

Supporting Teachers to Utilise Learning Analytics in Their Teaching

CPCECPR Conference 2023

Educational Development Centre, PolyU
(EDC LA Team – Mr Dick Chan & Ms Ada Tse)



THE HONG KONG
POLYTECHNIC UNIVERSITY
香港理工大學



Educational Development Centre
教學發展中心

Teachers and students participated in many online learning and teaching (L&T) activities which generated huge amount of data



Learning management system

- Blackboard



Online conferencing tool

- Bb Collaborate Ultra
- Microsoft Teams
- Zoom



Video management system

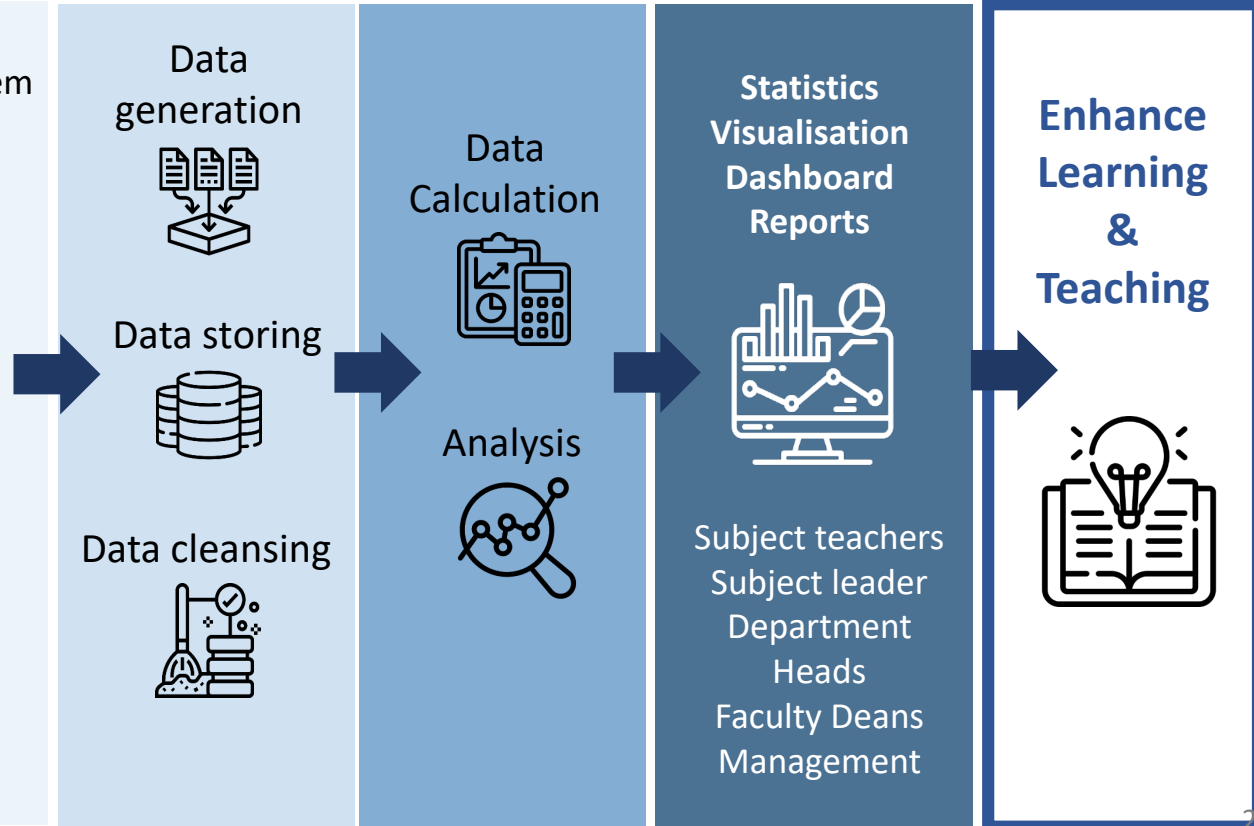
- Panopto



Student performance



Student views on learning



What we do...

- Promote LA to teachers
- Disseminate guidelines or latest information
- Provide professional development to teachers
- Develop tools for conducting LA
- Generate reports for stakeholders
- Provide consultation or suggestion
- Conduct research or projects

Newsletter

Guidelines

Learning Analytics Newsletter:
Five Tips for Getting Useful Learning Analytics

Do you know how students engage in your online teaching? Here are some tips to consider if you want to get some useful learning analytics for understanding students' online learning.

