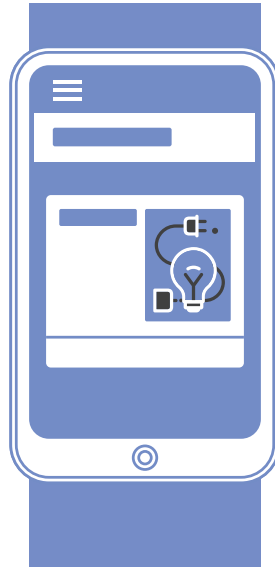




Adaptive LMS & eContent Distribution Platform



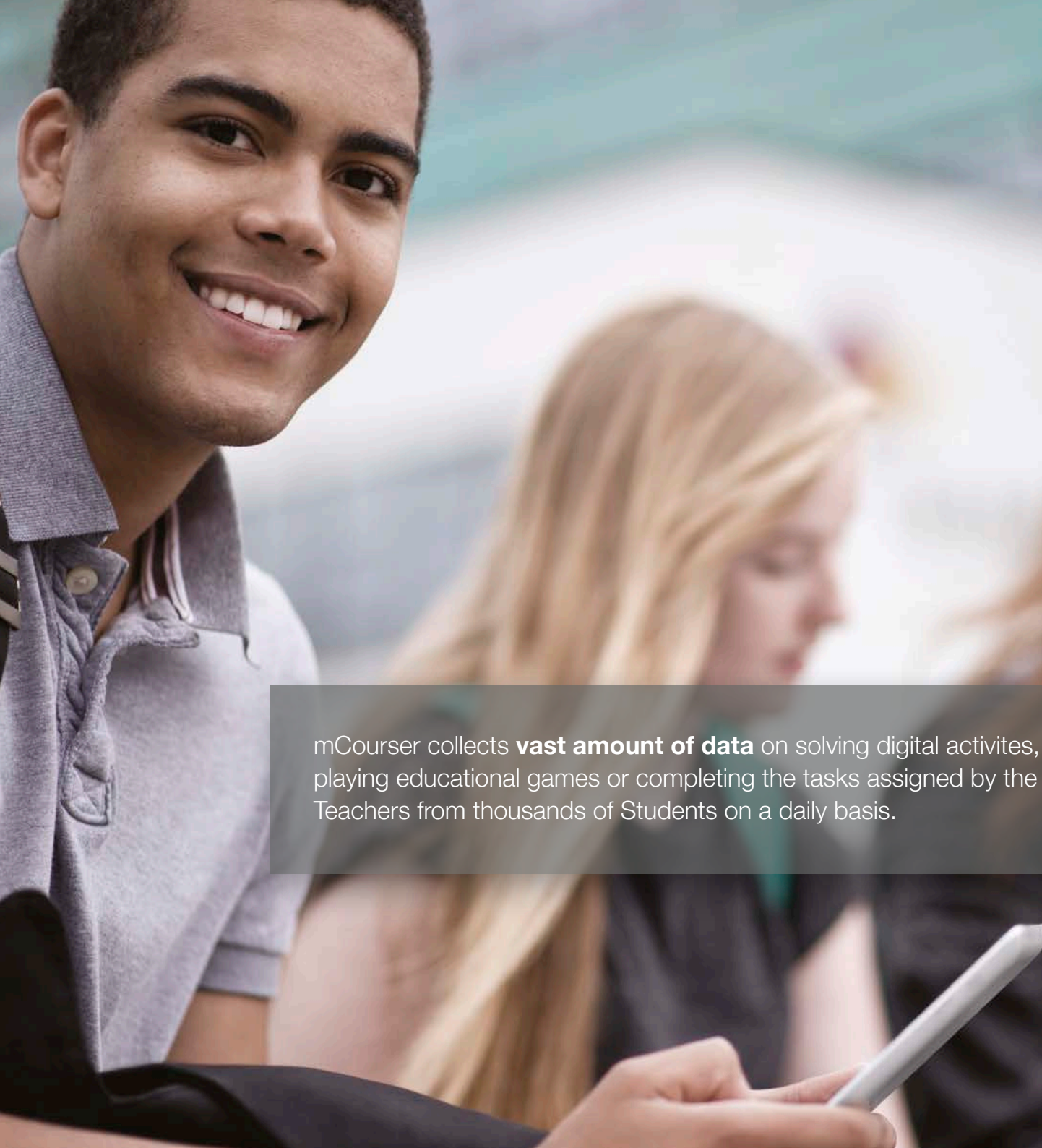






Adaptive Learning Platform

mCourser is a comprehensive eLearning Platform (LMS) supporting Adaptive Learning and dedicated for the delivery of highly interactive educational eContent packages. It effectively supports all educational processes and interactions between Teachers and Students.



mCourser collects **vast amount of data** on solving digital activities, playing educational games or completing the tasks assigned by the Teachers from thousands of Students on a daily basis.

Main Features

USER FRIENDLY

An intuitive and transparently designed interface, based on the industry standard UX practices, makes it perfect even for those less tech-savvy users.

ONLINE & OFFLINE

All results are synced, stored and managed on-line on the mCourser platform with a dedicated native offline mLibro application.

OPEN ARCHITECTURE

An API allowing the connection with the third-party LMS platforms and creating a new look & feel with the functions meeting different age-group expectations.

ADAPTIVE PATHS

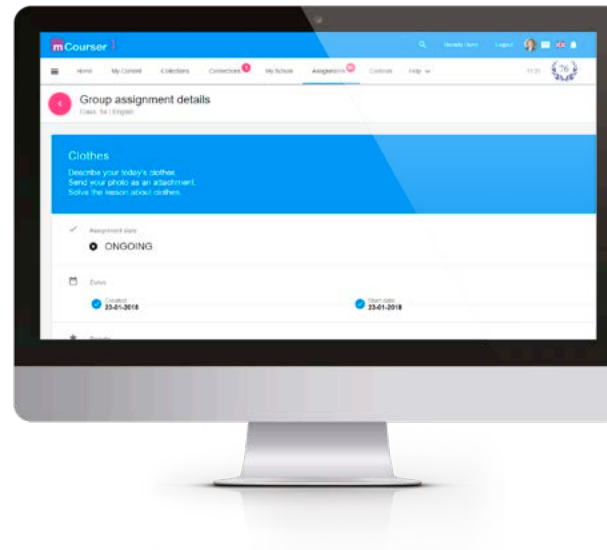
Advanced algorithms supporting the eCourses adaptivity and the selection of optimal learning paths.

ASSIGNMENTS

An intuitive assignment functionality with full capabilities for reporting and monitoring, including individual and group assignment types that help personalizing learning methods.

BIG DATA

The continuous collection of a huge number of data resulting from all interactions between thousands of Students and the eContent deployed in the platform.



GRADE BOOK

A complete Grade Book functionality, also including Lesson Schedule, Attendance Record, Reporting, Teacher/Student/Parent communication, printing certificates and others.

ADAPTIVE LEARNING COURSE EDITOR

An easy to use editor facilitating the creation of adaptive algorithms and the interdependence between alternate learning paths.

CONTESTS

Contests for thousands of students simultaneously can be hosted on the platform. Our cloud servers are switched on and off dynamically allowing efficient management of computing power during even country-wide events.

REPORTS

A broad variety of reports clearly presenting students' results, the time spent on eContent materials, a number of revisions, help button clicks, and many more.

SAAS MODEL

No need for installation or local hosting – mCourser is a fully Cloud-based solution delivered in a Software-as-a-Service model.

MOBILE READY

Accessible from a variety of stationary and mobile devices with various screen resolutions.

OS AGNOSTIC

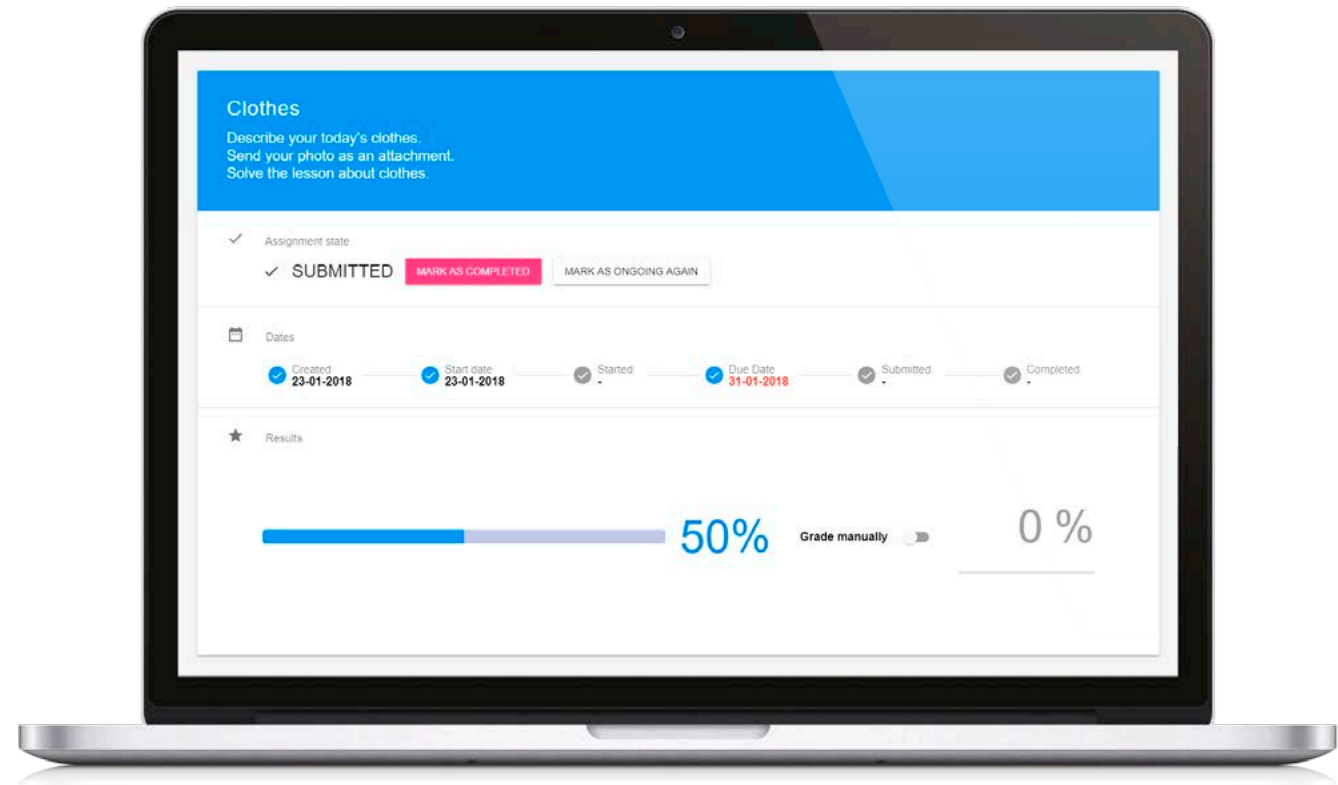
Runs smoothly on Windows, Mac OS and Linux operating systems as well as in iOS or Android driven environments.

