Teaching and learning Processes in Primary and Middle schools through the Flipped Learning Model, the Skills and the Vehicular Use of ICT.

CONCLUSIONS

The project...

- to highlight the role of ICT in the effectiveness of the flipped learning model and the integration of educational technologies...

- to improve the processes of teaching and learning in Primary and Middle schools...

- to provide a tool for educators...

A case study...

- to evaluate the use of the Flipped Learning Model and the effect of the integration of educational technologies...

- to analyze the impact of these technologies on the educational process...

- to propose recommendations for the improvement of teaching and learning processes...

The study aims to...

- to measure the impact of the Flipped Learning Model on student performance...

- to analyze the role of educational technologies in the learning process...

- to identify the strengths and weaknesses of the flipped learning approach...

- to propose strategies for the effective implementation of educational technologies...

- to contribute to the development of a more student-centered education system...

Questions

- What is the flipped learning model and how is it implemented in the educational process?

- How does the integration of educational technologies affect student performance?

- What are the challenges associated with the implementation of the flipped learning model?

- How can educational technologies be effectively used to enhance student engagement and motivation?

- What are the best practices for the implementation of the flipped learning model in Primary and Middle schools?
Teaching and learning Processes in Primary and Middle schools through the Flipped Learning Model, the Skills and the Vehicular Use of ICT.

CONCLUSIONS

The project:
- can highlight or deny the validity of the combination between teaching with the Flipped Learning Model, the skills, and the vehicular use of ICT in improving the processes of teaching and learning in Primary and Middle schools.
- will also provide useful information about the possibilities of increasing the use of ICT and the Flipped Learning Method in the teaching of different subjects in Primary and Middle Schools.

A case study...

- evaluate to collect data on the use of the Flipped Learning and teaching through competencies conveyed by the use of new technologies, to analyze, interpret, and on which to theorize.
- using the tools of pedagogy and didactic, the use of ethnography, sociology, anthropology and statistics.
- through a holistc view of reality in order to understand the processes and appreciate the competencies.
Still traveling because

FLIP Project - Italy

In Italy during the last years scholastic administrators have supplied the Primary and Middle schools with a lot of interactive whiteboards, personal computers and other different digital devices.

Up to now, even if the schools have digital devices available, only some teachers have started to teach in a competent way with these tools. In this context the Flipped Teaching and Learning could represent important strategies to increase the use of the new technologies within the schools. In the same time this new didactic method allowed our group to work on the ideas of competences and skills.
Throughout the two-year period 2014-2016 I have coordinated, with the collaboration of Gian Andrea Caresia, many training courses and workshop for teachers. These teachers developed different Flipped Learning activities in different Primary (age 7-10) and Middle (age 11-14) schools. During this period our research group (Giunti - FLIP) has examined in depth the idea of Flipped Learning and the concept of competence. The all of us have reflected upon how to adapt the meaning of competence on the idea of a teaching-learning conveyed by new technologies and implemented in the schools with the Flipped Learning Model.
In our part of the "Erasmus Plus FLIP-Project" we involved 17 classes of 4 schools. In this project 15 teachers tried to teach their own disciplines with the use of the Flipped Learning Method, the use of ICT and the idea of skills.
In May 2016 the "Giunti-Scuola" Publishing House will publish the book entitled "Flip your Classroom - la Didattica Capovolta" in which I have translated the original book of Jonathan Bergmann and Aaron Sams "Flip Your Classroom: Reach Every Student in Every Class Every Day (2012)" and the "Flipped Workbook (2014)". In addition to the translation, this Italian version of the book contains many reflections of our teachers-researchers (Flip Erasmus+ Project) and an essay I wrote upon the development of the Flipped Learning in the last years.
In Italy during the last years scholastic administrators have supplied the Primary and Middle schools with a lot of interactive whiteboards, personal computers and other different digital devices. Up to now, even if the schools have digital devices available, only some teachers have started to teach in a competent way with these tools. In this context the Flipped Teaching and Learning could represent important strategies to increase the use of the new technologies within the schools. In the same time this new didactic method allowed our group to work on the ideas of competences and skills.
What does competence mean?

