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Classics of Education Sciences: Maria Montessori. Background knowledge and perceived meanings of University students compared to teachers attending Montessori in-service training courses

Klasyka nauk edukacyjnych: Maria Montessori. Wiedza środowiskowa i odkrycie znaczenia w ocenie studentów Uniwersytetu oraz nauczycieli uczestniczących w kursie szkoleniowym Montessori

Abstract

Maria Montessori's pedagogy is considered a "classics" of Education Sciences. In this contribution, a survey conducted with three different groups of subjects attending University lectures or in-service Montessori training courses is reported. Main research purpose is to discover background knowledge and perceived meanings of each group concerning the Montessori Method and its main characteristics. Data collected from the three groups under investigation are compared to identify the most macroscopic differences and / or similarities. Through the graphs produced, first reflections and conclusions are attempted, at the same time readers are invited to build their own opinions inferring other meanings or conclusions thanks to data and reading tools provided.

Keywords: Montessori pedagogy, Montessori Method, Quantitative methodology, Qualitative methodology, Education Sciences, Teachers, In-service training course, University students, Background knowledge.

Streszczenie

Pedagogika Marii Montessori jest postrzegana jako „klasyka" w naukach edukacyjnych. W pracy zaprezentowano wyniki badań ankietowych przeprowadzonych na trzech grupach badawczych: studentach oraz dwóch grupach nauczycieli będących uczestnikami szkolenia Montessori. Głównym celem badania było rozpoznanie stanu wiedzy środowiskowej i ustalenie, co poszczególne grupy rozumieją przez metodę Montessori. Zebrane dane przeanalizowano, aby określić najważniejsze różnice i podobieństwa w wynikach uzyskanych w tych grupach. Graficzne zaprezentowanie wyników badań pozwoliło na sformułowanie wniosków, czytający może także na ich podstawie samodzielnie zbudować własną opinię na ten temat.

Słowa kluczowe: pedagogika Montessori, metoda Montessori, metodologia ilościowa, metodologia jakościowa, nauki edukacyjne, nauczyciele, szkolenia zawodowe, studenci Uniwersytetu, wiedza środowiskowa.

Introduction

This contribution belongs to the category of surveys involving students of University courses in Educational Sciences. It is aimed at investigating: a) which is the previous knowledge students have got with respect to the course lectures' main issue; b) what are the perceptions of meaning they have already acquired about a specific topic that will be lectured.

Below we briefly illustrate the conditions under which the idea of carrying out this investigation has developed.

In the academic years 2016–2017 and 2017–2018 I was assigned a teaching position as Adjunct professor at Roma Tre University, Department of Education. I lectured Experimental Pedagogy, a three University credits teaching module addressed to second-year students of Educational Sciences bachelor degree. I led my first two lectures in March 2017 and decided to submit to students a survey in order to collect data about their background knowledge and perceptions concerning Maria Montessori's model of education, the "classic" in Education I was going to discuss as the main topic of my teaching program. Luckily, there was a large number of students attending so I was able to collect 110 fulfilled questionnaires. Many years before, I had distributed the same survey to two smaller groups of traditional elementary and middle school teachers who were attending in-service Montessori training courses realized in Bozen (Italy) by Roma Tre Montessori Research Unit, in which I acted as Research fellow and lecturing. These training courses were carried out under two separated agreements signed by Roma Tre University and the two Pedagogical Institutes (German-speaking/Italian-speaking) located in Bozen. The first in-service Montessori training course was attended by 20 traditional teachers while the second was attended by 29. Having collected and processed those data, too, I thought it would have been interesting to compare part of the data collected from the University students with those collected from the teachers' survey.

So, for our research purposes we processed data from three different groups:

Teachers group 1 = traditional elementary and middle school teachers attending in-service Montessori training course (20 subjects);

Teachers group 2 = traditional elementary teachers attending in-service Montessori training course (29 subjects);

University students group 3 = University students attending the bachelor degree's second year in Education (110 subjects).

During the first lecture held at Roma Tre University (March 2017), together with the survey I also decided to investigate students' perceptions about Montessori Pedagogy asking them to answer a stimulus question («The word "Montessori"… what makes me think at?») writing the answer/comment on a piece of paper so that I could then collect and process data in order to set up a list of perceived meanings to discuss in my next lecture. The question's purpose was to investigate students'

perceived image/meanings of the Montessori Pedagogy at a glance. In April 2018, having been asked lecturing on Montessori at the University of Bergamo, I decided to use the same stimulus question with students of the bachelor degree's first year in Education who were attending my lecture. As a result, I collected 57 answers/comments from Rome's students and 52 answers/comments from Bergamo's students. The comparison between data collected from these two groups is very interesting because it adds more features to our investigation about University students' perceived image/meanings of the Montessori model of education.