CONTINUOUS DEVELOPMENT

mCourser is regularly updated with extra features and functionalities making it always at the edge of arising technologies and new devices.



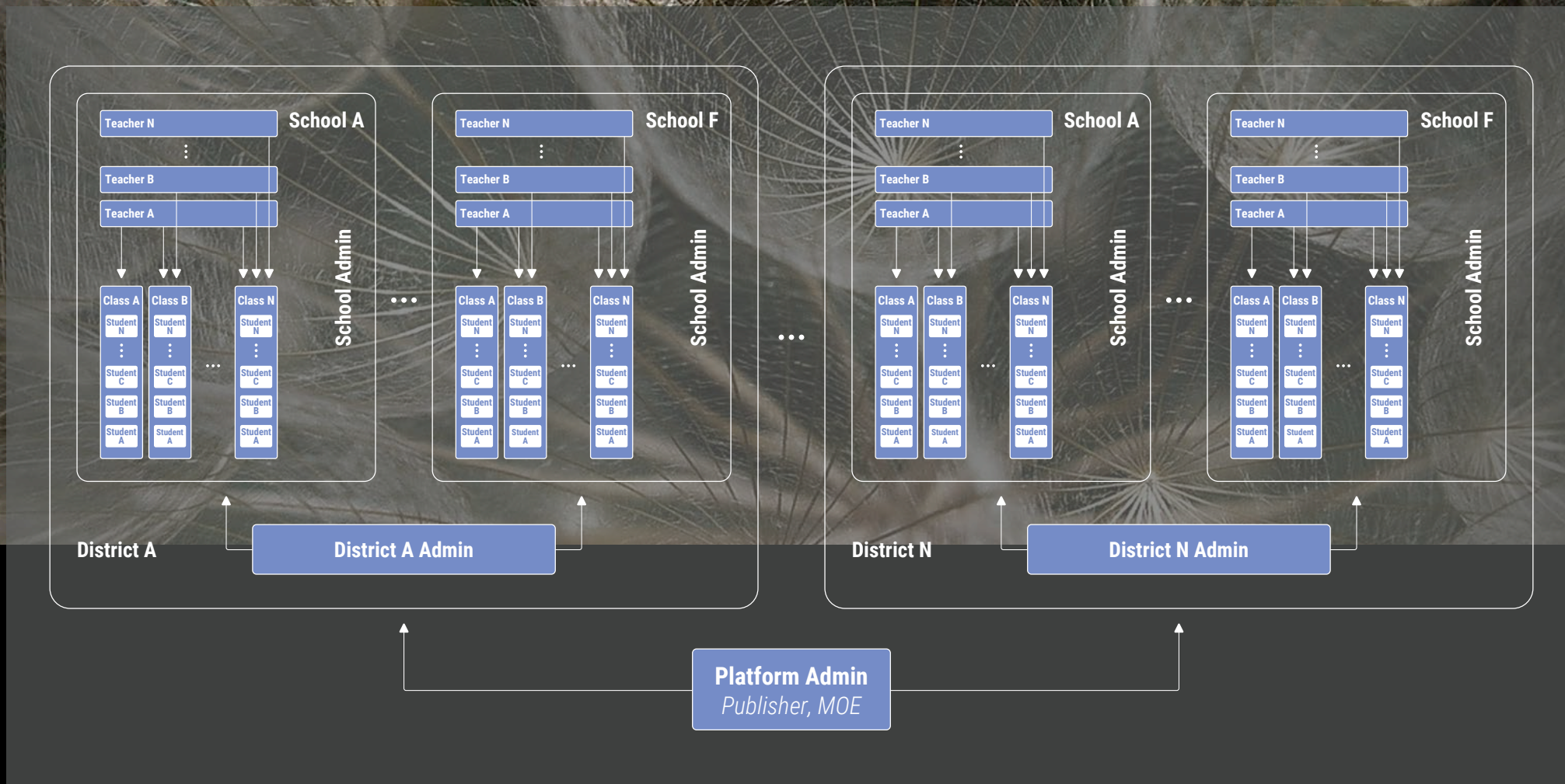
Connecting
the
Connected
Generation



Virtual Structure of a School System

Unlike many other LMS platforms, mCourser is capable of mimicking the **virtual structure of a school system** in a particular region or country. Starting from a central platform operator (e.g. an Educational Publisher or the Ministry of Education) through districts, schools and classes up to the single interaction between a teacher and a student.







Roles within the Virtual Schools Structure

Along with the replication of a regular school system in a virtual environment, mCourser supports different roles taking active part in digital teaching and learning processes.

From a single Student, through a Teacher and a School Admin to the entire Platform Administrator, each user has a specific set of tools and access rights. All available data and functions enable them to fully exploit the capabilities of a modern, digital educational platform.



STUDENT

The Student is basic and the most important role in the system. Students can be organised in groups and classes and can have access to a number of courses or eContent packages assigned to them by Teachers.



TEACHER

The Teachers registered in the platform have a number of possibilities to assign tasks, organise projects or arrange tests for their Students. As they have full access to Students' activities, they can monitor their progress and address the areas that require some extra explanation or additional practice to truly personalize Students' learning paths.



SCHOOL ADMIN

School Admins are responsible for creating a virtual representation of their school. They can link Teachers with their Students, deploy the learning materials available to them, and manage the gradebook. School Admins can also monitor and generate various reports of Students' and Teachers' activity.



DISTRICT ADMIN

Schools are usually supervised by local educational organisations or School Districts who want to know more general information regarding the schools' activity and their average or aggregated results. District Admins have access to this data and they can also organise tests and exams for selected or all schools under their supervision.



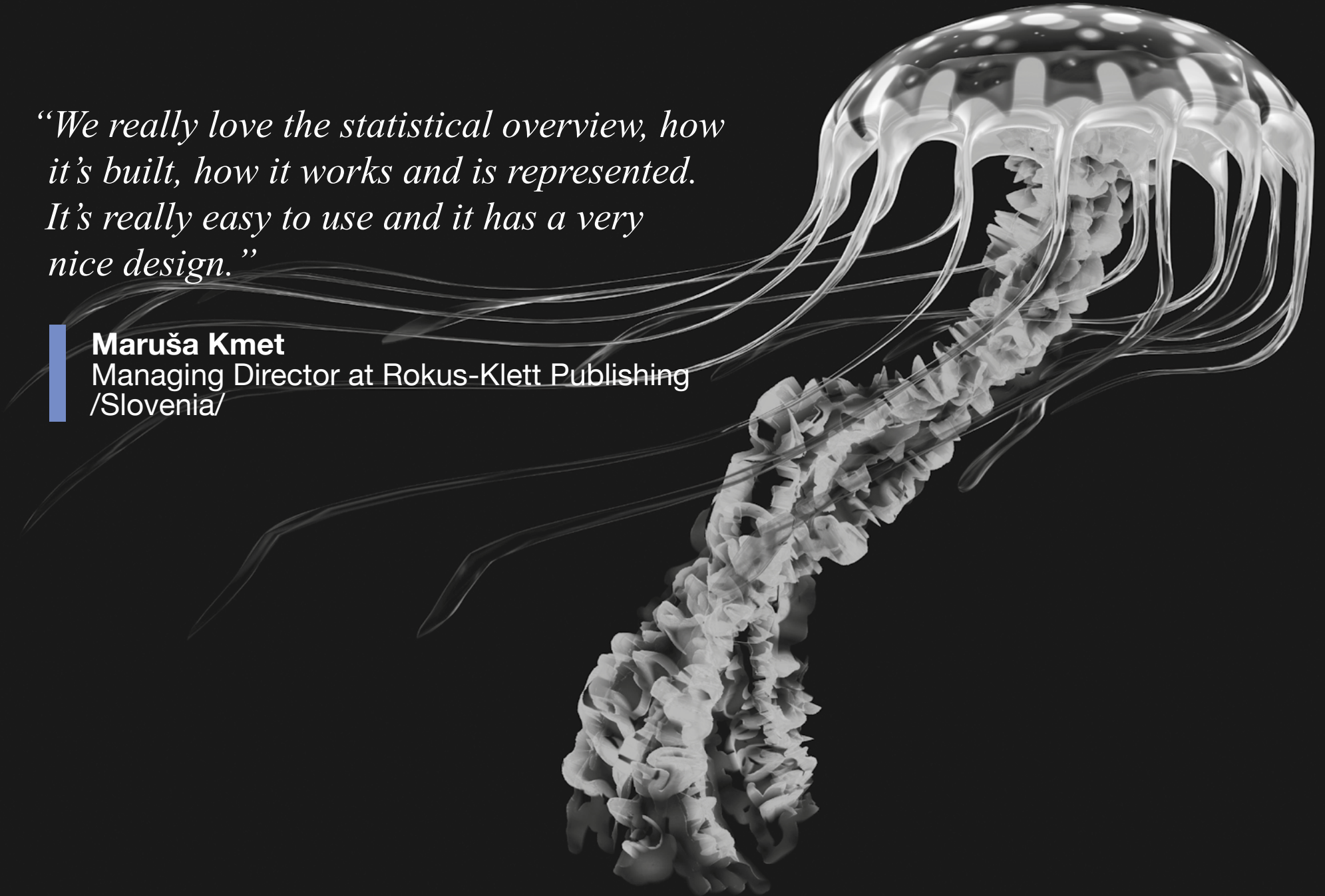
PLATFORM ADMIN

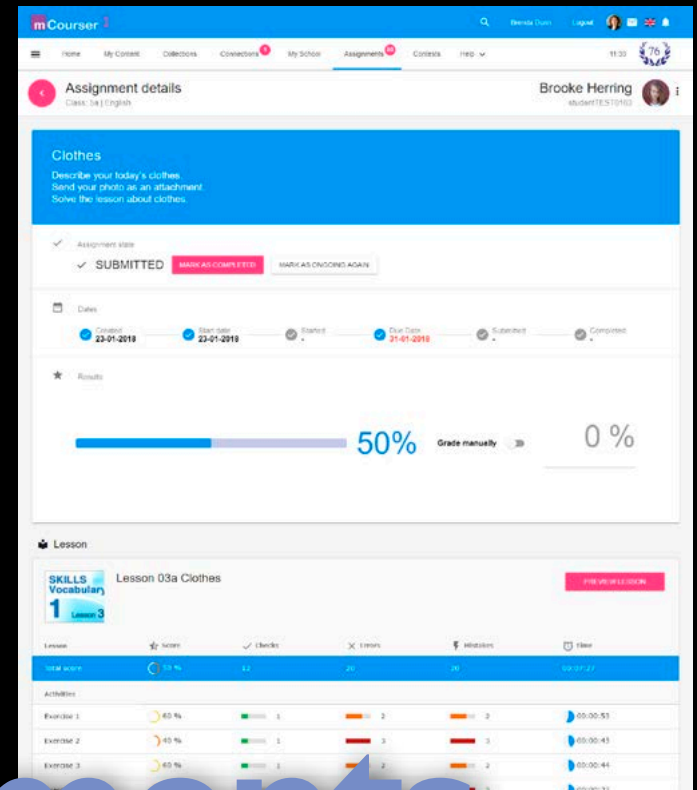
The head of the whole platform is in charge of enabling the LMS features available for the other users, setting up the whole school system in the platform, assigning access rights and roles, and verifying which courses or eContent packages are uploaded to the platform.

