

Αναλυτική Εκπαιδευτικών Δεδομένων για την υποστήριξη του Εκπαιδευτικού Σχεδιασμού

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ΔΙΑΔΙΚΤΥΑΚΗ ΕΠΙΣΤΗΜΟΝΙΚΗ ΗΜΕΡΙΔΑ
για το LAMS (Learning Activity Management System)
Σύγχρονα εκπαιδευτικά μοντέλα, στρατηγικές διδασκαλίας, μέθοδοι, τεχνικές και προηγμένα εργαλεία μαθησιακής τεχνολογίας

LAMS

**Διδάσκω στον 21ο αιώνα
με σύγχρονα Εργαλεία & Μεθόδους**

400+ σενάρια στο LAMS για τη διδασκαλία της
Πληροφορικής σε Δημοτικό, Γυμνάσιο, ΓΕΛ & ΕΠΑΛ

Educators in the post COVID-19 era: the need to upgrade professional competences

Educational Data Literacy

Educational Data Analytics

Professional Development 4 Educational Data Literacy

Educators in the post COVID-19 era: the need to upgrade professional competences

Educators in the post COVID-19 era

- Experiences during the periods of lockdown demonstrated the importance of the *level of pre-existing digital capacity* for both Schools as organisations, as well as, School Teachers and Leaders.
- **School Teachers' preparedness** to adapt new pedagogical strategies and to get the best results in online and blended teaching and learning is fundamental.

Educators in the post COVID-19 era

- The **2020 European Commission's** Communication on **Achieving the European Education Area by 2025**:
 - emphasizes on the **crucial role of teachers and trainers as cornerstones of Europe's economic and social prosperity**, since *“without teachers and trainers, no innovation, no inclusion and no transformational education experiences for learners can take place”*
 - recognizes **the need for highly competent and motivated educators** who have opportunities for continuous professional development throughout their careers, also addressing teacher shortages that most EU countries face.

Educational Data Literacy

Educational Data:

The challenge and the opportunity

Educators have a good understanding of their students' needs *when* they *interact* with them *daily* in the *classroom* or in the *lab*

And yet, they would like to be able to **discover more** and **personalise** their teaching for **each** one of their students – “*differentiate instruction*”

What happens when **Teaching and Learning** moves

- from the **Physical Classroom** to the **Online Virtual Space** (the Web)
- from the **Small Groups** of Students to the **Massive Audiences** of a MOOC

Educational Data: The challenge and the opportunity

Online Teaching and Learning are typically supported by **Course** or **Learning Management Systems** (CMS or LMS) which are web-based systems that handle teaching and learning activities online, such as **Moodle**.

Effective online and blended teaching require **updated professional competences** compared to those assumed at the traditional face to face education and training programs.

Educational Data: The challenge and the opportunity

A recent advancement in online and blended teaching and learning is **Educational Data Analytics (EDA)**: *the use of educational data generated during teaching and learning (including assessment) to better support individual learners' in online and blended courses.*

As a result, most Course Management Systems are now incorporating **Educational Data Analytics tools**.

However, ***these tools are not widely used*** mainly because of the low **Educational Data Literacy (EDL)** competences of the professionals that could be using them (educators, instructional designers and trainers, leaders).

