

Sapiens

Skill Assessment
for Personalised
Competence
Networks

THE CONSORTIUM

- Fundacion Universidad Loyola Andalucia (Spain)
- FH Joanneum Gesellschaft mbh (Austria)
- Universität Bielefeld (Germany)
- Universidad Pablo de Olavide (Spain)
- International Consulting and Mobility Agency Sociedad de responsbilidad limitada (Spain)



Co-funded by the
Erasmus+ Programme
of the European Union

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Welcome to our 1st SAPIENS Newsletter!

SAPIENS is a project funded by the European Union through Erasmus +KA226 program. It has set out to develop a **micro-competence assessment tool** for Higher Education Institutions in order to improve student learning.

How? By offering individualized itineraries, detecting gaps in the acquisition of micro-competences and providing them with personalized exercises adapted to their needs.

In doing so, using network theory, the cognitive processes that a student has followed when solving an activity are analyzed. This allows the creation of an individual learning network of each student (and the class group too) that goes beyond a mere final grade in a course.



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Fundación Universidad Loyola Andalucía



Isabel Lopez and David Becerra, Main Researchers, SAPIENS, Universidad Loyola

Preface by David Becerra, Coordinator of the project:

"SAPIENS aims to collaborate with higher education professors who teach physics, mathematics, statistics, and economics by helping them implement new methodologies and online competency assessment tools. To this end, it has developed an innovative tool for detecting and assessing student competencies. The tool thus makes it possible to identify learning deficiencies and gaps, as well as those skills that students have consolidated. The tool issues an individualized report for each student, class, and subject. With all this, we can affirm that SAPIENS enhances teachers' abilities to design and implement high-quality curricula for their students according to the learning needs that have been detected by the assessment tool".

If you are a teacher, and you want a free app for automatic evaluation and learning analysis, as well as practical tips to use it and make your students develop their maximum potential in your subject, then check out the **SAPIENS website: <https://sapiens-project.net/>**

FH JOANNEUM Graz



Focusgroupmeeting_FH JOANNEUM_Prof. Rupert Beinhauer & his students

FH JOANNEUM tested the prototype of the SAPIENS method in the winter semester 2021/22 in the course "Qualitative and Quantitative Methods" at Bachelor level. Although a very early prototype was used and there were still some minor problems to be solved during the semester, the students drew a very positive conclusion: Sapiens gave them the opportunity to have their own personalised exercise books that they could work on whenever they wanted and as intensively as they wanted. The students also agreed that the extra exercises and quick feedback on demand were very valuable, especially for an exercise book. They recommended that the methodology be retained and used in future semesters. They liked the Moodle exam associated with the course and were less interested in using SAPIENS as a grading tool, but felt the development and feedback on the microcompetencies would add interesting value as an assessment and feedback tool for students during their studies to track progress in the various microcompetencies. The course material will be updated, improved and re-tested this summer semester with a newer prototype at Master's level.