“We really love the statistical overview, how it’s built, how it works and is represented. It’s really easy to use and it has a very nice design.”

Maruša Kmet

Managing Director at Rokus-Klett Publishing
/Slovenia/





Assignments

Assignments allow Teachers to create class tasks or homework exercises either for individual Students or for a whole Class. Extensive reports allow Teachers to assess the **entire class's performance** in a glimpse of an eye. Also, instant access to the smallest details of every activity enables them to implement individual approach to the specific needs of a particular Student.



A young man and woman are sitting at a desk, looking at a laptop screen. They are both smiling and cheering, with their fists clenched in excitement. The woman is in the foreground, wearing a grey tank top, and the man is behind her, wearing a plaid shirt. The background is bright and out of focus, suggesting a window with natural light. The overall mood is one of joy and accomplishment.

Contests

The Contests functionality makes it possible to organise **contests, tests or even exams**. In this mode, Students are given an exact time slot to perform a test based on variety of materials, including mCourser content packages, mInstructor teacher-created resources or any SCORM compliant package imported into the mCourser platform.

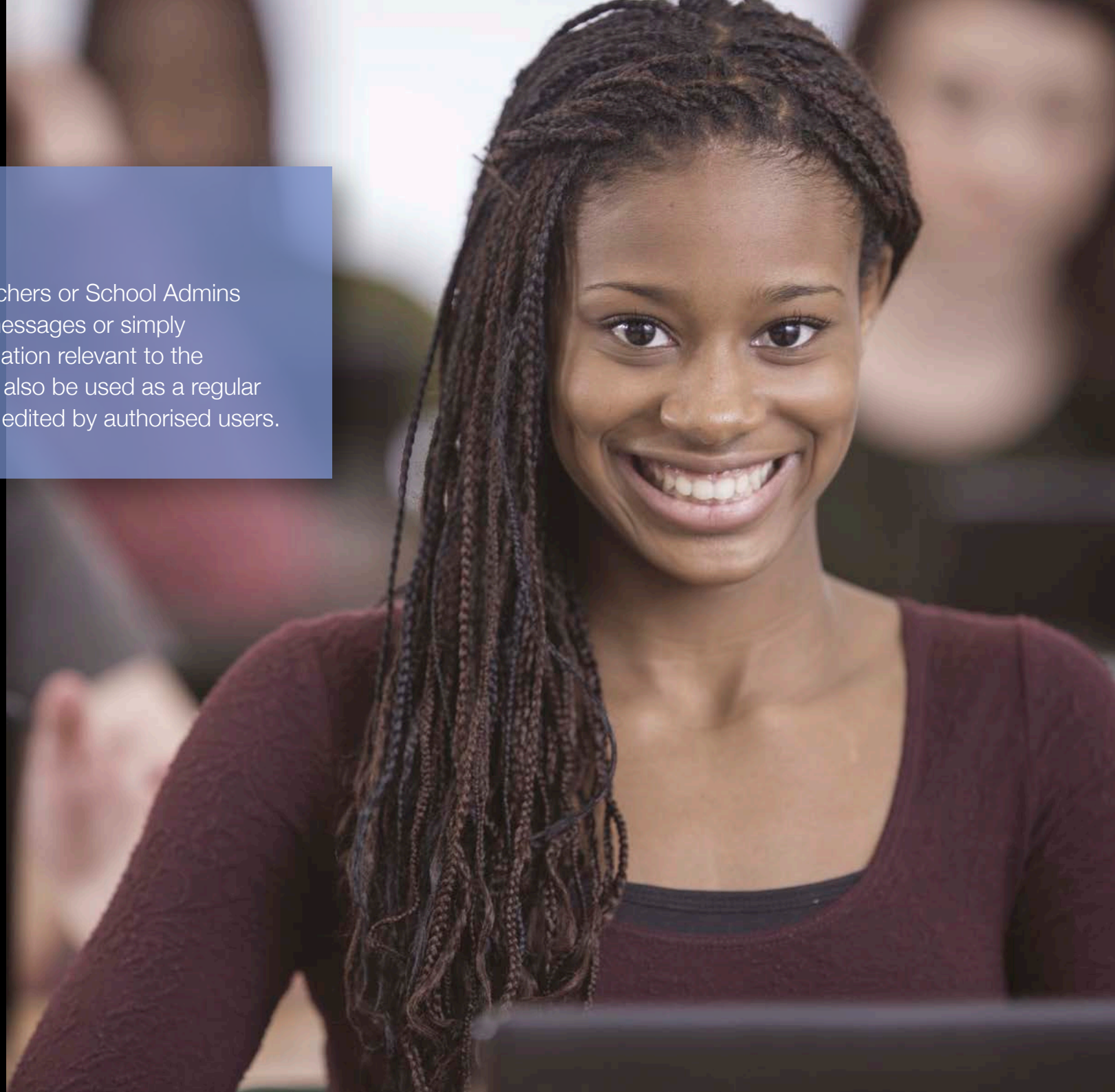
A photograph of two young women sitting at a desk in a library, smiling and looking at a laptop. The woman on the left has her hair in a bun and is wearing a beige sweater and a dark scarf. The woman on the right is wearing a denim jacket over a grey hoodie. A coffee cup is on the desk in the foreground. The background shows bookshelves filled with books.

Collaboration

The mCourser platform is equipped with a number of functions that facilitate group work, common projects and general Students' collaboration. The School Admin can determine which collaboration units are to be available for Students.

News

This module enables Teachers or School Admins to announce important messages or simply present interesting information relevant to the school community. It can also be used as a regular Newsletter prepared and edited by authorised users.





Portfolio

Teachers and Students can make their own repository of files documenting their work. mCourser allows them to upload various resources and link them with content available on the platform to create **a complete archive of class projects or group assignments**. Teachers have full access to the Student's Portfolio and they are able to download its content or add more files to it.

Chats

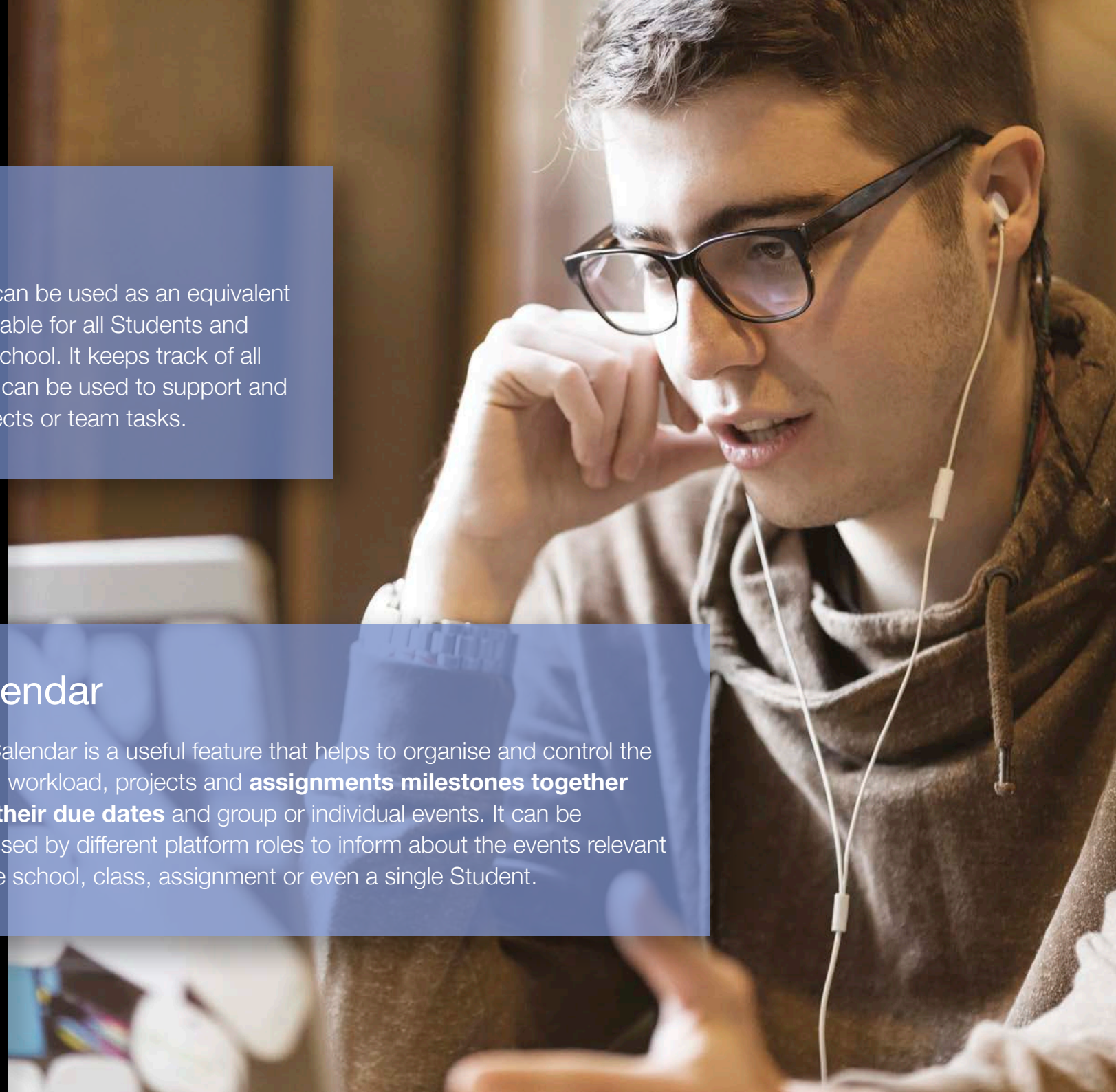
The Chat module enables all users registered within the virtual School to **communicate in a real-time mode**. The Chat recognises who is currently logged into the mCourser platform and enables users to initiate instant conversation or even a **group discussion**. It can be used to organise "Teacher on Duty" service available to the Students who need extra support.

Messenger

The Messenger module can be used as an equivalent of the e-mail service available for all Students and Teachers of a particular school. It keeps track of all the correspondence and can be used to support and document common projects or team tasks.

Calendar

The Calendar is a useful feature that helps to organise and control the actual workload, projects and **assignments milestones together with their due dates** and group or individual events. It can be accessed by different platform roles to inform about the events relevant for the school, class, assignment or even a single Student.





*“You can’t manage it,
if you can’t measure it.”*

Reports

mCourser offers a large number of valuable Reports for all different roles deployed in the platform. They are presented in a form of clearly designed **tables, plots, charts and dashboards** depending on the role of a particular user.

