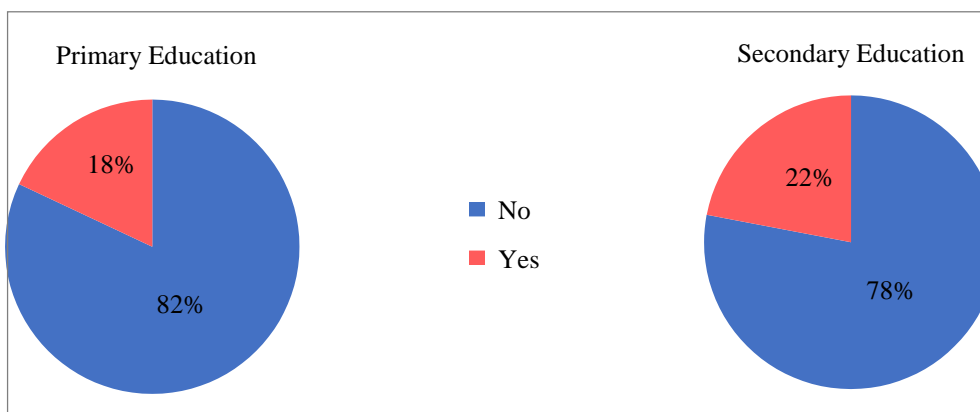


Figure 6: Distribution of sample by experience in school management and educational stage

Regarding other positions of responsibility in the life of the schools such as didactic departments or coordination of projects (Figure 7), 47% of teachers in Primary Education have exercised these positions of responsibility at some point in their career compared to 53% who have never done so. Among the teachers of Secondary Education surveyed, 55% have held these positions of responsibility at some time, compared to 45% who have never held any position.

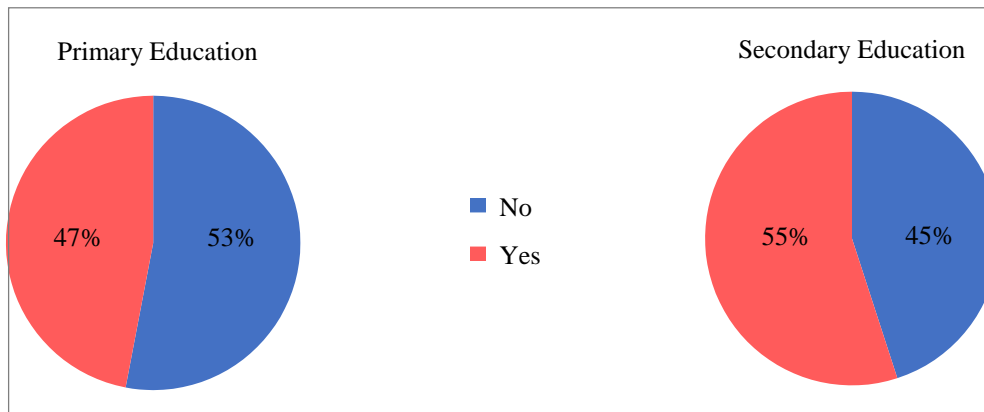


Figure 7: Distribution of sample by coordination position and educational stage

It was really important for this research to ask about the teachers' training in methodological innovation (Figure 8) and how they had obtained that training. It can be said that 87% of Primary teachers recognize they have received training in methodological innovation, compared to 13% who admit not having received any training in this sense. Regarding the sample of Secondary teachers, 86.2% state they have received training in innovative methodologies and 13.8% of respondents do not. Regarding the acquisition of this training, and according to the options proposed, the majority of teachers, both in Primary Education and Secondary Education, claim to have received training through courses organized by the State Education administration. Innovative formation from University has been received by 21.5% of Secondary teachers while in the case of Primary teachers 14.6% have done so.