FH JOANNEUM Graz

The Team behind SAPIENS at FH JOANNEUM



Rupert Beinhauer, Senior lecturer and Master Mind

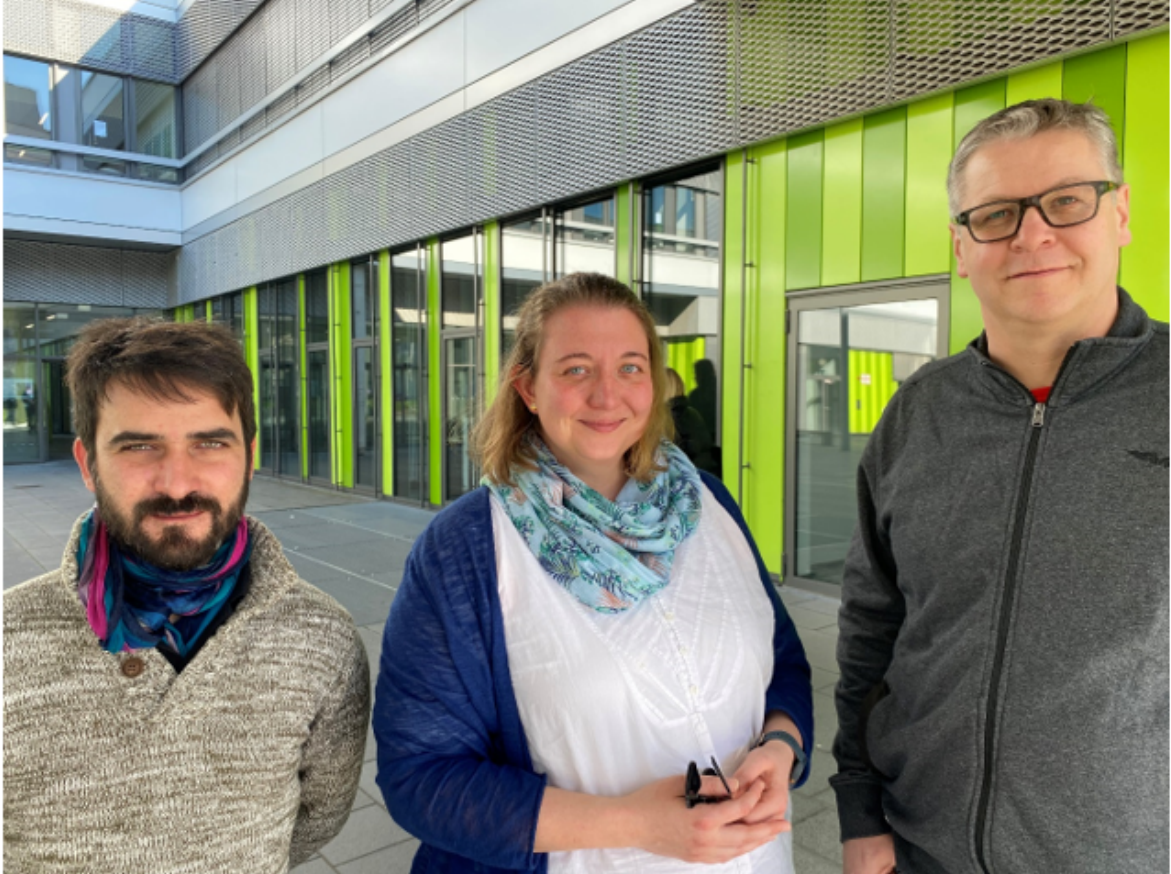


Ingrid Kienberger, Project Manager



Yao Sossou, Social Media Lead

Universität Bielefeld



Samuel Alvarez, Judith Huget and Michael Kleine

The Uni Bielefeld Team wants to introduce themselves. Samuel, Judith and Michael are currently working hard to implement SAPIENS in the next semester. Prospective teachers will deepen their knowledge about tasks, mistakes in mathematics and language in mathematics classes with the support of the tool. They are excited to try the tool and are fascinated by the possibilities this tool provides. They are looking forward to tell you more about this tool.

Currently, the SAPIENS-Team of Bielefeld University is working on developing tasks for prospective teachers. As SAPIENS is an interdisciplinary project, the prospective teachers will get individual tasks for their development.

What exactly has happened so far?

The team of the Bielefeld University has been working intensively to create the learning pathways with the SAPIENS tool for the courses of the **summer semester 2022**. More than 30 students participated in 3 courses in mathematics education and benefited from the work organised in individualised homework sheets that accompanied the work done in the classroom. In total, 140 tasks for the students' professionalisation have been developed. The course "Preparations for the practical semester in teaching Mathematics" taught by three different teachers will be the first trial to the SAPIENS tool. The students of the Bielefeld University are the pioneers in using the SAPIENS tool.

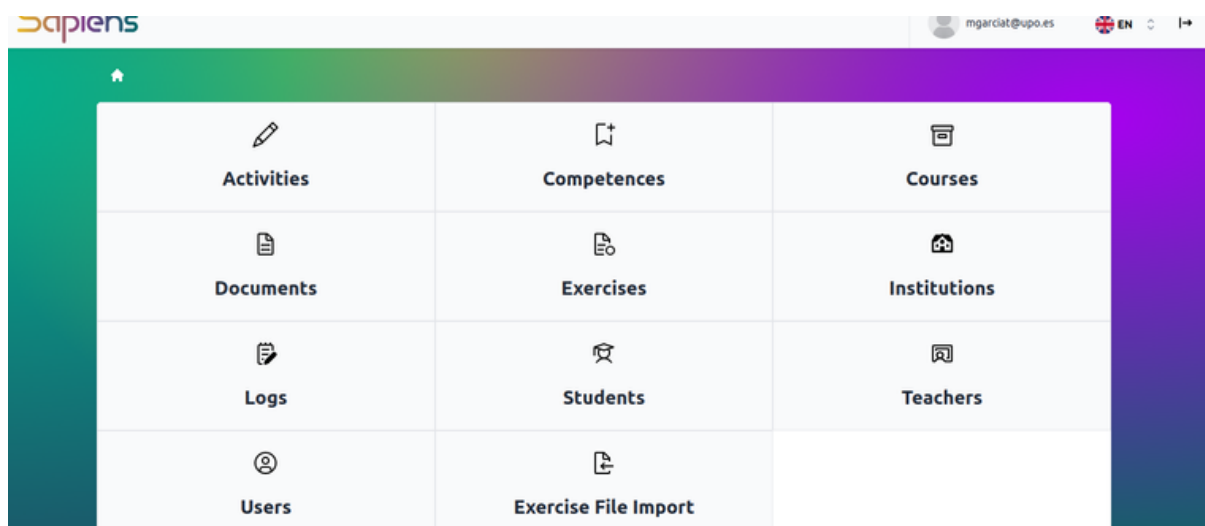


Universidad Pablo de Olavide



Francisco Gómez Vela, Miguel García Torres and Federico Divina

The main activities of Universidad Pablo de Olavide team are the monitoring of the development of the SAPIENS tool, the coordination between Green Slope (the company in charge of the development of the tool) and the other partners of the SAPIENS project, as well as the testing of the tool and the creation of contents for computer science courses.