Student's Reports

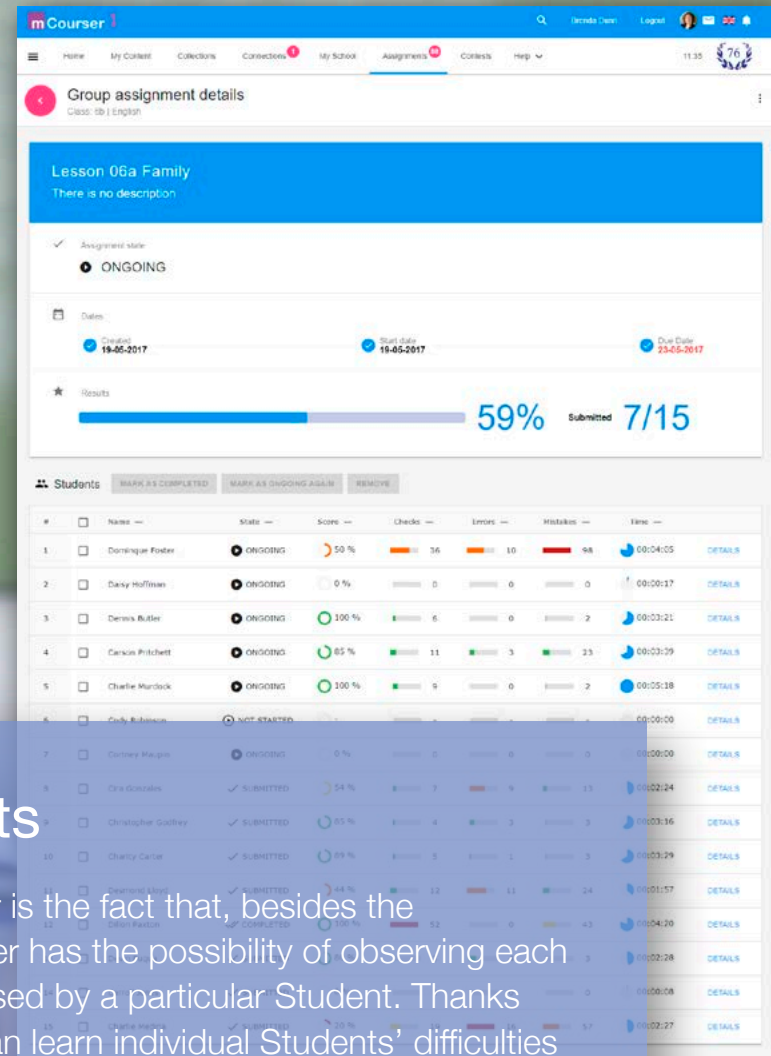
Each Student has a full access to his or her results obtained during a selected period of time. The Student can also see all portions of the eContent materials that he or she accessed with a full insight to the answers given while solving the activities.

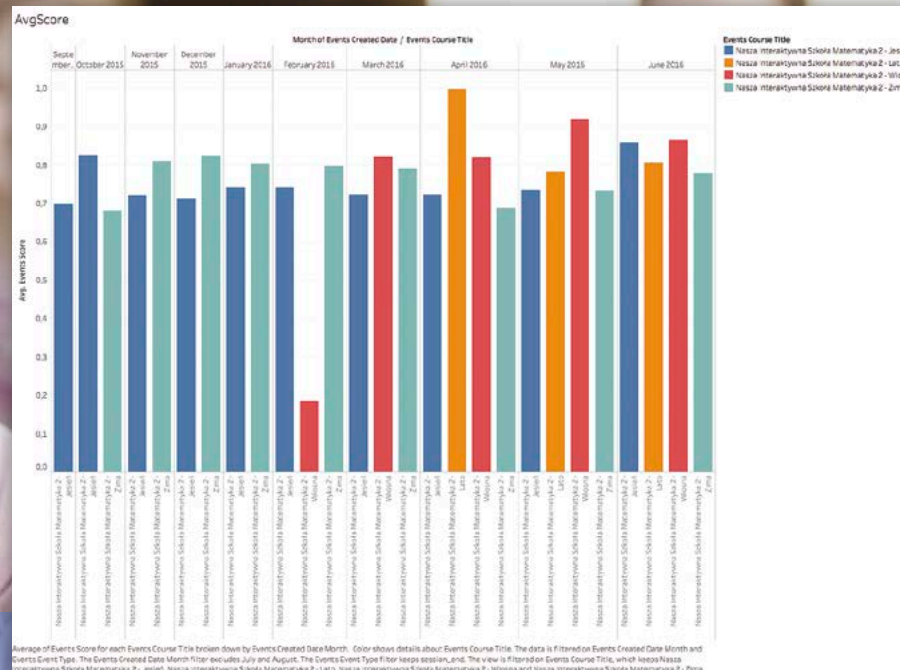
The screenshot displays the mCourser student interface. At the top, the navigation bar includes 'Home', 'My Content', 'Collections', 'Collections 1', 'My School', 'Assignments', 'Contents', and 'Help'. The user is logged in as 'Brooke Herring' (student ID: 1570160). The main section is titled 'Assignment details' for 'Class: 5a | English'. The assignment is 'Clothes' with instructions: 'Describe your today's clothes. Send your photo as an attachment. Solve the lesson about clothes.' The assignment status is 'SUBMITTED', with buttons for 'MARK AS COMPLETED' and 'MARK AS ONGOING ASSIGN'. A progress bar shows 50% completion, with a 'Grade manually' toggle. Below this, a 'Lesson' section for 'Lesson 03a Clothes' includes a 'PREVIEW LESSON' button. A table shows the results for various exercises:

| Lesson | Score | Checks | Errors | Warnings | Time |
|-------------|-------|--------|--------|----------|----------|
| Total score | 60 % | 10 | 20 | 20 | 00:07:27 |
| Activities | | | | | |
| Exercise 1 | 60 % | 1 | 2 | 2 | 00:00:53 |
| Exercise 2 | 40 % | 1 | 3 | 3 | 00:00:43 |
| Exercise 3 | 60 % | 1 | 2 | 2 | 00:00:44 |
| Exercise 4 | 60 % | 1 | 3 | 3 | 00:00:23 |
| Exercise 5 | 60 % | 1 | 2 | 2 | 00:00:48 |
| Exercise 6 | 40 % | 4 | 3 | 3 | 00:01:36 |
| Exercise 7 | 60 % | 2 | 2 | 2 | 00:00:56 |
| Exercise 8 | 40 % | 1 | 3 | 3 | 00:00:57 |

Teacher's Reports

The uniqueness of mCourser is the fact that, besides the aggregated reports, a Teacher has the possibility of observing each piece of the eContent accessed by a particular Student. Thanks to this option, the Teacher can learn individual Students' difficulties and address them accordingly by suggesting additional materials or giving direct hints, instructions or explanations.





School Admin's Reports

The School Admin (e.g. a School Principal with appropriate access rights) has access to all data generated by the platform and the eContent deployed in his or her School. He or she can generate the reports of time spent by Teachers and Students with a particular part of the eContent packages, a number of sessions or average results of a class taught by a particular Teacher. All results can be presented within selected timeframes in order to trace the trends of targeted teaching or learning objectives.



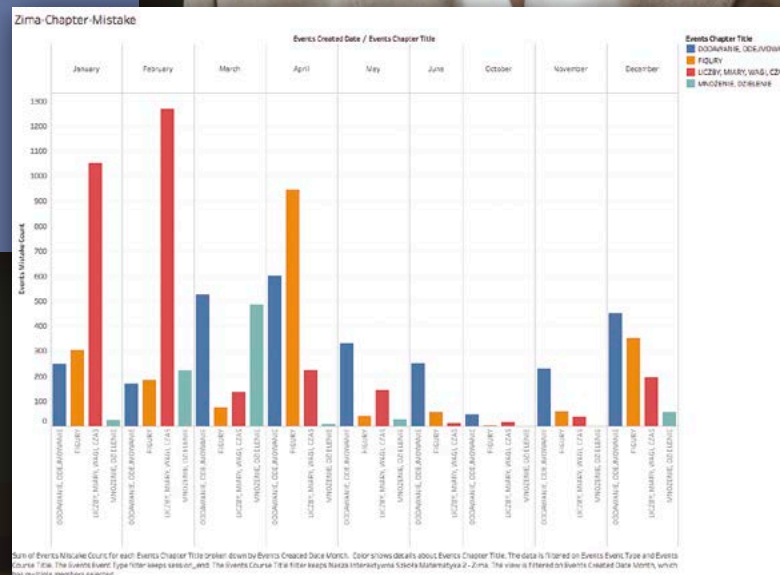
District Admin's Reports

With mCourser, local educational organisations or School Districts can collect general information regarding schools' activity and the results obtained by Teachers and their Students. They can easily organise tests or exams to assess the effectiveness of the teaching and learning processes in schools under their supervision.

Platform Admin's Reports

The Platform Admin (e.g. an Educational Publisher or the Ministry of Education) may have access to all data generated by the platform and the eContent from all schools deployed in mCourser. All data, up to the smallest detail, are stored in a BigQuery format in order to make it possible to generate practically any report or perform a desired analysis.

The abilities and skills in analysing and interpreting the Big Data streams will become soon the source of an important competitive advantage for Educational Publishers. They will be able to identify the effectiveness of their materials and take the corrective measures where necessary.



The most
powerful
Adaptive
Learning
Platform
ever.



