

INTERED

Report Prepared by



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Introduction

In alignment with our research on Phenomenon-Based Learning (PBL), we employed a multifaceted approach to reference and resource acquisition. This involved leveraging next-generation search technologies to identify relevant materials based on carefully chosen PBL-related keywords. We further augmented this process by incorporating AI-powered research functionalities. This AI analysis, guided by the same PBL keywords and topics, enabled us to significantly broaden our research scope while ensuring the retrieved materials directly contribute to the project's core objectives.

The case study outlined is that of the Liceo Ginnasio Statale Virgilio in Rome.

Since 2017, the school has been engaged in a renewal of its teaching methodology and to this end has created a particular pathway called A.T.L.A.S. (Art – Translation – Laboratory – Knowledge), with a multi and inter-disciplinary educational approach, aimed at merging humanistic studies and science through the study of classical culture. The aim of the project is to place the student at the centre of the learning process and to make them an active participant through the experience of collaboration and laboratories.

The methodology provides for an inclusive teaching plan of co-teaching moments, during which the study of Art History, starting in the first year, is supported by teachers of History, Mathematics, Physics and Philosophy, with a view to experimenting with a plural and problematising approach, which is a method in line with the most recent academic orientations.

Students are also offered the optional opportunity to stay at school for a few hours per week during which they can ask a teacher of their subject area for study support, if necessary.

List of Reference and Resources

No	Name of the Resource	Authors	Publication Date	Keywords Used	Country (If Applicable)
1	Phenomenon-Based Learning in Teaching a Foreign Language: Experiences of Lithuanian Teachers	Nijole Ciuciulkiene, Ilona Tandzegolskiene-Bielaglove and Martyna Culadiene	2023	phenomenon-based learning (PhenoBL); teaching a foreign language; didactic competencies of foreign language teachers	Lithuania
2	An Artificial Intelligence-Enhanced Phenomenon-Based Learning Approach for Interdisciplinary Understanding and Speaking Skills	Surattana Adipat	2023	interdisciplinary understanding, speaking skills, artificial intelligence, phenomenon-based learning, preservice teachers	Thailand
3	Interdisciplinarity in Physical Education: Effect on Students' Situational Interest	Benoit Tonnetti and Vanessa Lentillon-Kaestner	2023	interdisciplinarity; physical education; situational interest; secondary school	Switzerland
4	Teaching interdisciplinarity in secondary school: A systematic review	Benoit Tonnetti and Vanessa Lentillon-Kaestner	2023	interdisciplinarity; interdisciplinary teaching; secondary school; education	
5	Development of the Mathematical Problem-Solving Ability Using Applied Cooperative Learning and Polya's Problem-Solving Process for Grade 9 Students	Lalita Yapatang and Titiworada Polyiem	2022	mathematical problem-solving ability, team assisted individualization, problem-solving processes	Thailand
6	Phenomenon-Based learning of multiliteracy in a Finnish upper secondary school	Marjaana Kangasa and Päivi Rasib	2021	Multiliteracy; upper secondary school; phenomenon-based learning	Finland

7	The effect of phenomenon-based learning approach on students' metacognitive awareness	Eşref AKKAŞ and Cevat EKER	2021	Phenomenon-based learning, metacognition, metacognitive awareness.	Turkey
8	Una scuola nuova, l'esempio dello I.E.S. Cartima - p.105-114	Francesca Bordini	2020	Innovazione; Scuola secondaria; Project Based Learning	Italy - Spain
9	PHENOMENON-BASED APPROACH TO TEACHING RUSSIAN AS A FOREIGN LANGUAGE IN THE CULTURAL CONTEXT	Tatiana S. Makarova, Evgenia E. Matveeva, Maria A. Molchanova and Elena A. Morozova	2020	Phenomenon-based learning, teaching RFL, cultural awareness	Russia
10	A best-practice model for integrating interdisciplinarity into the higher education student experience	E.J. Poer and J.Handley	2019	collaborative learning; higher education, interdisciplinarity; interdisciplinary; teaching and learning	United Kingdom
11	Phenomenon-based Learning in Finnish and Vietnamese Upper Secondary School Curriculum for English as a Foreign Language	Hung Phi Nguyen	2018	phenomenon-based learning, national curriculum, Finland, Vietnam	Finland - Vietnam
12	Phenomenon Based Learning Implemented in Abu Dhabi School Model	Dr. Eija Valanne, Ms. Rafeea Al Dhaheri, Ms. Riina Kylmalahti and Ms. Heidi Sandholm-Rangell	2017	Phenomenon-Based Learning, cooperative planning, Abu Dhabi School Model, cross-curricular approach, curriculum delivery, Finnish approach to education, storytelling Implementing Abu Dhabi School Model	United Arab Emirates
	Professional Calling in Higher Education - Challenges of teacher education in the				

13	Carpathian Basin – Reforms in Teacher Education, A Phenomenon-Based Curriculum for Teacher Education (p. 12–18)	Vv. Aa. (Pentti Moilanen)	2015	phenomenon-based curriculum; reform in teacher education; research-based teacher education	Finland
14	Mandated interdisciplinarity in secondary school: the case of science, technology and mathematics teachers in Quebec	Hasni Abdelkrim, Lenoir Yves and Alessandra Froelich	2015	interdisciplinarity, science and technology, STEM, School subject, curriculum	Canada
15	Moving beyond subject boundaries: Four case studies of cross-curricular pedagogy in secondary schools	Jonathan Savage	2012	Cross-curricular; Curriculum development; Pedagogy	United Kingdom

Case Study Presentation

Introduction

The Liceo Ginnasio Statale Virgilio has been for over fifty years a reality in the Roman secondary education scene in continuous movement and evolution. It is located in Via Giulia, right in the historic centre, housed in a building built in the late 1930s by architect Marcello Piacentini, to which the seventeenth-century Ghislieri College and the Church of the Holy Spirit of the Neapolitans are annexed.