Main menu of the SAPIENS tool.

The SAPIENS tool will allow, not only the creation of student customized exercises, but also to analyze the performance of each student according to the other students of the same course.

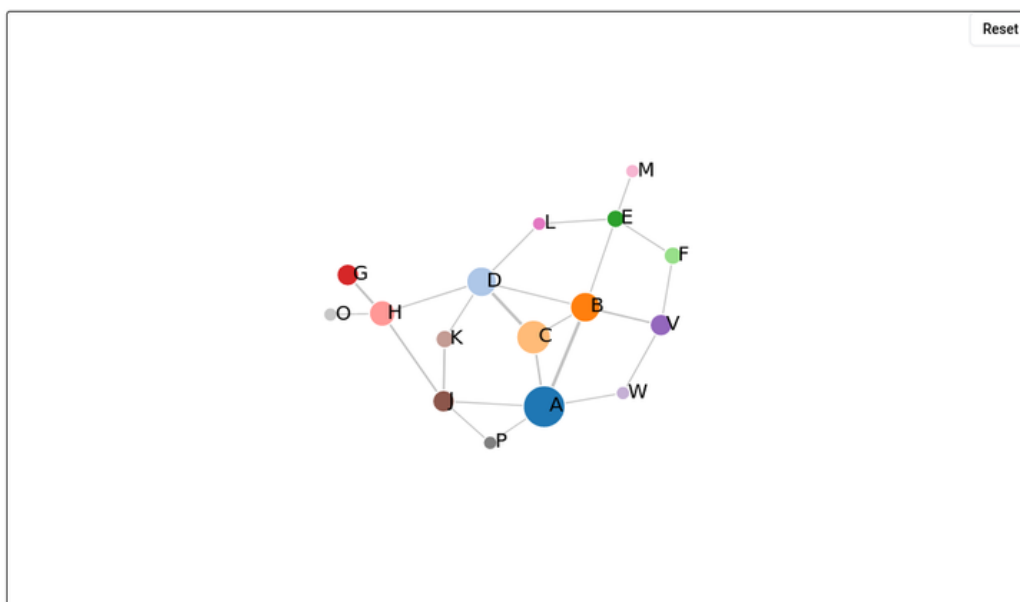
As a result of such analysis, the tool can provide a microcompetences graph for each student. Such visual information will allow the teachers to follow the progress of students during the courses of the academic year.

The SAPIENS application will provide updated information at any time. Such feature will allow teachers to address the issues students are facing with the objective of strengthening the students' skills in those microcompetences for which the performance has not reached a minimum level.

Competences

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Nodes: 16
Density: 0.19
Diameter: 5
PI Index: 4.60



Microcompetencies network represented as a graph.

International Consulting and Mobility Agency Sociedad de responsabilidad limitada

IINCOMA is a training and research centre based in Seville (Spain) with extensive know-how and experience in the development and coordination of international cooperation projects mainly funded within the framework of EU programmes, especially in the field of education, training and research.

On the one hand, as experts in education projects, INCOMA leads the development and digitisation of content for the online training, which will be one of the results of the SAPIENS project.

On the other hand, as experts in European project management, INCOMA ensures the quality of the SAPIENS project, evaluating the different activities carried out and the partners' satisfaction with it.



Pilar Naranjo is a researcher and trainer at INCOMA's Innovation & Research Department.



Juan Guerrero, one of the founders of INCOMA, is currently the coordinator of the Innovation and Research office of INCOMA.

FINALLY, what specifically is SAPIENS about?

- SAPIENS will develop, test and implement an **innovative tool** to detect and **assess learning shortcomings/gaps** among students individually and the class as a whole;
- SAPIENS will **empower professors** teaching Physics, Mathematics, Statistics and Economics to implement new, competence-based assessment methodologies and tools in online or blended learning pathways in Higher Education studies;
- SAPIENS will **increase professors' skills** to design and implement high-quality curricula for students, according to their learning needs and based on evidences provided by the SAPIENS Competence Assessment Tool;
- SAPIENS will **promote a greater adaptation of curricula and training programmes** by adopting an assessment tool that is based on competences, thus making qualifications easier to understand (namely by the labour market);
- SAPIENS will **enable Higher Education Institutions to improve their capacities** to offer online or blended learning pathways, while also promoting their competitiveness in an increasingly more digital world and fostering transnational cooperation.

Why do we believe this project is so important?

Education and training systems are currently facing unprecedented challenges as a result of the COVID-19 pandemic and, for many, digital teaching and learning was the only viable emergency response in times of confinement measures and lockdown.

Building on these evidences, SAPIENS aims at reinforcing the ability of education and training institutions to provide high-quality and inclusive digital education by providing Professors with an innovative, digital competence-based assessment tool that supports online and blended learning training pathways, which is of increased importance in light of the effects of the COVID-19 crisis in education.

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