In the following chapters we explain by a methodological point of view the investigation carried out, show data collected and data processing outputs, try to make our own reflections for discussion. At the same time, we are showing readers useful charts in order to allow them to make their own considerations/reflections using data outputs by different categories and subjects. Then, in the final part of this contribution, we try to achieve some final conclusions considering comparison results from a wider point of view.

Methodology

The questionnaire

The survey is conducted by distributing a questionnaire to students. The tool was elaborated years ago by the Montessori Research Unit at Roma Tre University, a scientific unit of which I was an integral part since its foundation. With the students of my course I have utilized the tool as co-author and adjunct professor of Roma Tre University.

To start with, we give a description of the questionnaire structure as the main tool of investigation.

The questionnaire consists of four sections for a total of eight questions. Of these, only two are open-ended while the remaining ones have a structured response mode.

The questionnaire's four sections are:
– Section I: personal data
– Section II: qualifications
– Section III: background knowledge
– Section IV: Maria Montessori's personality and her system of education

For our investigation purposes, we mainly consider data collected in Section III and IV as detailed below:
– Section III: background knowledge

This section consists of 3 questions. We are considering here only Question No. 1:

Q1 Did you ever read Maria Montessori's books?

If yes, subjects must specify which title/titles choosing between five given titles. Subjects have also the possibility to make their choice adding a title which is not in the list.

– Section IV: Maria Montessori's personality and her system of education

This section consists of 5 questions. We are considering here only Questions No. 4 and No. 8:

Q4: Read terms shown in the following table and choose to what extent each of them is relevant to Maria Montessori's personality and her system of education.

29 terms are listed in the table (random order):

– Furniture
– Availability
– Directiveness
– Autonomy
– Peace
– Discipline
– Organization
– Feminism
– Pluralism
– Non-directiveness
– Freedom
– Handicap-special needs
– Interculturality
– Environment
– Learning material
– Constraint
– Conditioning
– Laxness
– Normalization
– Order
– Attention
– Work
– Facilitation
– Gradualness
– Motivation
– Socialization
– Individualization
– Cooperation
– Interdisciplinarity

Terms are listed in a completely random order. The purpose of this choice is to avoid influencing the perception and evaluation of respondents. Subjects must insert relevance of each term, according to their perceptions, giving a point from

1 to 4, where: 1 = very Montessori; 2 = quite Montessori; 3 = a little Montessori; 4 = not Montessori.

Q8: Indicate to what extent you agree with the following statements concerning the image of the Montessori system of education. Use the scale from 1 to 10, where 1 = maximum disagreement and 10 = maximum agreement.

8 statements are listed in the table:

1. The Montessori method is completely outdated
2. I would like to educate my child/children according to the Montessori method from birth to University
3. The Montessori method is good only for children with disabilities or special needs
4. The Montessori method can only be applied to children under 6 years
5. The Montessori method can be effectively applied with adults (1)
6. The Montessori method can be effectively applied with adults with low levels of functional literacy (2)
7. The Montessori method is very modern as it is
8. The Montessori method should be the nationally applied method at least in kindergartens

For each statement, subjects must indicate to what extent they agree or disagree with it, using values available in the scale (from 1 to 10).

The stimulus question
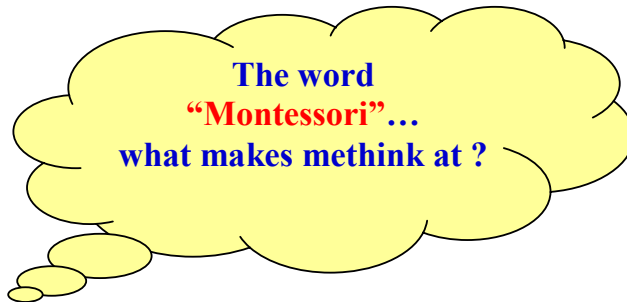
Subjects are asked to write on a sheet of paper up to 3 key-words they are thinking at in connection to the word "Montessori".