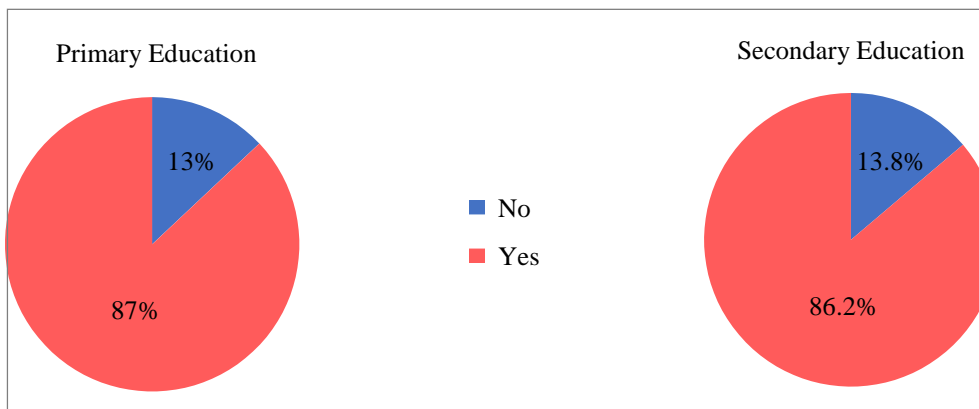


Figure 8: Distribution of sample by training in innovation and educational stage

### Instrument

It is a questionnaire of 70 items. The questions fulfilled the classic rules that, according to Abascal and Grande (2005), all questionnaires must comply: simple and not double, neutral, direct and related to the subject. Our questionnaire contains a series of statements on which the respondent has to indicate their degree of agreement or disagreement according to a Lickert scale. The questionnaire consisted of some items on the personal and professional situation of the teachers (gender, age, teaching experience, work situation, position on the management team, etc.) and other items related to methodological innovation and other aspects derived from or led to: motivation, evaluation, daily action, teacher coordination, management teams, pedagogical leadership, inspection and assessment, classroom activities, etc.

We obtained a Cronbach's Alpha coefficient of 0.830. Taking into account that a coefficient of 0.6 is acceptable (Thondike, 1997) and a value higher than 0.8 is considered good (George & Mallery, 2003), we can affirm that the reliability of our measuring instrument is high.

### **Data Analysis**

From the data obtained through the questionnaire, we carried out a contingency analysis. This analysis has allowed us to know if the teachers' responses were associated with the identification variables, which are gender, age, teaching experience, work situation, experience in school management, experience in coordination positions and training.

## **RESULTS**

### **Summary of Findings**

We have found significant associations in all the descriptive variables except in the labor situation of the teachers. The variable that presents a significant relationship with more items is that regarding the training of teachers in innovation followed by teaching experience or have been part of management teams. With the aim of throwing a general view of the results obtained, we are in a position to affirm that female teachers feel more secure and determined to methodological innovation, valuing more positively the results of some of the experiences that have been launched and in which they have participated. They give a stronger opinion to the need to face an educational change in their schools. Likewise, they show a greater willingness to innovate regardless of the support of the administration or any other sectors involved.

In terms of age, it is an essential factor when betting on methodological innovation. The age range between 48 and 55 years is the most reluctant to the changes and reorganization needed for innovative practices. Teachers of these ages distrust more in the improvement of academic performance through new teaching practices, are the most reluctant to work collaboratively with other teachers, reject to a greater extent the direct participation of parents in the life of schools and show a greater distrust in the educational administration.

Both male and female teachers with a teaching experience of 1 to 10 years are more predisposed to changes and new practices. They specially give strong value to the collaborative work between students and teachers and recognize the continuous training of teachers as a key element for successful teaching practice. Teachers who have had experience in school management are more determined to innovation and have greater confidence in the improvement through methodological and structural changes in schools. However, those teachers are more pessimistic about the teachers staff in carrying out the changes required. Undoubtedly, training in innovation is the most important value when it comes to relying on new educational methods and seeking success through innovation. At a higher level of formation, teachers are more convinced that an educational transformation is necessary in their schools, they take into high consideration parents' participation in schools. Besides, they are more convinced of the value of new methods in the teaching-learning process.

Regarding the Secondary stage, we found significant associations between all the descriptive variables and the items that make up the questionnaire.

### **Comparative Study between Stages**

From the results obtained in the analysis carried out, it seems very useful making a comparative study between the two stages investigated. It can be affirmed that the Secondary stage yields asymptotic relationships with all the descriptive variables of the questionnaire used. The Primary stage does not show any relationship of significance between the variables and the employment situation of the teachers surveyed. In the Primary stage, the three descriptive variables that show the most significant relationships are training in innovation, years of experience and belonging or having belonged to a management team with 15.71% of the total variables of the questionnaire in the first case and with 14.29% in the other two cases. On the other hand, in the Secondary stage the descriptive variables that show a greater number of significant relationships with the rest of the variables are training in innovation with a very high 37.14% of the total of the variables followed by age with 15.71%.

It is interesting to provide the percentage obtained by each of the descriptive variables in each of the stages analysed.