Its privileged geographical location, easily accessible, and the multitude of courses of study immerse it in a polychromatic reality open to experimentation with new approaches and educational models as well as embracing a vision of education marked by internationality and an awareness of cultural importance.

The facility currently accommodates approximately 1050 pupils, divided into 46 classes, with an average of 22 pupils per class. In its educational offer it is possible to choose between: Liceo Classico, Liceo Scientifico, Liceo Linguistico, Liceo Linguistico Internazionale Spagnolo, Liceo Linguistico Internazionale Francese.

The case study focuses on a particular section of the classical address called ATLAS (Art – Translation – Laboratory – Knowledge) created in 2017 with the intention of merging the humanistic studies and science through the study of classical culture. Interdisciplinarity is the project's distinguishing feature; pupils are offered co-participation teaching hours where themes related to art, myth and history are tackled from different perspectives, fostering in the class the development of a deep-rooted critical sense and harmonious learning.

The project, born almost as a gamble from the minds of a few teachers sensitive to the physiological changes that teaching undergoes with the passage of time, is today one of the school's strong points, as it is capable of attracting pupils who, driven by curiosity towards innovation, enthusiastically face the challenges of a

stimulating course that places them at the centre of the phenomenon, making them an active part of learning. It is an example of a situation where the focus has shifted from what to teach to how to teach it.

How do the case study selected implement interdisciplinary approaches?

ATLAS is a new track of the traditional Liceo Classico based on an educational and methodological innovation that includes the study of art history starting from the first year instead of the third. This translates into the addition of one hour to the canonical 27 weekly hours total planned for the first two years of the five-year course.

During these hours, the classes deal with themes of classical art history through a didactic approach conducted in collaboration with teachers of geography and history, Greek and Latin, with targeted in-depth sessions (focus) capable of immersing the students in a detailed dimension of the historical and cultural contexts of the individual works and monuments studied, in favour of a greater extensiveness of knowledge awareness.

The entire work aims to address the topics related to classical art more calmly and critically, so as to lighten part of the syllabus for the following three-year period and to enable the topics to be aligned with those in the syllabus for the subjects of geography, history and classical literature.

Having more time available allows them to experience both learning and teaching in a more relaxed atmosphere, and it becomes possible to increase the number of class outings to one per month. Pupils not only study art from an academic point of view, but also have the opportunity to experience it first-hand by visiting museums and archaeological parks, where they are involved in the promotion and management of culture, developing their problem solving and cooperation skills.

Classroom work is complemented by a study-assistance afternoon programme, where pupils have the opportunity to stay in school for two hours a week and ask for clarification or practice with teachers of Latin and Greek subjects. The variety of viewpoints offered and the workshop-like atmosphere of the activity help pupils strengthen their critical sense as well as the awareness of their own abilities.

Why did they begin to implement this methodology in education?

The need for methodological innovation arose in 2017 from the realisation that, in more or less regular cycles, the classical high school is experiencing a downturn. In fact, in recent years, many schools of classical studies have experienced a decline in enrolments, due to the undeniably greater interest in scientific subjects than in the humanities.

Teachers and headmasters therefore reflected on the trend in their enrolments and, based on the data, opted to set up a commission to consider what they could do to change the educational offer and make the study of classical subjects more appealing. The response was the birth of the experimental ATLAS section, where interdisciplinarity and laboratory experiences join forces to meet the needs of pupils who are increasingly attentive to the practical aspects of learning at school desks.

What challenges do they face?

Although teaching with a workshop and interdisciplinary focus arouses a great deal of enthusiasm, it also meets with some resistance among both pupils and teachers, who sometimes find it difficult to deviate from the classical approach of their own curricula and react rigidly to the need to merge with the requirements of their colleagues in other subjects.

On the other hand, one of the stumbling blocks that an interview with the art history teachers of the ATLAS sections revealed is the undeniable complexity of the nomenclature that first-year boys and girls have to master in order to be able to deal with classical art topics. In some cases, it is still difficult to prevent the playful spirit from transforming the teaching hours carried out in co-presence into moments of play. In conclusion, it was found that in the aftermath of the Covid-19 pandemic, it became difficult for some pupils to feel comfortable in workshops and sharing contexts. However, teachers report that the trend is improving exponentially.

Finally, the most critical issue appears to be the difficulty in managing the pupils' class time during the days when the art history teachers are busy with the pupils of the sections on educational outings.

Lessons Learned and Results

Since 2017, the ATLAS sections have grown from one to three, with two fifth classes graduating this year. The school is proud of its achievements and the work has shown that:

- co-presence has made teaching fun and productive;
- the pupils benefit from exposure to multiple and multidisciplinary points of view, as it helps them to overcome the gap between the scientific and humanistic aspects of knowledge, but also to break out of the pattern of a rigid perspective;
- the transition to the next three years is smoother: the pupils arrive more prepared and aware of what they have learnt, with a solid foundation in classical art history, Latin and Greek more in line with the history and philosophy syllabus they will face. Working with trained minds means, for the teachers, being able to take the freedom to change the cards on the table and mix up the topics of the syllabus without the fear of leaving any element of the class behind;
- the interdisciplinary approach favours the learning experience of pupils with specific learning disorders;
- at the end of the five years, the pupils develop such a mastery of the topics covered that they report feeling like specialists in the field. This contributes to giving their work a sense of quality.

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