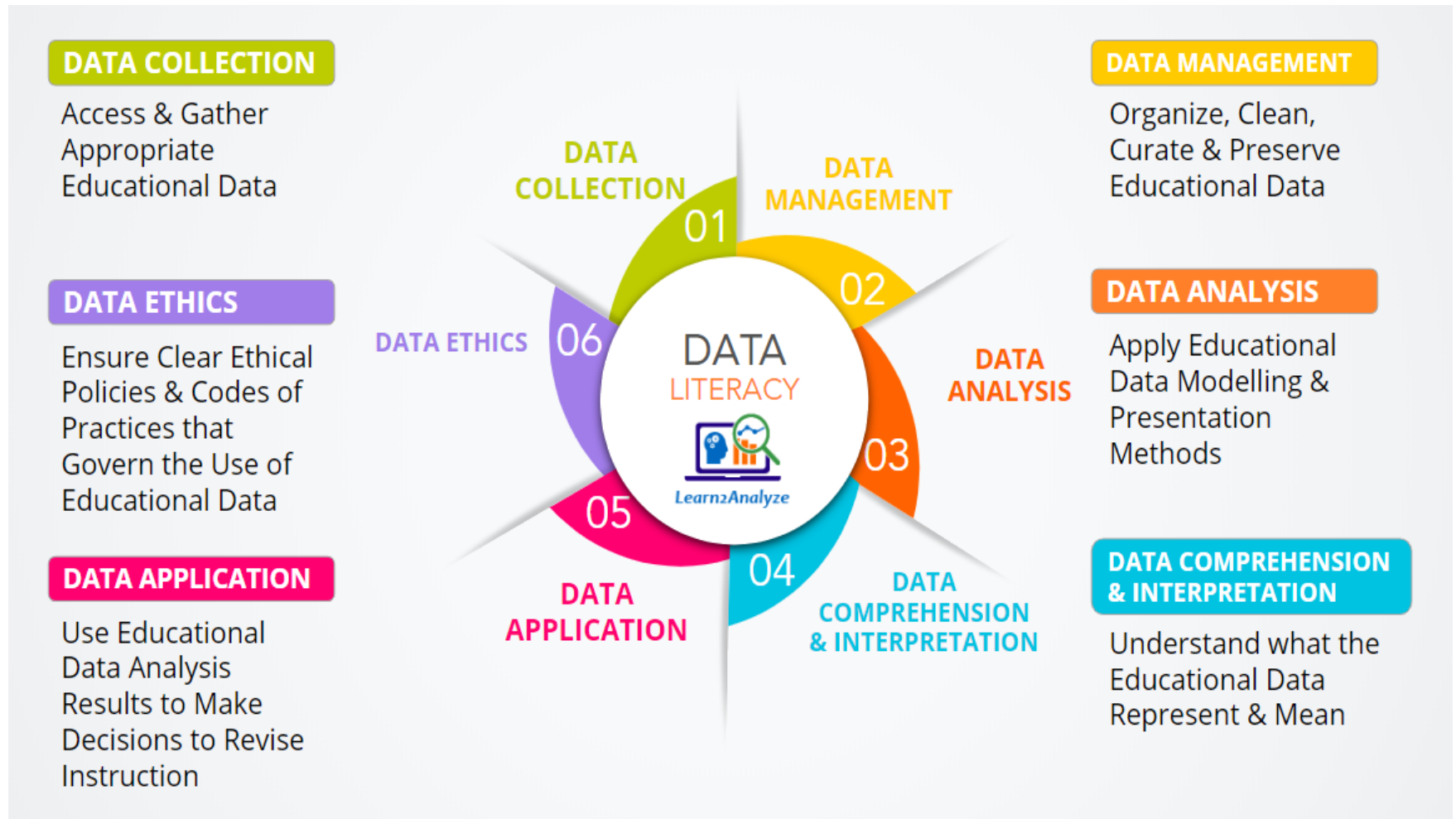
Educational Data Literacy

Educational Data Literacy is a **core competence** for all **education professionals**, including school teachers, instructional designers and tutors of online and blended learning course, as well as educational institutions' leaders.

Data Literacy for Educators

- is the ability to **understand** and **use** data effectively to inform educational and pedagogical **decisions**
- it requires a **competence set** to locate, collect, analyze/understand, interpret and act upon Educational Data from different sources so as to support improvement of the teaching, learning and assessment process

Educational Data Literacy Competence Profile



Educational Data Analytics

Educational Data

Collected and organised to represent all aspects of teaching and learning, including

Profiling and **Interaction** Data

of & between

Students, Teachers, Learning Environment

derived from both *qualitative* and *quantitative* methods.

Educational Data Analytics Technologies

Teaching Analytics

methods and digital tools to visualize, analyze, and/or assess **teaching practice**

Learning Analytics

methods and digital tools to collect, analyze and report student-related educational data towards monitoring the **learning process**

Teaching & Learning Analytics

to support the process of **reflective practice**: facilitating teachers to reflect on their teaching design using evidence from the actual delivery to their students

Teaching Analytics: Analyse Teaching Design

for self-reflection and improvement

Visualize the *elements* of a lesson plan

Visualize the alignment of a lesson plan to *educational objectives / standards*

Validates whether a lesson plan has potential *inconsistencies* in its design

through sharing with peers or mentors to receive feedback

Support the process of *sharing* a lesson plan with *peers or mentors*, allowing them to provide *feedback* through comments and annotations

through co-designing and co-reflecting with peers

Allow *peers* to *jointly analyze* and *annotate* a common teaching design in order to allow for co-reflection

Learning Analytics

Collection of learner data during the delivery of a teaching design (e.g., a lesson plan) to **build/update individual student profiles**.

Types of learner data typically are “*Dynamic Student Data*”:

Engagement in learning activities. For example, the progress each learner is making in completing certain learning activities.

Performance in assessment activities. For example, formative or summative assessment scores.

Interaction with Educational Resources & Tools, Peers & Tutors, for example which educational resources each learner is viewing/using.

Emotional Data, for example stress, boredom, anxiety.

Educational Data Analytics Technologies

Descriptive Analytics

“**what has already happened**”: they are related to existing *data summarization*, namely the visualization of *past data*

Predictive Analytics

“**what will happen**”: they are related to processing existing data for *pattern elicitation*, so as to make estimations of *future trends*

Prescriptive Analytics

“**what should we do**”: they are related to generating decision-support *recommendations for actions* to be taken, based on the analysis of existing data

Professional Development 4

Educational Data Literacy

EDU1x: Analytics for the Classroom Teacher



edX MOOC, Curtin University

EDU1x Analytics for the Classroom Teacher

30.000 enrollments from 180 countries since October 2016



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Ιδέες για διδακτορική εκπαιδευτική έρευνα:

Design Thinking with LAMS

Teaching Analytics in LAMS

Beyond Sharing Educational Scenaria: Sharing
Educational Data through LAMS

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