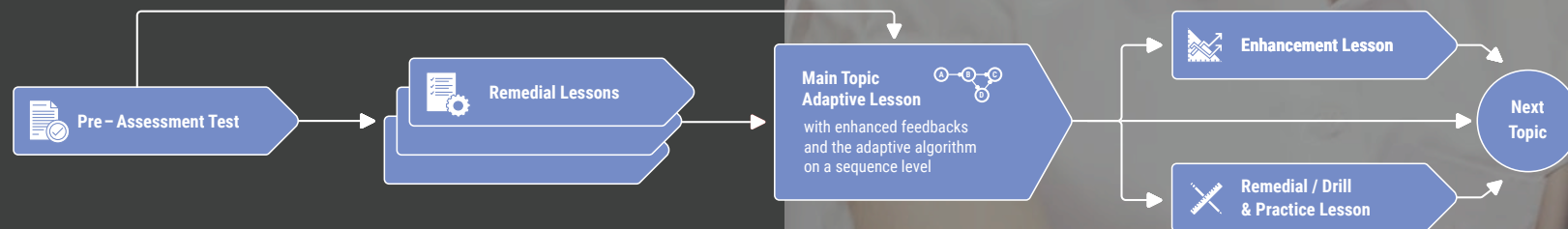


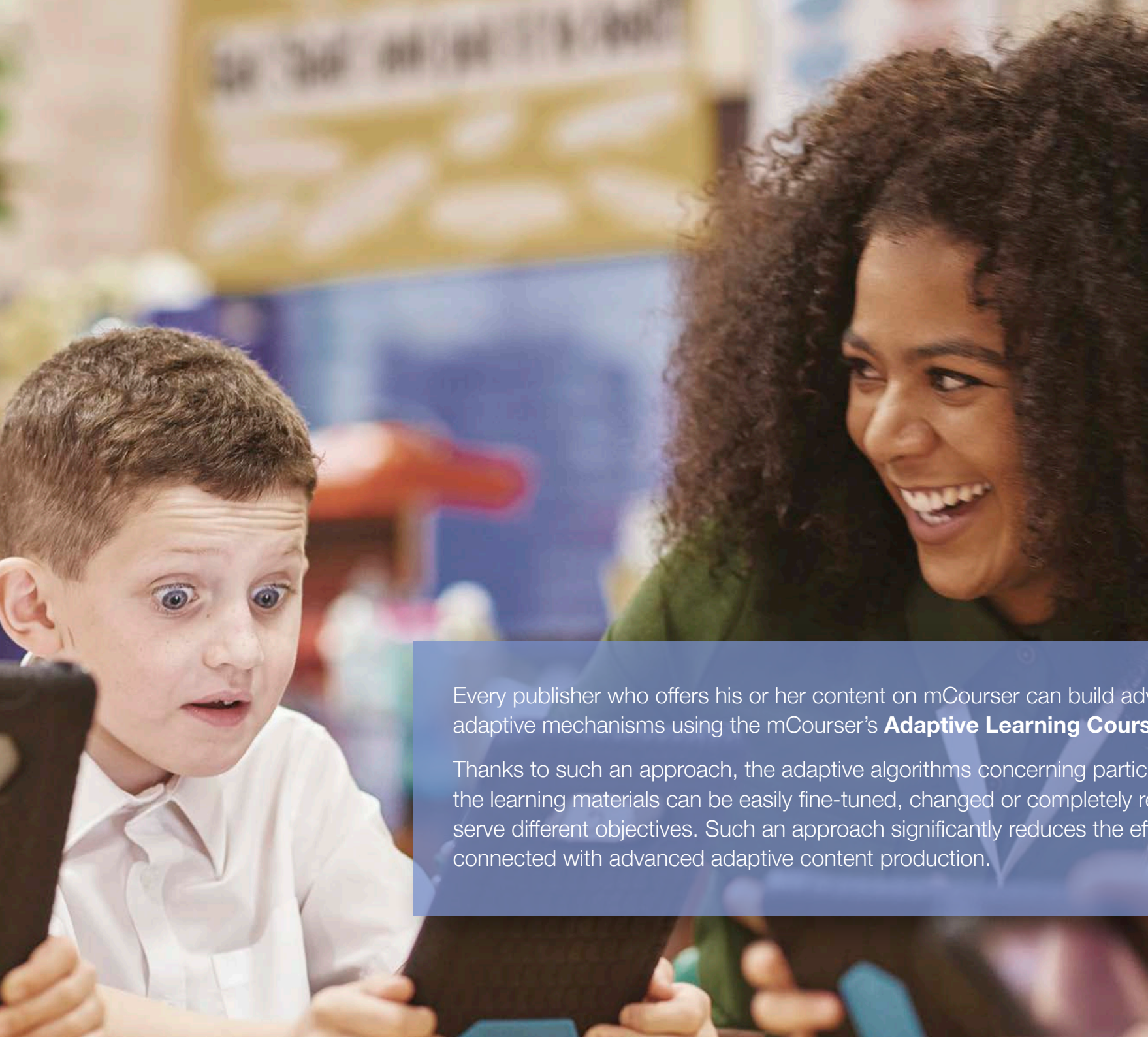
All courses published on mCourser, even those created in a linear form, can be re-designed into truly adaptive content.

In order to define advanced adaptive paths across the course, mCourser is able to fully exploit the large data sets collected from students. They can take the form of either the results from solved activities or from the variety of other student-content-platform interactions.

The adaptivity algorithm starts from a pre-assessment test aiming to provide information on a particular student's current level of skills and knowledge. The result determines the next step, which is either displaying one of the available Remedial Lessons or moving the student to the Main Topic Lesson.

The lesson itself is also displayed as an adaptive sequence of Learning Objects in accordance with the algorithm designed in mAuthor at the stage of creating a lesson. The algorithm provides Learning Objects in a sequence adjusted to the student's progress. When the Main Topic lesson is finished, depending on the results the student may be forwarded directly to the Next Topic or can be given a particular set of Enhancement or Remedial / Drill & Practice Activities.





Every publisher who offers his or her content on mCourser can build advanced adaptive mechanisms using the mCourser's **Adaptive Learning Course Editor**.

Thanks to such an approach, the adaptive algorithms concerning particular parts of the learning materials can be easily fine-tuned, changed or completely redesigned to serve different objectives. Such an approach significantly reduces the effort and cost connected with advanced adaptive content production.



Grade Book

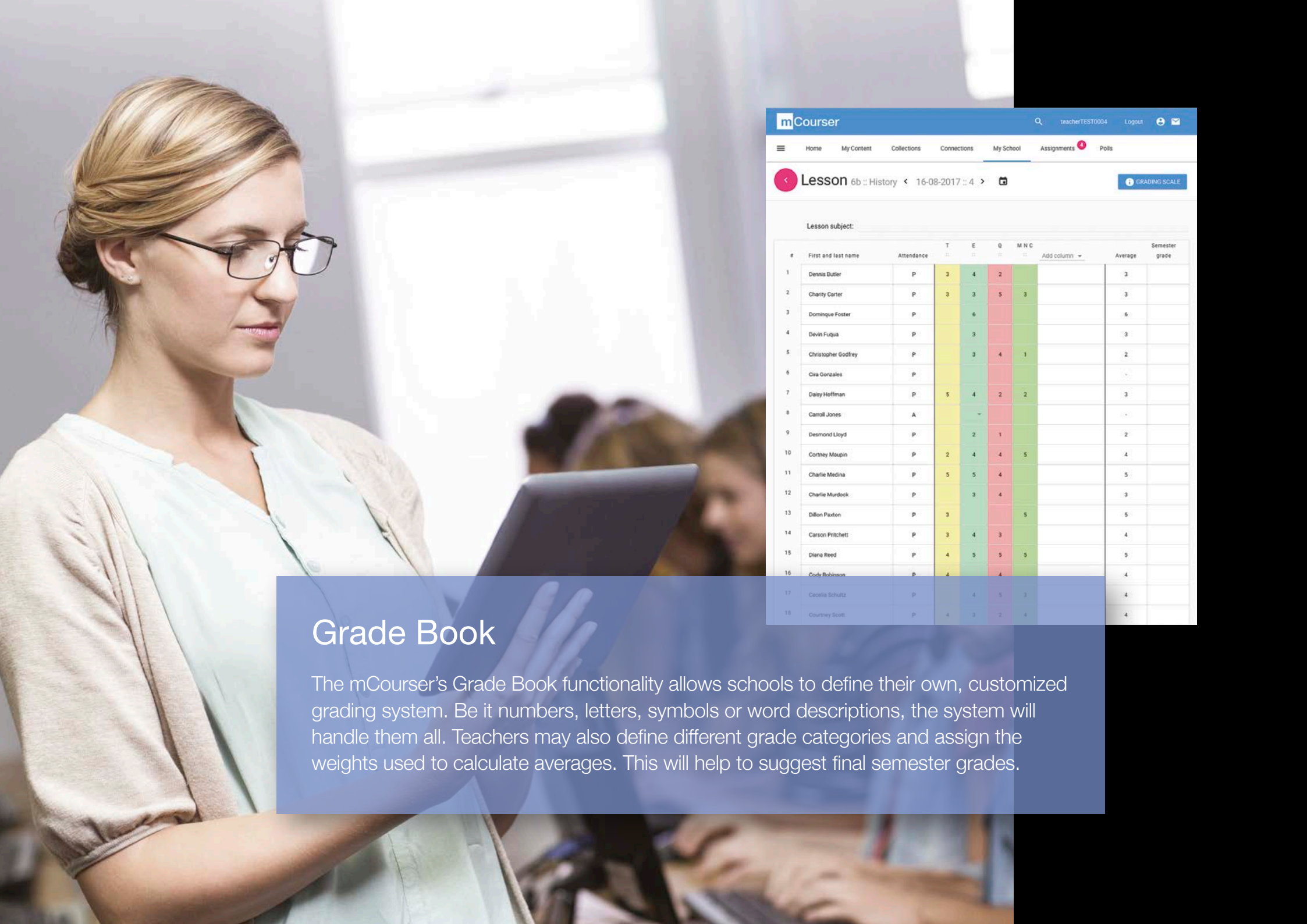
Lessons Schedule

Attendance Record

and other useful utilities

mCourser is not only a combination of an advanced Learning Management System and eContent Distribution Platform. It offers additional functionalities that make it even better aligned with modern schools' expectations.

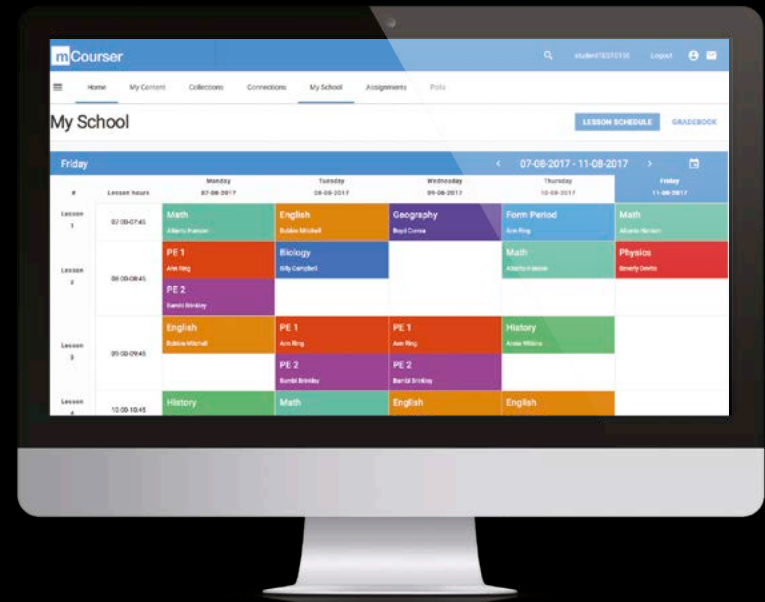
Every school that uses mCourser may extend it with the grade book offering custom grades definitions, school-wide lesson schedules planning, attendance records or teacher-parent communication tools. Moreover, it is possible to integrate these features with the existing school structures and students' results data already available on mCourser.



| mCourser | | | | | | | | | | |
|---|---------------------|------------|---|---|---|---|---|---|---------|----------------|
| teacherTEST0004 Logout | | | | | | | | | | |
| Home My Content Collections Connections My School Assignments 4 Polls | | | | | | | | | | |
| Lesson 6b :: History < 16-08-2017 :: 4 > GRADING SCALE | | | | | | | | | | |
| Lesson subject: | | | | | | | | | | |
| # | First and last name | Attendance | T | E | Q | M | N | C | Average | Semester grade |
| 1 | Dennis Butler | P | 3 | 4 | 2 | | | | 3 | |
| 2 | Charity Carter | P | 3 | 3 | 5 | 3 | | | 3 | |
| 3 | Dominique Foster | P | | 6 | | | | | 6 | |
| 4 | Devin Fuqua | P | | 3 | | | | | 3 | |
| 5 | Christopher Godfrey | P | | 3 | 4 | 1 | | | 2 | |
| 6 | Cira Gonzales | P | | | | | | | - | |
| 7 | Daisy Hoffman | P | 5 | 4 | 2 | 2 | | | 3 | |
| 8 | Carroll Jones | A | | - | | | | | - | |
| 9 | Desmond Lloyd | P | | 2 | 1 | | | | 2 | |
| 10 | Cortney Maupin | P | 2 | 4 | 4 | 5 | | | 4 | |
| 11 | Charlie Medina | P | 5 | 5 | 4 | | | | 5 | |
| 12 | Charlie Murdock | P | | 3 | 4 | | | | 3 | |
| 13 | Dillon Paxton | P | 3 | | | 5 | | | 5 | |
| 14 | Carson Pritchett | P | 3 | 4 | 3 | | | | 4 | |
| 15 | Diana Reed | P | 4 | 5 | 5 | 5 | | | 5 | |
| 16 | Cody Robinson | P | 4 | | 4 | | | | 4 | |
| 17 | Cecelia Schultz | P | | 4 | 5 | 3 | | | 4 | |
| 18 | Courtney Scott | P | 4 | 3 | 2 | 4 | | | 4 | |