Questionnaire data processing and main results

Let's start showing results beginning from Section III of the questionnaire, Question no. 1 (Q1), displayed in charts by overall results and by groups.

As anticipated, groups under investigation are the following:

Teachers group 1 = traditional elementary and middle school teachers attending in-service Montessori training course (20 subjects);

Teachers group 2 = traditional elementary teachers attending in-service Montessori training course (29 subjects);

University students group 3 = University students attending the bachelor degree's second year in Education (110 subjects).

Most of the subjects under investigation are female and they never attended a Montessori course before (data processing from "Section I: personal data" and "Section III: background knowledge", Question 3). For the first time they are attending a training course within which the scientific profile and thought of Maria Montessori, as classics reference of the History of education, are deepened. Most subjects graduated from High School (data processing from "Section II: qualifications").

Section III: background knowledge
*Q1: Did you ever read Maria Montessori's books?*
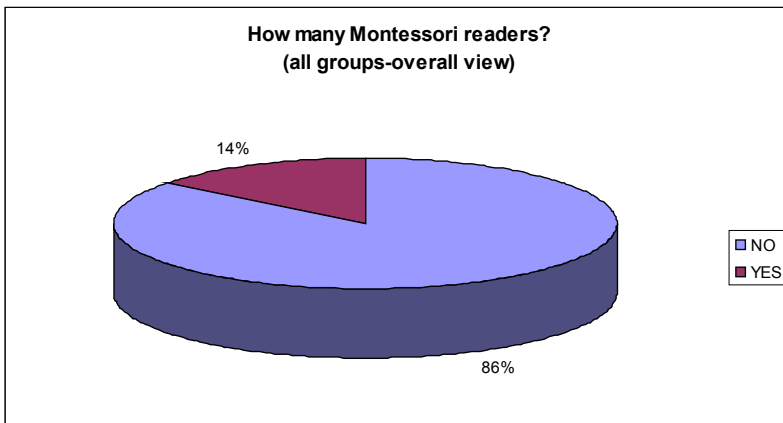
Chart no. 1 – Montessori readers (Group 1 + Group 2 + Group 3, overall view)[1]