• A competence is a complex capacity articulated in common and specific indicators (knowledge, know-how, know how to be).
• A competence is co-constructed between teachers and pupils through shared, individual and collaborative processes.
• The competences emerge through authentic tasks in which pupils can completely express themselves.
• Teachers should appreciate the competence more than evaluate it.
• Teachers and pupils should accomplish assessments with observation indexes (evaluation rubrics).
The digital competence

If we take apart digital competence, we can analyze it's constituent parts, it's own dimensions that it characterize, and its common dimensions to other competences.
Questions

• Is it possible to develop a didactic through competences using digital environments?
• Does the use of ICT in Flipped Teaching promote the development of student skills at disciplinary level?
• Does the use of ICT in Flipped Teaching promote the development of student skills at trasversal level?
• Can digital competence be gained by pupils in paths of disciplinary Flipped - Learning conveyed by the use of ICT?
• Which are the most effective technological devices to develop functional Flipped pathways of Teaching - Learning?
• Does the use of new technologies in teaching foster or instead restrict the level of cooperation of the group that uses them?
• How does the role of the teacher change by the use of new technologies and the Flipped Learning (i.e., perceptions of teachers and parents involved in the activities)?
A case study ...

- ... evaluative to collect data on the use of the Flipped Learning and teaching through competencies conveyed by the use of new technologies, to analyze, interpret, and on which to theorize.
- ... using the tools of pedagogy and didactic, the eyes of ethnography, sociology, anthropology and statistics.
- ... through a holistic view of reality in order to understand the processes and appreciate the competencies.
15 Teachers involved

**Primary Schools:** Maria Cristina Cioni, Zaira Piroddi, Daniela Marranci, Patrizia Melani, Stefania Mariotti, Tiziana Leggi, Elisabetta Premoli, Silvia Migliorini, Maria Festevole, Giusy Vallisa.

**Middle Schools:** Simona Ciaramella, Alessandra Cenci, Marco Bianucci, Marco Veri, Sara Ottanelli
Observations

In the different cases observed by our teachers, the hypothesis according to which the vehicular use of new technologies and the Flipped Learning in teaching through competencies enables:

**PUPILS**

to develop:
- disciplinary competencies
- digital skills
- soft and social competencies

**TEACHERS**

to reflect through observations, and the comparison with the researcher, on the effectiveness or ineffectiveness of the proposed activities to consolidate or improve the same
Students
Primary School: 143 - Middle School: 233
Total: 376
Subjects
Assessment
(One of the possibilities)

AUTHENTIC TASK

EVALUATION'S
RUBRIC

PROFILE OF
COMPETENCE

TEACHERS

PUPILS
<table>
<thead>
<tr>
<th>DIMENSIONI</th>
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<tbody>
<tr>
<td></td>
<td>Parziale</td>
</tr>
<tr>
<td>Consapevolezza del traguardo di apprendimento e autocontrollo</td>
<td>Ha aiutato i compagni a portare a termine l'attività solo quando gli hanno chiesto di farlo o gli hanno spiegato cosa fare</td>
</tr>
<tr>
<td>Disponibilità ad apprendere</td>
<td>Ha svolto l'attività solo quando gli hanno chiesto di farlo e ha faticato a collaborare con i compagni</td>
</tr>
<tr>
<td>Orientarsi nello spazio fisico ed in quello rappresentato</td>
<td>Fatica ad orientarsi sia nello spazio fisico che in quello rappresentato</td>
</tr>
<tr>
<td>Interpretare l'ambiente scolastico dal punto di vista geografico</td>
<td>Fatica ad interpretare l'ambiente scolastico dal punto di vista geografico</td>
</tr>
<tr>
<td>Utilizzare autonomamente differenti hardware e software</td>
<td>Utilizza con discreta dimostrezza differenti hardware e software</td>
</tr>
<tr>
<td>Usa le I.C.T. per portare a termine con successo diversi compiti</td>
<td>Individua attraverso le nuove tecnologie solo alcune soluzioni utili all'attività di studio</td>
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Logbook

The activities were developed and documented using the online platform Office 365 (that is completely free for schools). This kind of environment offers a lot of advantages in Flipped Teaching & Learning. Within the platform teachers can share digital videos, documents and other resources, students can access all these resources out of the school and can work together in a collaborative way.
All the resources, the activities and the products are documented within the digital platform.
CONCLUSIONS

The project:

• can highlight or deny the validity of the combination between teaching with the Flipped Learning Model through skills and the vehicular use of ICT to improve the processes of teaching and learning in Primary and Middle schools;
• will also provide useful information about the possibility of integrating the use of ICT and the Flipped Learning Method in the teaching of different subjects in Primary and Middle Schools.