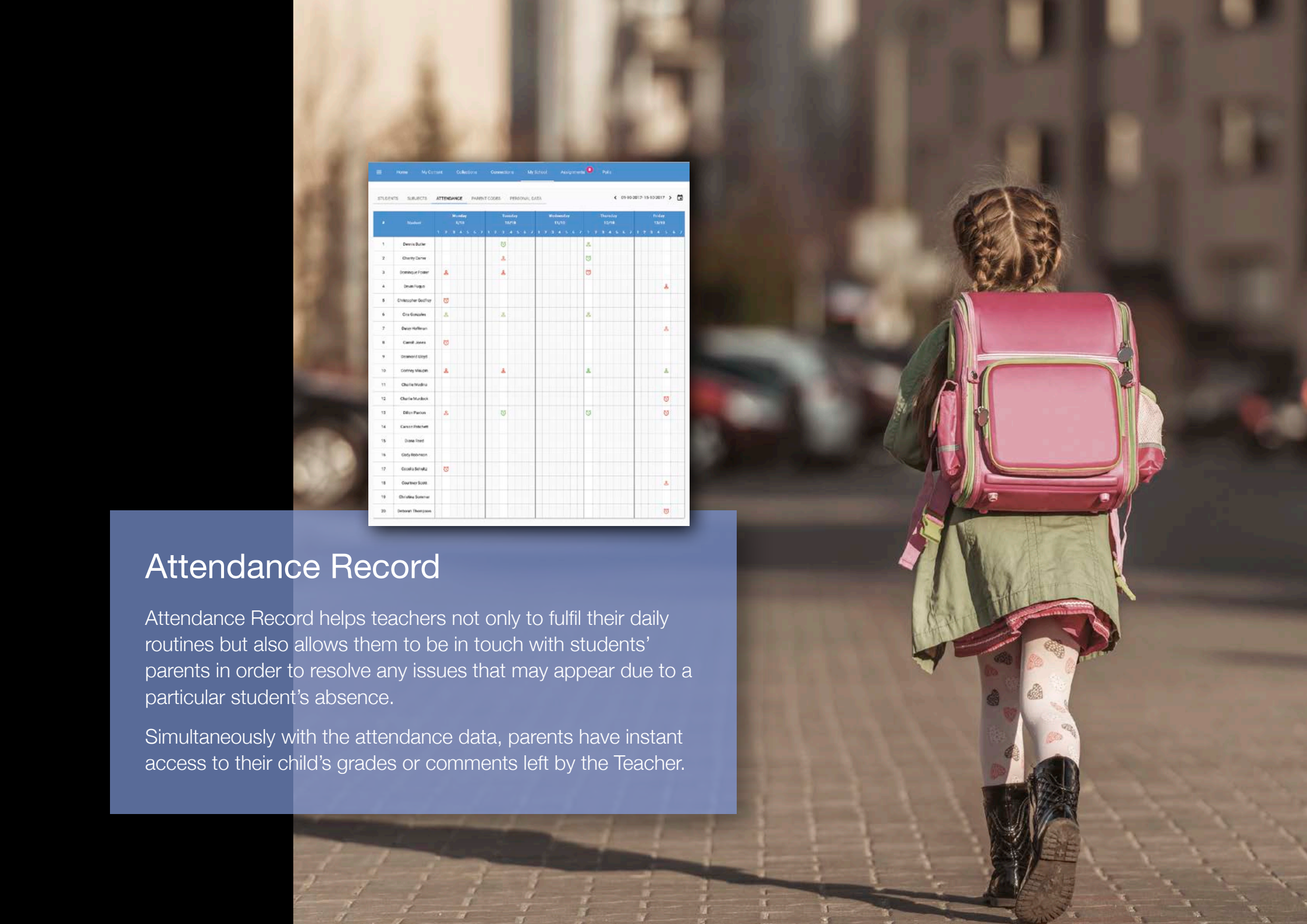
Grade Book

The mCourser's Grade Book functionality allows schools to define their own, customized grading system. Be it numbers, letters, symbols or word descriptions, the system will handle them all. Teachers may also define different grade categories and assign the weights used to calculate averages. This will help to suggest final semester grades.



Lesson Schedule

Building a Lesson Plan for the entire school is a real challenge faced at the beginning of every school year or even every semester. mCourser offers huge support providing a dedicated Lesson Scheduling Editor. School admins are able to define their semesters, classes and subjects, and distribute them in an easy and intuitive way in the form of weekly plans for every teacher and every student.



| | | Monday 12/18 | | | | | Tuesday 12/19 | | | | | Wednesday 12/20 | | | | | Thursday 12/21 | | | | | Friday 12/22 | | | | |
|----|----------------------|-----------------|---|---|---|---|------------------|---|---|---|---|--------------------|---|---|---|---|-------------------|---|---|---|---|-----------------|---|---|---|---|
| # | Student | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 1 | Dennis Butler | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Khariy Carter | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Demetrius Foster | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | David Hogan | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Christopher Gaultney | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Cora Gonzalez | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Dawn Hoffman | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Camell Jones | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Diamond Knight | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Correy Maizen | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | Charlie Mullins | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Charlie Murbach | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | Edison Parnes | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Carson Pritchett | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Danae Reed | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | Cody Robinson | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | Cyrella Smith | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | Courtney Scott | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Christine Sotomayor | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | Danielle Thompson | | | | | | | | | | | | | | | | | | | | | | | | | |

Attendance Record

Attendance Record helps teachers not only to fulfil their daily routines but also allows them to be in touch with students' parents in order to resolve any issues that may appear due to a particular student's absence.

Simultaneously with the attendance data, parents have instant access to their child's grades or comments left by the Teacher.



mLibro
Sync Offline App

Offline Application

There are places or situations when there is no access to the Internet. Thanks to mLibro offline application, which compliments the mCourser platform, this is not an issue anymore. From now on Students **can work anytime & anywhere.**

How does it work?

1. Download e-content

While connected to the Internet, Students can download their assignments and digital lessons from the mCourser platform to the mLibro offline application.

2. Work offline

From now on, they can work offline anytime, anywhere and all their results are stored locally on their computer or mobile device.

3. Upload results

Once a Student has logged in to the Internet again, all his or her results obtained while working offline are automatically uploaded and synchronised with the mCourser platform.



SIMPLE & EASY TO USE

The simplified and easy to use mLibro's interface allows working effortlessly even for the Students with limited computer literacy.

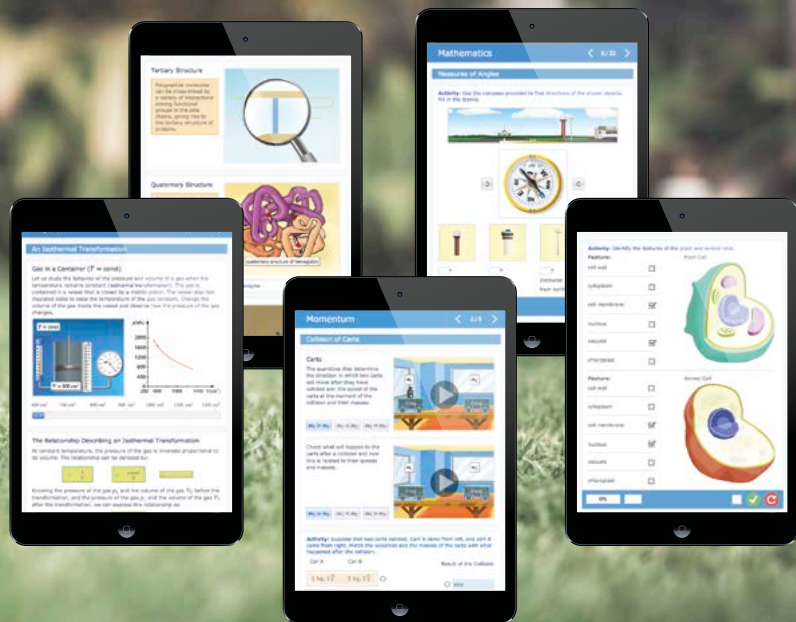
SYSTEM AGNOSTIC

The mLibro application can work on stationary Windows based computers or on iOS or Android based mobile devices as a native app.

FREE OF CHARGE

mLibro is a free of charge application, which depending on a Student's device can be downloaded from AppStore, Google Play, Microsoft Store or directly from Learnetic's webpage.