Only 14% of respondents read at least one Montessori's book. Among these, the most read book is "The absorbent mind". In the second position, Montessori's masterpiece "The discovery of the child" followed by "The advanced Montessori Method" and "The secret of the child". In general, we would expect a greater percentage of readers. In particular, we note that the first published books are probably better known than others also due to their greater availability on the market.
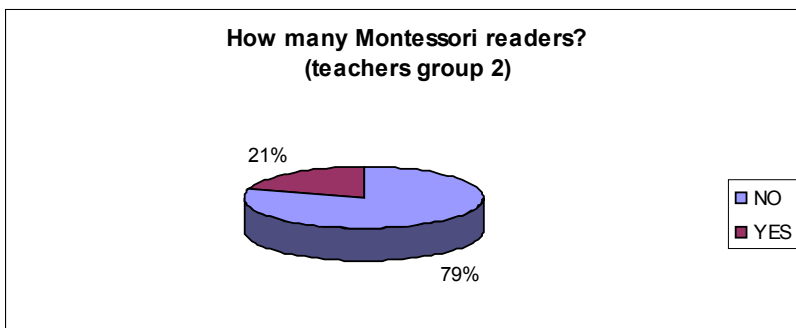
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[1] Source: own research data.
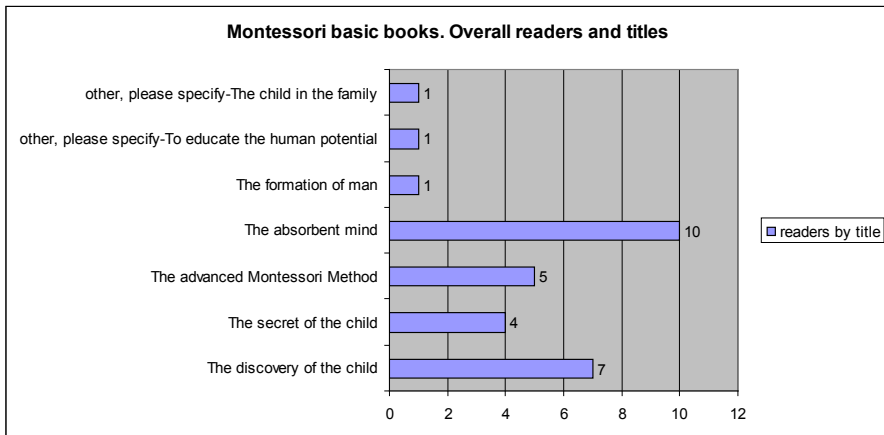
Chart no. 2 – Overall readers by title (Group 1 + Group 2 + Group 3, overall view)[2]
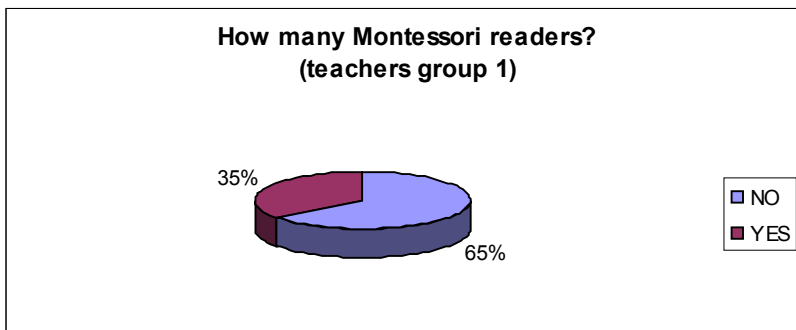
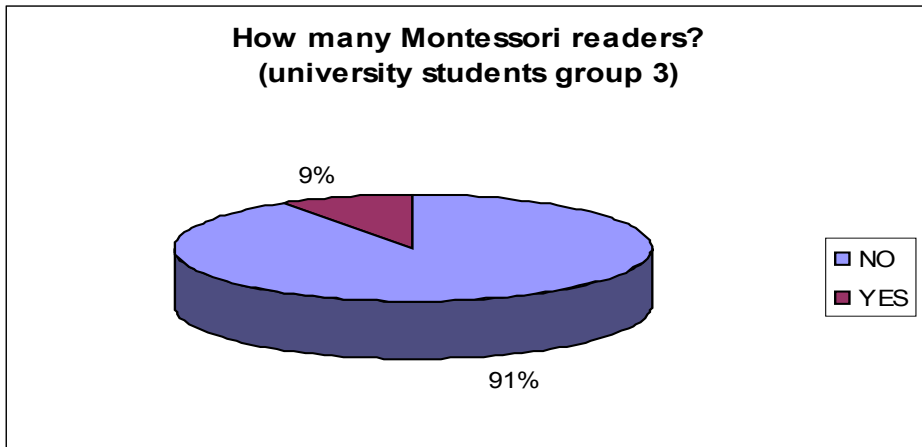**Chart no. 3 – Montessori readers (Group 1)[3]**

Chart no. 4 – Montessori readers (Group 2)[4]

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[2] Source: own research data.

[3] Source: own research data.

[4] Source: own research data.

**How many Montessori readers?
(university students group 3)**

9%

91%

- NO
- YES

Chart no. 5 – Montessori readers (Group 3)[5]

Group 1 scores 35% of readers, Group 2 21% and Group 3 only 9%. We would expect an higher percentage of readers especially for Group 1 and 2. Figure relating to University students is rather quite understandable, dealing with second-year students who have not yet had the opportunity to learn and deepen, during their study program, Montessori Pedagogy and its applications in the education system.

Now, let's show results from Session IV of the questionnaire, Question no. 4 (Q4).

Section IV: Maria Montessori's personality and her system of education

Q4: Read terms shown in the following table and choose to what extent each of them is relevant to Maria Montessori's personality and her system of education.


**Montessori Pedagogy. Relevance of selected terms
(teachers group 1)**

- very MM
- quite MM
- a little MM
- not MM
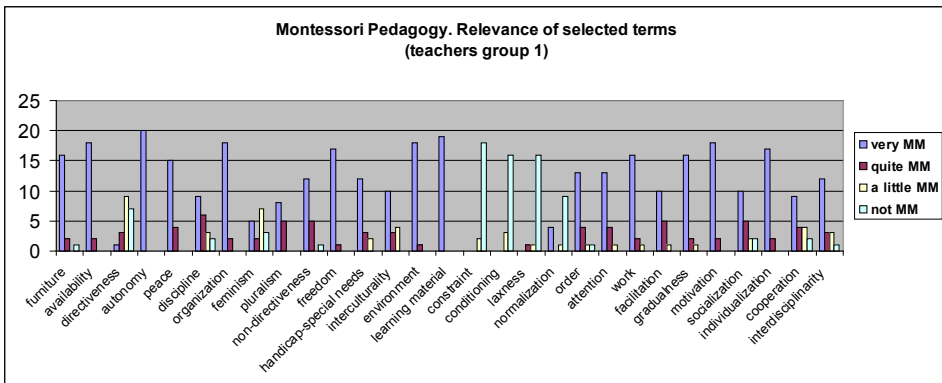
Chart no. 6 – Terms and relevance according to Group 1[6]

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[5] Source: own research data.
[6] Source: own research data.