Table 2. Percentages of items of the questionnaire associated to each identification variable

Identification Variable	mary	ondary
Gender	43%	29%
Age	4%	71%
Years of experience	29%	5%
Professional situation		9%
Have or having had experience in school management	29%	7%
Have or having had responsibility in coordination	5%	1%
Training in innovation	71%	14%

In both stages female teachers are more determined to innovation. According to age, in Primary Education teachers between 47 and 58 years old are the most pessimistic towards innovative practices. However, this drop in teacher involvement in this age is not appreciated among teachers of Secondary Education, that maintain more constant values in all ages. However, in both groups younger teachers feel more willing to innovate teaching.

Regarding the teaching experience, the first 10 years of teaching are the most optimal when searching for educational changes and the application of innovative practices in the classroom looking for the improvement of academic results. There are no differences between substitute and staff Primary teachers in terms of educational innovation, contrary to what happens in the Secondary stage, in which eventual and substitute teachers are more optimistic and more determined in the face of innovation in their teaching practice.

Regarding the fact of having exercised a position of responsibility in school management, in both stages the teachers who have had this responsibility are more determined to face the necessary changes for the transformation of their schools, they are more willing to methodological innovation and they need less involvement of other educative agents or factors. Furthermore, in both stages these teachers show a greater pessimism about the teachers staff to carry out these transformations. Teachers who have experienced the coordination of any project or group of teachers in Secondary stage are more resistant to collaborative work and innovation. This fact is not appreciated among Primary teachers.

We are in conditions to affirm that teachers' development and formation is, by far, the most remarkable factor for the innovative profile of the teacher in the two stages investigated. It is verified that teachers with training in innovation are the most aware of the need for a change in the educational model. They are more willing to face the necessary changes and apply innovative methods in their teaching practice. These teachers show a high value for inclusive education and consider that the participation of parents in the life of the schools is a decisive factor in order to improve academic performance. For both stages the professionals who have received training in innovation through University obtain higher rates than those who have received this training through other organizations.

## CONCLUSIONS

In light of these evidences we can say that some teachers in the city of Ceuta present a positive attitude toward innovation, although others show themselves reluctant to innovative practices. It is also very decisive to affirm that the absence of the innovative teacher is more significant in the Secondary stage, level with a higher rate of school failure.

We can identify an innovative teacher as a young woman with a high level of formation, with an experience of ten years or less, without any distinction regarding her employment situation in the case of Primary level and substitute or eventual in the case of Secondary teachers. In both stages this teacher profile exercises or has exercised the position of responsibility in school management teams and has experience in coordination positions in the case of the Primary stage.



Through the results obtained in this study we can conclude that the methodological innovation in the city of Ceuta is not a reality yet and responds to personal performances from only a part of the teachers. Innovation is still considered to be as a current of educational thought that has managed to attract the attention of some of the collective, still far from the implementation as a key practice for the success and improvement of results and the best learning of all students.

## REFERENCES

- Abascal, E., & Grande, I. (2005). *Análisis de encuestas*. Madrid: ESIC.
- Aubert, A., Flecha, A., García, C., Flecha, R., & Racionero, S. (2009). *Aprendizaje dialógico en la sociedad de la información*. Barcelona: Hipatia.
- Bolívar, A. (2008). La autonomía de los centros educativos en España. Entre declaraciones discursivas y prácticas sobrerreguladas. In J. López (Dir.), *La autonomía de los centros escolares* (pp. 29-63). Madrid: Ministerio de Educación, Política Social y Deporte.
- Darling-Hammond, L. (2001). *El derecho de aprender. Crear buenas escuelas para todos*. Barcelona: Ariel.
- Gámez, R. A., Sánchez, C. A., García, M., & Cotrina, M. (2011). Explorar y comprender el fracaso escolar en el contexto multicultural de Ceuta. Respuestas de la institución escolar. In F. J. García & N. Kressova (Coords.), *Actas del I Congreso Internacional sobre Migraciones en Andalucía* (pp. 133-147). Granada: Instituto de migraciones.
- George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference*. Boston: Allyn and Bacon.
- Martínez, J. S. (2009). Fracaso escolar, PISA y la difícil ESO. *Revista de la Asociación de Sociología de la Educación*, 2(1), 56-85.
- OECD (2016). *Panorama de la Educación. Indicadores de la OCDE 2016*. Madrid: Ministerio de Educación.
- Sánchez, S. (2010). *El abandono escolar temprano en las ciudades de Ceuta y Melilla*. Madrid: Secretaría General Técnica del Ministerio de Educación.
- Thorndike, R. M. (1997). *Measurement and evaluation in psychology and education*. Upper Saddle River, NJ: Prentice-Hall.