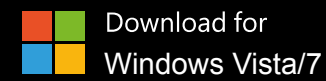




mLibro

Sync Offline App

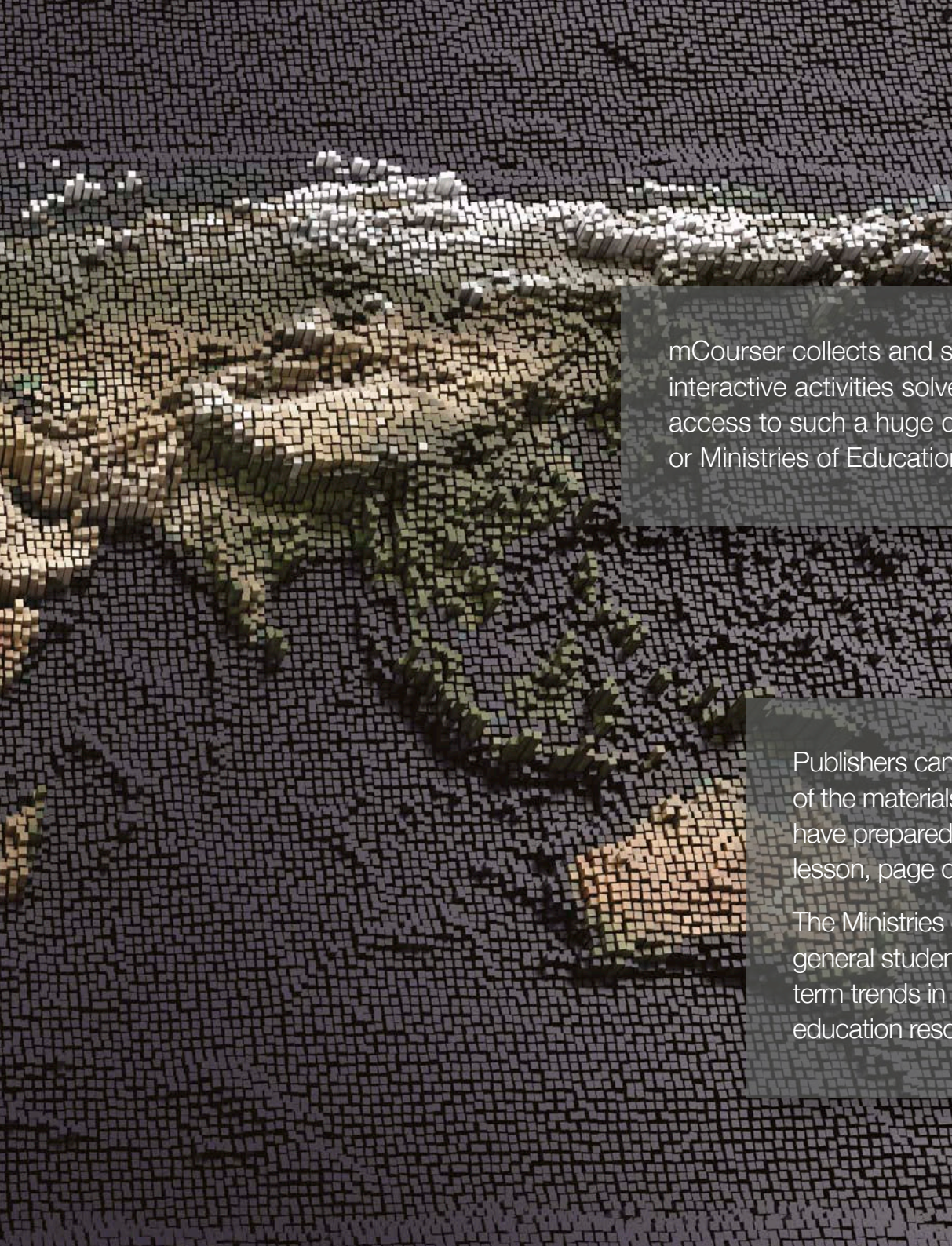
You may download it free of charge from the following places:





Big Data Analytics

Thanks to the fact that mCourser is a Cloud-based solution, it is possible to collect an **enormous number of data** resulting from all interactions between the Students and the eContent deployed in the platform.



mCourser collects and stores millions of results that are coming from highly interactive activities solved by thousands of Students every day. Having access to such a huge database of information, the Publishers, Universities or Ministries of Education can use it in a broad variety of ways.

Publishers can test and verify the efficiency of the materials that their publishing teams have prepared for each subject, chapter, lesson, page or even a single activity.

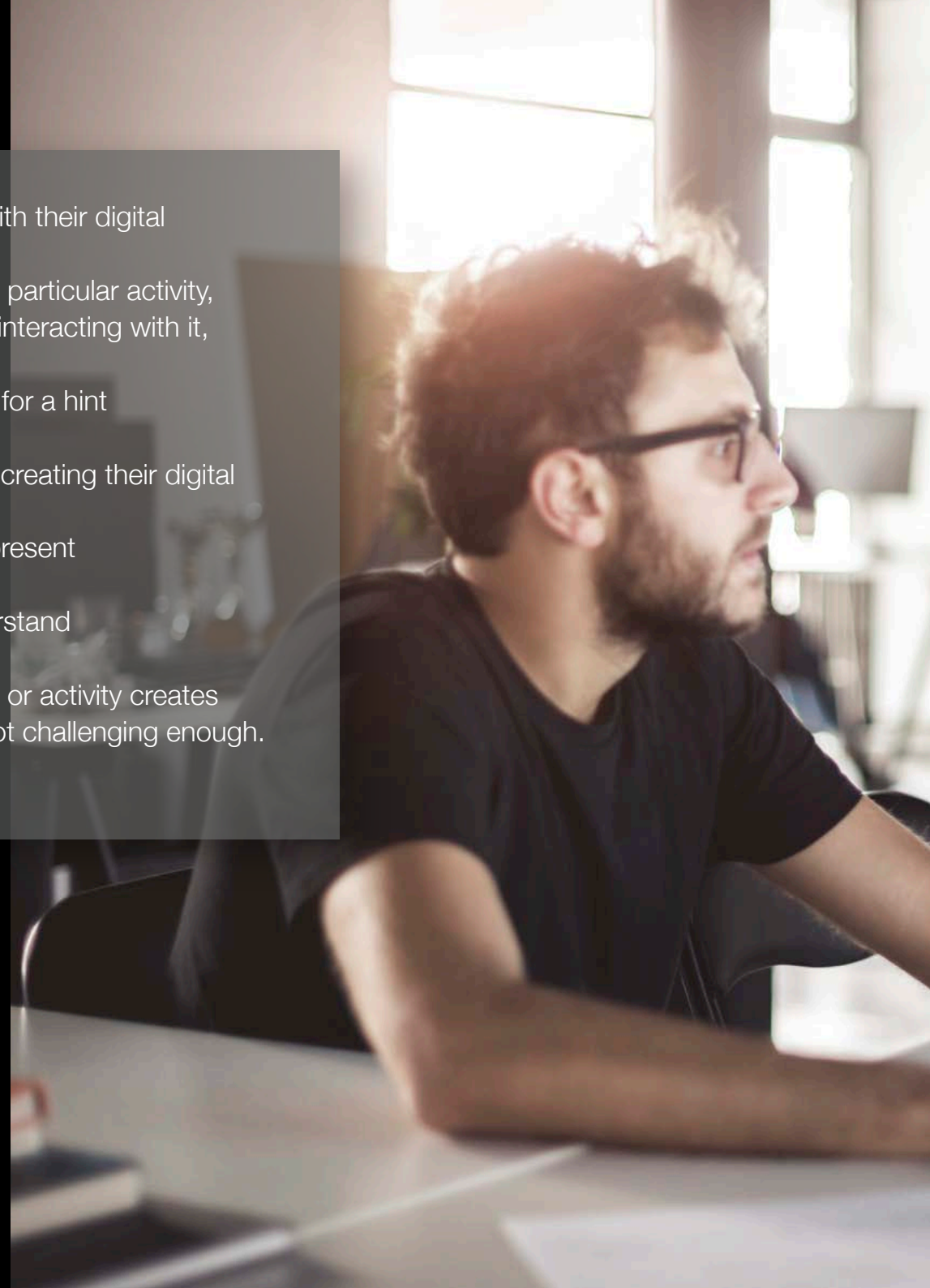
The Ministries of Education can trace more general students' results observing long-term trends in the effectiveness of selected education resources or methods.

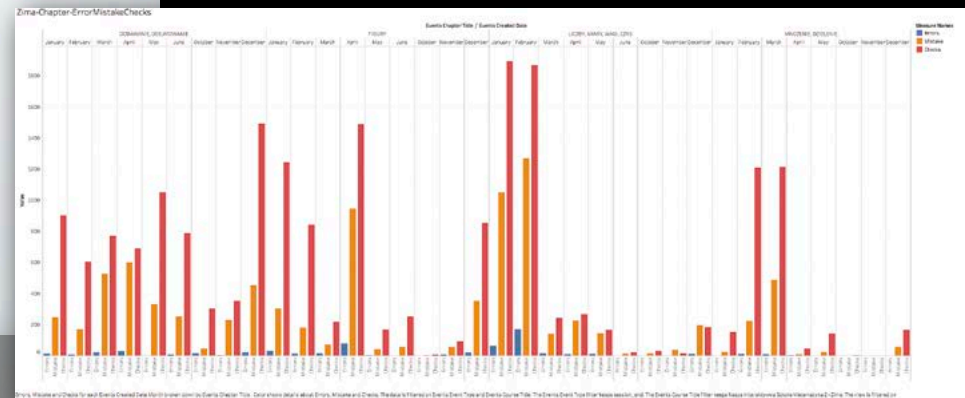
By observing how Students are doing with their digital textbooks and tracing:

- how much time they spend to solve a particular activity,
- how many mistakes they make while interacting with it,
- the type of mistakes they make,
- how many times they ask the system for a hint or to show the correct answers,

the publishers or editors responsible for creating their digital textbooks can assess if:

- their materials clearly and effectively present the intended concepts and ideas,
- how difficult it is for Students to understand the presented concepts,
- which particular part of a lesson page or activity creates a problem for them or which one is not challenging enough.





Having all this information, the publishers and editors can **constantly improve the quality** of their electronic textbooks. What's more important, instead of waiting for the next edition of a paper-based textbook, they can make **all corrections and improvements practically in real time**.

Moreover, access to such a huge pool of information allows Publishers to make a variety of statistical analysis in different segments and groups and check, e.g. the differences between Students in different locations, large towns vs. villages, or between Students of a particular background, skills, abilities or disorders.

Applications of Electrostatics and Calculations Connected with Electrolysis

< 5/8 >

Current and Electrical Charge

Current and Electrical Charge

$1\text{ A} = 1\text{ C s}^{-1}$ electrons pass through a cross-section of a conductor during 1 second, we say that a current of 1 ampere has flowed through the conductor. 6.24×10^{18} electrons carry an electrical charge of 1 coulomb.

1 coulomb equals electrical charge of 6.24×10^{18} electrons.

Conductor

Take a look at the circuit-diagram of a resistor:

Doppler Effect

< 4/9 >

Why Does Frequency Change?

Stationary and Moving Wave Source

Stationary wave source:
 $\lambda_1 = \lambda_2, f_1 = f_2$

Where:
 λ_1, λ_2 are wavelength,
 f_1, f_2 are frequency.

Stationary Wave Source

Moving Wave Source

▶ 0:07 / 0:14

Activity: Watch the animations and then match the wave diagrams to the appropriate animations.



0%

Pythagorean Theorem and Trigonometry
in 3-D

4/9 >

A Cone

A circular cone is made of a sector that is $\frac{5}{6}$ of a circle with radius 4. The angle that the generator forms with the base and the height of 11 in the blanks. Write the fraction in its lowest terms.


$l = \frac{5}{6} \cdot 2\pi a = \quad \pi$ $r = \quad$
 $\cos \alpha = \frac{r}{a} = \quad$
 $\alpha = \quad^\circ$ (to the nearest degree)
 $h = \sqrt{\quad}$

... 4 5 6 7 8 9 10 11


Part 2: Doppler Effect Without the Doppler Effect

Does the Doppler Effect Exist?

distance between a source of sound and the observer does not change, then there is no change in frequency as the sound travels. In this case, no Doppler effect.



Select the person who will hear the Doppler effect from the moving ambulance.



Activity: Choose the description and the label.

The angle between the lateral edge and the base.

☐ α ☐ β

The angle between the original and the base.

☐ α ☐ β

The angle between the slapping of a lateral face and the base.

☐ α ☐ β

The angle between the lateral face and the base.

☐ α ☐ β ☐ γ

The angle between the lateral edge and the base.

☐ α ☐ β ☐ γ

The angle between the face and the base.

☐ α ☐ β ☐ γ ☐ δ

Electric Charge
is defined as the amount of charge flowing through a conductor in unit time. The formula used to calculate the current is given by the equation:
$$I = \frac{Q}{t}$$

where I is the current, Q is the charge and t is the time.