For this group, terms that count a greater number of preferences (score >15), because they are considered more relevant than others, are 11: furniture, availability, autonomy, organization, freedom, environment, learning material, work, gradualness, motivation, individualization. The term "directiveness" appears as fairly controversial due to the fact it is mostly perceived "a little" and "not" Montessori, but also "very" and "quite" Montessori. Then we have a group of three terms, with a deliberately very high-contrasting meaning (constraint/conditioning/laxness), scoring very high and perceived as "not Montessori". The term "normalisation", too, scores very high as mainly perceived as "not Montessori" even if other subjects make an opposite choice perceiving it as "very Montessori". Finally, terms "autonomy" and "learning material" find the whole group perceiving them as "very Montessori" without any doubt.
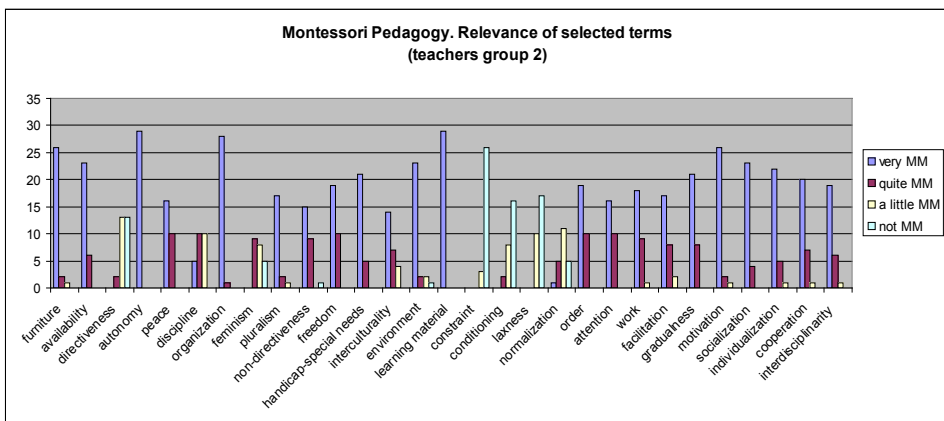
Chart no. 7 – Terms and relevance according to Group 2[7]

For this group, terms that count a greater number of preferences (score >25), because they are considered more relevant than others, are 5: furniture, autonomy, organization, learning material, motivation. We would like to point out that all these five terms are considered among the most relevant also by Group 1. The term "directiveness" appears as fairly controversial due to the fact it is mostly perceived "a little" and "not" Montessori, but also "quite" Montessori. Then we have a group of three terms, with deliberately high-contrasting meaning (constraint/conditioning/laxness), scoring very high as perceived as "not Montessori". The term "normalisation", too, scores very high as mainly perceived as "a little Montessori" even if other subjects make an opposite choice perceiving it as "not" or "quite" Montessori. Here too, as in Group 1, "autonomy" and "learning material" find the whole group perceiving them like "very Montessori" without any doubt.

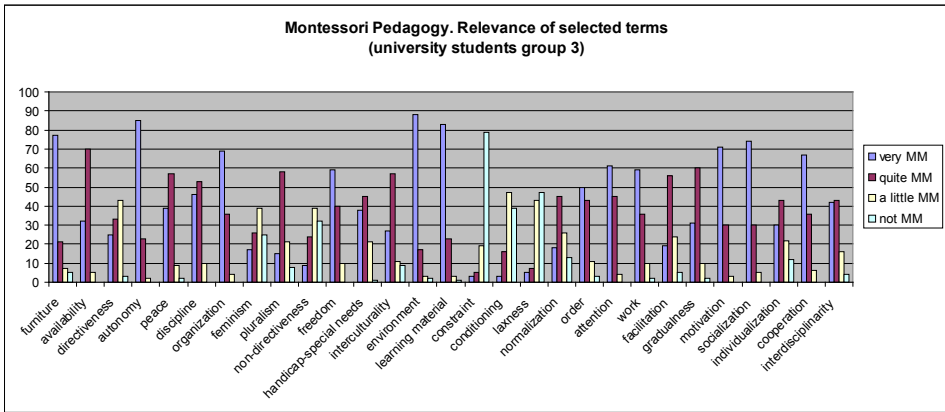_____

[7] Source: own research data.

Chart no. 8 – Terms and relevance according to Group 3[8]

For this group, terms that count a greater number of preferences (score >70), because they are considered more relevant than others, are 6: furniture, autonomy, environment, learning material, motivation, socialization. We would like to point out that five terms out of six are considered among the most relevant also by Group 1. Four terms out of 6 are considered among the most relevant also by Group 2 while the term "socialization" appears to be highlighted only by this group. The term "directiveness" appears as fairly controversial due to the fact it is mostly perceived "a little" Montessori, but also "quite" and "very" Montessori. Then we have a group of three terms, deliberately offering a high-contrasting meaning (constraint/conditioning/laxness), scoring high as perceived as "not Montessori" but also as perceived as "a little" Montessori by a rather large number of subjects. The term "normalisation", too, scores high as mainly perceived as "quite Montessori" even if other subjects make an opposite choice perceiving it as "a little" or "not" Montessori. Unlike the other two groups, the group of the university students shows a wider disparity of perceptions/opinions with respect to each single term and this feature leaves much room for discussion aimed at the improvement of their learning and knowledge on Montessori's scientific profile and system of education.

At the end, we show results from Session IV of the questionnaire, Question no. 8 (Q8).

Section IV – Maria Montessori's personality and her system of education

Q8: Indicate to what extent you agree with the following statements concerning the image of the Montessori system of education. Use the scale from 1 to 10, where 1 = maximum disagreement and 10 = maximum agreement.

Unfortunately, we are not able to show data concerning the traditional elementary teachers group (Group 2) because when they filled the questionnaire,

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[8] Source: own research data.

items were different in Section IV (Question 8 was not present). Instead of Q8, the Montessori Research Unit preferred to include an open-ended question regarding the expectations of each student about the attendance of the course.

For evaluation purposes, the values of the scale have been grouped around 3 macro-categories:
1) points 1 to 3 = maximum disagreement
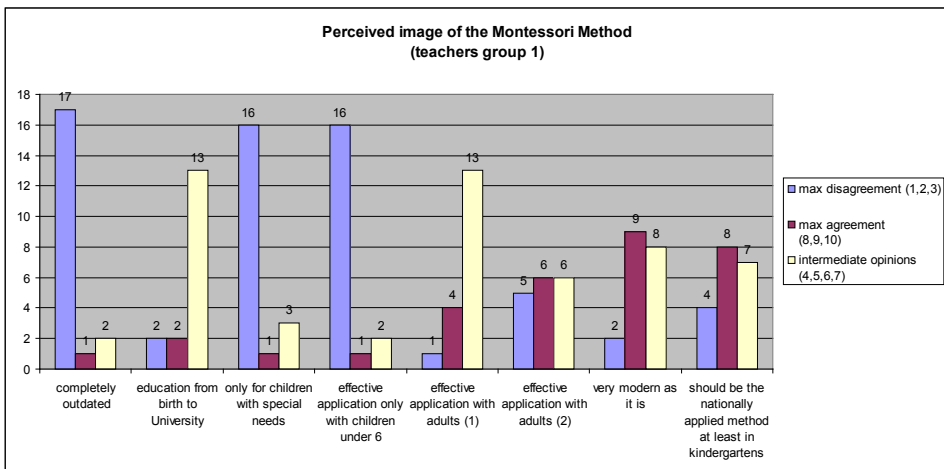2) points 4 to 7 = intermediate opinions
3) points 8 to 10 = maximum agreement

Chart no. 9 – Montessori Method. Perceived image according to Group 1[9]