For a simulation to see a flow of electrons using different amounts in ampere and calculate the charge transferred by a current.



The simulation shows a battery, a switch, and a wire. A clock shows 1:00. Below the wire, a bar chart shows the number of electrons transferred over time. The bar chart has a scale from 0 to 8. The current is 1.00 A.

Charge = Current \times Time
(Amperes) (Seconds)

Calculate the charge in Faradays transferred by a current of 8 ampere in one second. Also find the mass carried in one atomic particle.

$Q = I \times t$ $Q = 8 \times 1$
 $Q = 8$

Electrons is equal to a faraday, then Q coulombs is equal to faradays

$$F = \frac{Q}{n}$$

where F is the faraday, Q is the charge, and n is the number of electrons.

Calculate the charge in Faradays transferred by a current of 1 ampere in 1 second. Also find the mass carried in two particles.

$Q = I \times t$ $Q = 1 \times 1$
 $Q = 1$

In order to fully exploit the mCourser capabilities, it is necessary to secure a perfect match between an LMS and the eContent deployed in it.

The best results can be obtained while using the eContent created with **mAuthor** – Learnetic's proprietary top-quality **Authoring Tool** capable of producing highly interactive materials and offering over 140 highly adjustable functional modules to address the most demanding instructional design requirements.

Momentum

Collision of Carts

Carts

The quantities that determine the direction in which two carts will move after they have collided are: the speed of the carts at the moment of the collision and their masses.

Check what will happen to the carts after a collision and how this is related to their speeds and masses.

Activity: Suppose that two carts collided. Cart A came from left, and came from right. Match the velocities and the masses of the carts which happened after the collision.

Car A: $1 \text{ kg}, 1 \frac{\text{m}}{\text{s}}$ Car B: $1 \text{ kg}, 1 \frac{\text{m}}{\text{s}}$ Result of the Collision: ☐ stop

Hormones and Endocrine Glands

Specificity of Hormone Activity

Transport of Hormones

Hormones are usually transported by the blood and thus reach every cell of the body. However, they only affect the functioning of cells that are equipped with receptors specific for a given hormone. Receptors are located in the cell surface membrane or in the cytoplasm. Cells with specific receptors are called target cells.

Glossary: target cells

Steroid and Peptide Hormones

The chemical composition of hormones is similar, or sometimes even identical, in different species of vertebrates. However, the function of a particular hormone can be totally different in different species. For example, the hormone that regulates milk secretion in mammals also regulates water metabolism in reptiles. Watch to learn more about peptide and steroid hormones.

Peptide Hormones
Steroid Hormones

Hormones and Endocrine Glands

The Hypothalamus-Pituitary System

Pituitary Gland and Hypothalamus

The hypothalamus is the element of the dominant hypothalamus-pituitary system that controls hormone secretion in the endocrine system. The hypothalamus directly affects the activity of the pituitary, stimulating or inhibiting the secretion of hormones.

Coordination of the Pituitary and Hypothalamus

Trophic hormones are hormones secreted by the pituitary gland. They stimulate the activity of other, pituitary-dependent, endocrine glands. Watch to learn the principle by which the hypothalamus and pituitary coordinate.

Activity: Put the illustrations of glands into the correct spaces on the diagram. This will provide information about the hormones produced in

Chemical Equations

How to Write the Numbers of Molecules and Atoms in a Molecule

How to Write the Numbers of Molecules and Atoms of a Molecule

The number of atoms taking part in the chemical equation are indicated by stoichiometric coefficients.

Subscripts

These are small numbers written as subscripts after the symbol for an element in the formula for a molecule, indicating the number of atoms of this element that are present in the molecule.

Galaxies

The Milky Way

The Structure of the Galaxy

The Earth is a part of the Solar System, which has the Sun at its center. The Sun, together with a vast number of other stars, forms a galaxy. The stars in our galaxy are not distributed evenly in space, but are concentrated in a band of stars called the Milky Way. Our galaxy is named for this band of stars and is called the Milky Way Galaxy.

Activity: Label the parts of the Milky Way Galaxy.

Transformations of Graphs (2)

Transformations of Graph - a Brief Reminder

Reminder

If the graph of $y = f(x)$ undergoes a translation of a units parallel to the x -axis, then its equation becomes $y = f(x - a)$.

If the graph of $y = f(x)$ undergoes a translation of b units parallel to the y -axis, then its equation becomes $y = f(x) + b$.

Activity: Insert into the gaps the correct equations of the given graphs.

The graph of function $y = f(x)$ is shown.

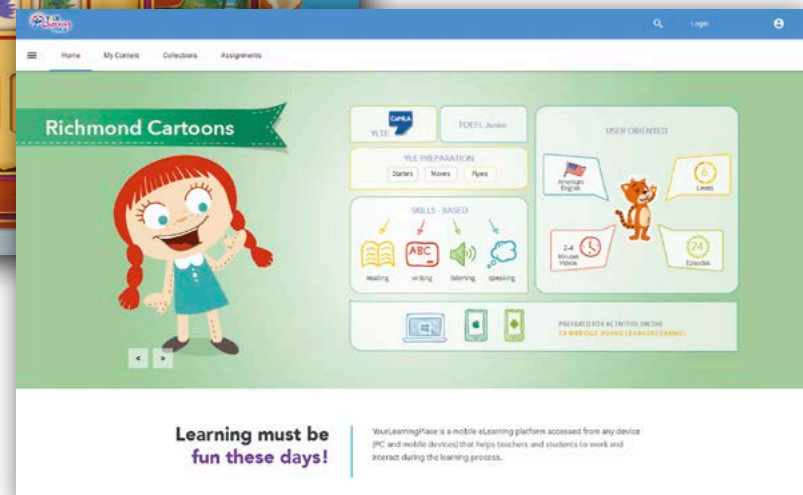
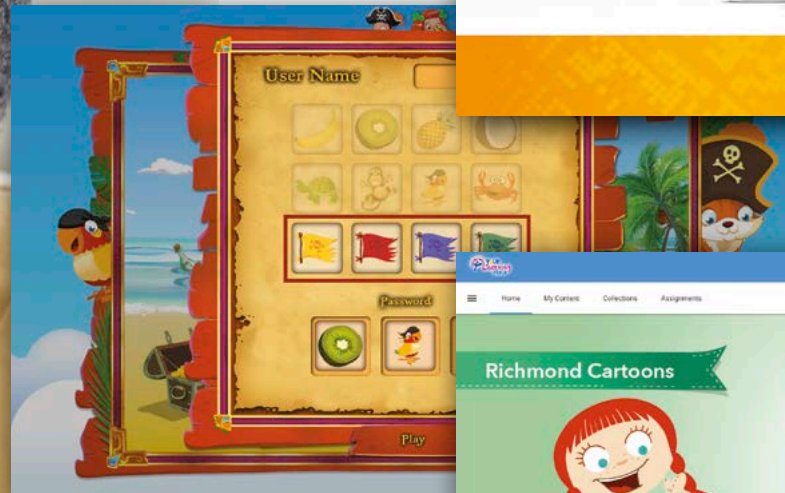
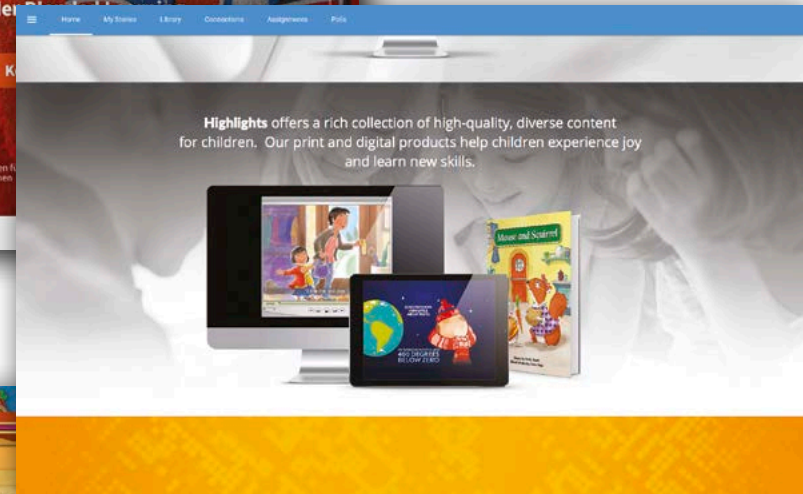
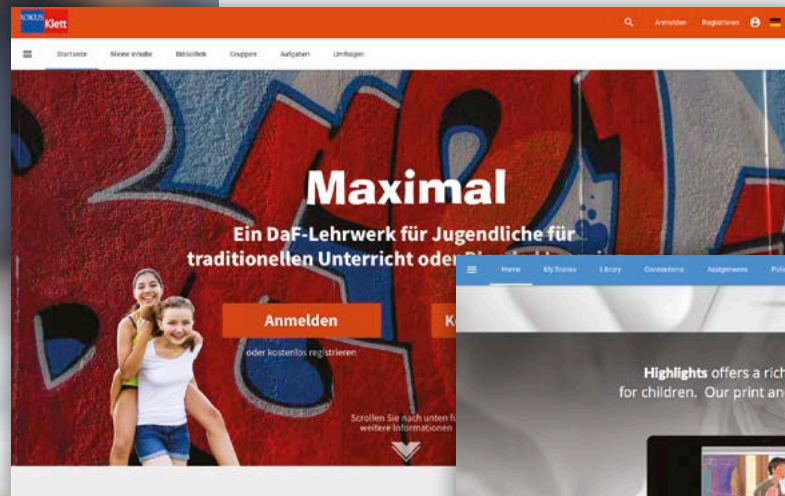
$y = f(x) + 3$, $y = f(x) - 3$, $y = f(x) + 2$, $y = f(x) - 2$

The background of the slide features a photograph of three young girls in a classroom. They are all smiling and looking down at tablets they are holding. The girl on the left is wearing a blue shirt with white stars. The girl in the middle is wearing a red and white striped shirt. The girl on the right is wearing a grey shirt. The text 'Platform Customisation' is overlaid on the left side of the image, with 'Platform' in blue and 'Customisation' in white.

Platform Customisation

Thanks to the mCourser customisation capabilities, it is possible to translate the interface to different languages or adapt its look-and-feel to specific age groups or subject contexts.

It is also possible to customise different layers of the platform in order to match it with particular school's or publisher's logos or preferential colour patterns. Platform or school administrators can also switch on and off different functional modules in order to streamline students' workflows or avoid their distractions.





Cloud-based Software as a Service Model.



No need for installation or local hosting – mCourser is a fully Cloud-based solution delivered and licensed in a Software-as-a-Service model.

It allows delivering not only the uninterrupted service but also provides necessary **flexibility to scale-up** mCourser service along with a growing number of schools and students using it. It also allows seamlessly introducing new options and functionalities that are being developed and launched by our development teams.



A photograph of three young adults sitting outdoors in a sunny, natural setting. On the left, a young man with dark hair is looking down at a tablet computer. In the center, a young woman with long brown hair is looking towards the camera with a slight smile. On the right, another young woman with long dark hair and sunglasses is smiling and looking at a white smartphone. The background is a soft-focus view of trees and foliage. The overall mood is bright, positive, and academic.

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