As we can see, this group shows a compact, without doubt agreement about the perceived image of maximum disagreement for 3 statements:
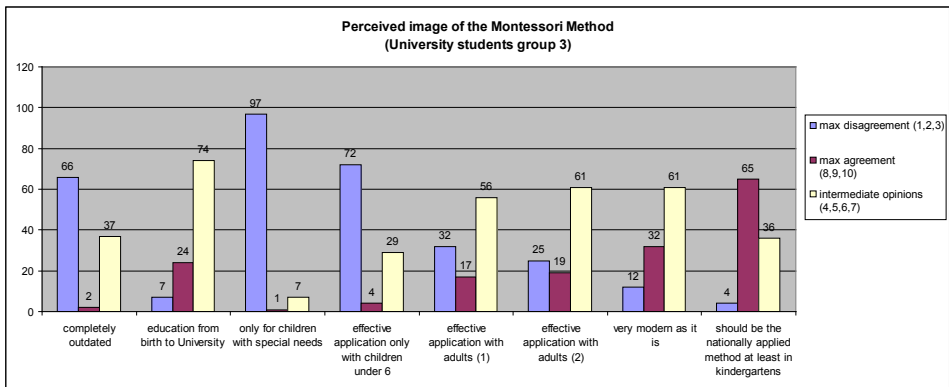– "The Method is completely outdated",
– "The Method is only for children with special needs",
– "The Method is an effective application only with children under 6".
    Intermediate opinions mostly arise around 2 statements:
– "The Method organizes education from birth to University",
– "The Method assures an effective application with adults".
Fairly critique and controversial is the perceived image of the statement: "The Method is effective if applied to adults with low levels of functional literacy", because we have a rather balanced distribution of choices between "max disagreement", "max agreement", "intermediate opinions". This output gives an interesting opportunity for further discussion and content reflections with university students.

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[9] Source: own research data.

Chart no. 10 – Montessori Method. Perceived image according to Group 3[10]

This group seems less compact than Group 1, anyway showing an agreement about the perceived image of maximum disagreement for 3 statements:
– "The Method is completely outdated",
– "The Method is only for children with special needs",
– "The Method is an effective application only with children under 6".

Notice that these are the same three statements highlighted without doubt by Group 1 as the perceived image of maximum disagreement.

Intermediate opinions mostly arise around 4 statements:
– "The Method organizes education from birth to University",
– "The Method assures an effective application with adults",
– "The Method is effective if applied to adults with low levels of functional literacy",
– "The Method is very modern as it is".

Almost completely agreed by the whole group, we find the last statement: "The Method should be the nationally applied method at least in kindergartens". For this item, "max agreement" scores the highest value if compared to the others of the same chart.

«The word "Montessori"… what makes me think at?».
Students' perceptions of meaning

As already mentioned in the Introduction, together with the survey we also asked students at Roma Tre University (March 2017) to answer a stimulus question about Montessori Pedagogy («The word "Montessori"… what makes me think at?»). We asked them to write the answer/comment on a piece of paper so that we could then

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[10] Source: own research data.

collect and process data in order to set up a list of perceived meanings to discuss with them later. The same activity was carried out with students attending the first year of the bachelor degree in Education at the University of Bergamo (April 2018). Rome's participants were 57 and we collected an overall number of 150 answers/comments; Bergamo's participants were 52 and we collected an overall number of 211 answers/comments. Below readers find Chart no. 11 for comparison between the two groups. It takes into consideration the perceived images/meanings, expressed at least by 4 students through terms they believe in connection with the Montessori Pedagogy. The output consisted in 19 terms. To facilitate reading, in Chart no. 11 terms are put in alphabetical order:
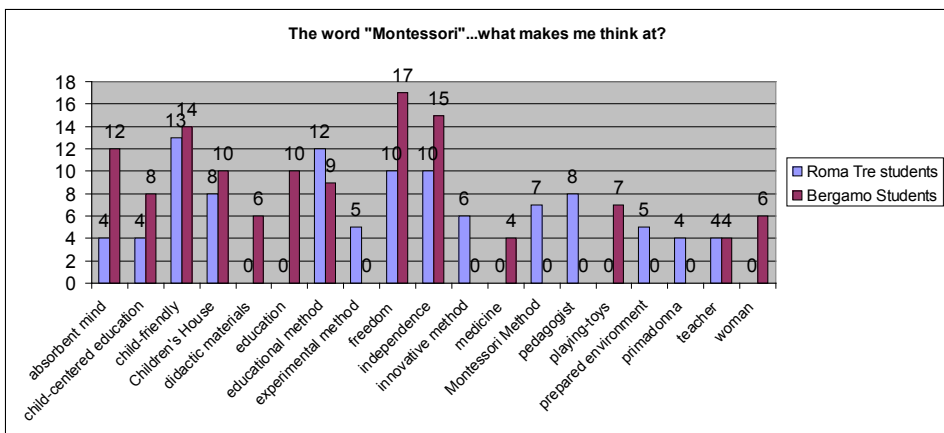
Chart no. 11 – Montessori pedagogy. Perceptions of meaning by University students (two groups compared)[11]

- – Absorbent mind
- – Child-centered education
- – Child-friendly
- – Children's House
- – Didactic materials
- – Education
- – Educational method
- – Experimental method
- – Freedom
- – Independence
- – Innovative method
- – Medicine

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[11] Source: own research data.

–   Montessori method
–   Pedagogist
–   Playing-toys
–   Prepared environment
–   Primadonna
–   Teacher
–   Woman

At a glance, comparison between the two groups allow us to highlight the following:

a) 6 terms out of 19 are exclusively mentioned by Roma Tre students (experimental method, innovative method, Montessori method, pedagogist, prepared environment, primadonna). On the other side, 5 terms out of 19 are exclusively mentioned by Bergamo students (didactic materials, education, medicine, playing-toys, woman).

b) 8 terms out of 19 are mentioned by both groups (absorbent mind, child-centered education, child-friendly, Children's House, educational method, freedom, independence, teacher). All these terms are very important key-terms of the Montessori pedagogy and students seem to have acquired a clear idea of their specific meaning in connection with the word "Montessori".

c) Considering the Roma Tre group, a rather original perceived meaning coming out is the term "primadonna" while "prepared environment" is a very important key-concept they have acquired which is not mentioned by Bergamo students at all.

d) Considering the Bergamo group, a rather original and controversial perceived meaning is the term "playing-toys" but we were not able to state if this perceived meaning is considered by students under a critical point of view or not.

e) As an overall result, Bergamo students show their knowledge of Montessori pedagogy through a more specific language of perceived meanings (absorbent mind, child-centered education, didactic materials, freedom, independence, medicine, woman) referable to all age groups in Montessori education. On the contrary, Roma Tre students show their knowledge through generalist meanings taken for granted (child-friendly, Children's House, educational method, experimental method, innovative method, Montessori method, pedagogist).

Conclusion

We have seen that, interesting data can be obtained through the administration of quantitative and qualitative survey tools (questionnaire, stimulus question) to students and teachers attending training courses in Educational Sciences. Our first analysis and reflections outlined in the previous chapters, together with the comparison between data reported, allow us to highlight the following:

a) a program of readings of Maria Montessori's books (basic books and further readings) should be establish for dissemination at the University, in schools (traditional and Montessori), in libraries, in Montessori training centers, in Montessori associations, in cultural organizations. Very few subjects read her books and titles chosen are foregone. Data collected gives confirmation that it would be extremely important and effective to insert systematically the "readings of classics in Education" activity during in-service teachers training courses. And one of the "classics" should absolutely be Maria Montessori.

b) Across groups under investigation, data outputs concerning the relevance given by respondents to selected terms referring to Montessori Pedagogy show the presence of some controversial perceived meanings. We consider it in a positive way because the margins of doubt and perplexity concerning different perceived meanings can be a wealth to be used for further discussion and shared reflections on Montessori model of education and generally. Therefore, each of these controversial terms should be analysed by the lecturer together with respondents aiming at improving pedagogical discussion and feedback during lectures.

c) We have seen that the exploration of students' perceptions of meaning concerning the main issue which will be developed and deepen during the teaching program, is a useful starting opportunity to actively involve University students. The tool helps "breaking the ice" and starting to dialogue involving students actively in the pedagogical reflective path and its multiple declinations and interpretations. It is a well used time for acquisition of students' previous knowledge, but also false clichés and stereotypes that students perceive around a classic author of Education Sciences.

Bibliography

Manion L., Cohen L., Morrison K., *Research methods in education*, Abingdon Oxford, Routledge, 2011.

Mezirow J. *Apprendimento e trasformazione*, Milano, Cortina, 2003.

Montessori M., *La scoperta del bambino*, Milano, Garzanti, 2000.

Montessori M., *La mente del bambino. Mente assorbente*, Milano, Garzanti, 2007.

Montessori M., *L'autoeducazione nelle scuole elementari*, Milano, Garzanti, 2000.

Nisbet J.D., Entwistle N.J., *Metodologia della ricerca educativa e della sperimentazione*, Roma, Armando, 1999.

Schön D.A., *Il professionista riflessivo*, Bari, Dedalo, 1993.