- Follow up with students who did not access your Blackboard course.** It is important to communicate with them to understand whether they are having any difficulties in learning and what assistance you can give them.
 - Check Retention Centre (BB course + Content Panel High panel) - Retention - Performance Centre [Click to download](#)
 - Check Performance Dashboard (BB course + Content Panel High panel) - Retention - Performance Dashboard [Click to download](#)
- Review the attendance record for your online session to understand whether your students have attended the online classes and when they joined and left.**
 - View attendance Report in Blackboard Collaborate Ultra [Click to download](#)
 - View attendance Report in Zoom [Click to download](#)
 - View attendance Report in MS Teams [Click to download](#)
- Track access of important teaching materials and tool usage in your Blackboard courses to see if your students have accessed them.**
 - Enable "Statistics Tracking" in order to make the statistics available [Click to download](#)
 - Read the course usage statistics report [Click to download](#)
 - Read the Subject Engagement Report (BB panel + Content Panel) - Higher "Subject Engagement Report" [Click to download](#)
- Upload videos to your Blackboard course using uLearn (powered by Panopto) under the default course folder.** uLearn contains detailed statistics about students' engagement (e.g., how many students viewed the videos, how long your students watched the videos, which part they viewed most). Uploading these videos to the default course folder makes viewing statistics available to you.
 - Set up your Blackboard course with uLearn [Click to download](#)
 - Upload videos to the uLearn [Click to download](#)
 - View the video analytics and reports [Click to download](#)
- Set up regular online short quizzes/tests in your Blackboard course to understand students' learning progress and identify and provide support to students lag behind.**
 - Create test in Blackboard course [Click to download](#)
 - Set up different types of questions in the test [Click to download](#)
 - Read the Test Results [Click to download](#)

We hope these five tips can help you, with you and your students a successful online teaching and learning experience. If you have any questions related to making use of learning analytics, please email us at teach.analytics@utoronto.ca.

Learning Analytics Newsletter (2020/21 Semester 2):
Five Tips for Getting Useful Data to Understand Student Engagement

Do you know how students engage in your online teaching? Here are some tips to consider if you want to get some useful learning analytics for understanding students' online learning.

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 - Read the course usage statistics report [Click to download](#)
 - Read the Subject Engagement Report (BB course + Content Panel) - Higher "Subject Engagement Report" [Click to download](#)
- Set up polling in your online synchronous session and look at your student responses to know who is engaging in class and evaluate students' understanding.**
 - Set up polling and download the data in Blackboard Collaborate Ultra [Click to download](#)
 - Set up polling in MS Teams [Click to download](#)
 - Set up polling and download the data in Zoom [Click to download](#)
 - Download polling data in MS Teams [Click to download](#)
- Set up regular short online quizzes/tests in your Blackboard course to understand students' learning progress and identify and provide support to students who are lagging behind.**
 - Create test in Blackboard course [Click to download](#)
 - Set up different types of questions in the test [Click to download](#)
 - Read the test results [Click to download](#)

We hope these five tips can help you and we wish you and your students a successful online teaching and learning experience. If you have any questions related to making use of learning analytics, please email us at teach.analytics@utoronto.ca.

Guideline to Conducting Learning Analytics (LA) in PolyU

Definition: The measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimizing learning and the environments in which it occurs. (Dierker for Learning Analytics Research [2014])

LA offer insights that can improve the quality of educational content that is delivered to learners and make learning more effective for students.

Do I need to collect student online learning data?
For online learning platforms used at PolyU, data about what students do online is collected automatically. However, for course reports in LEARN@PolyU (Blackboard), you need to enable Statistics Tracking for content items.

Where can I find the LA reports?
There are several reports available at PolyU. A link to the report or the online guide is attached:

- The Subject Engagement Report (SER)** - a customized weekly report viewed in LEARN@PolyU [Click to download](#)
- Performance Dashboard, Retention Centre or Course Report** in LEARN@PolyU (Blackboard) - real time reports [Click to download](#)
- Gradebooks** in LEARN@PolyU (Blackboard) - helps you to track students' completion of tests and assignment [Click to download](#)
- Gradebooks for Blackboard (Phantom)** - real time reports [Click to download](#)
- Attendance report in Blackboard Collaborate Ultra (BBU)**, MS Teams and Zoom

There are many ways of using learning analytics yourself, but to make it more convenient, there are several reports you can access where the analytics have already been done:

- SER [Click to download](#)
- MS Teams [Click to download](#)
- Zoom [Click to download](#)

To keep track of your students' online learning, it is recommended that teachers do the following, at least weekly:

1. Enable Statistics Tracking for content items in your course in LEARN@PolyU to collect data on how many times students access a particular item.
How to enable tracking option? [Click to download](#)
2. Make sure your students are assessing your course regularly. If not, please contact them (e.g., send them a friendly email) to encourage them to access your course.
3. See if your students have read your announcement(s). If not, try to remind them by sending an email or if it is important, send the announcement again.
4. Ensure your students have assessed important learning materials (e.g. lecture recordings, notes). If not, encourage students to read/watch them (e.g., send them an email using the materials are important to achieve the learning outcomes).
5. Explore whether your students engaging or interacting with the asynchronous discussion forum(s). If students are not very active in the discussion forum, you may try to facilitate the discussion.
6. Check if all your students have completed online tests or submitted assignments. If not, you could send them a reminder or make an announcement to encourage them to do so.
7. Review students' performance in online tests or assignments. Identify students' strengths and weaknesses and use if there is any enhancement needed to your teaching design.
8. Check whether your students participate in online live discussion(s). If not, try to contact those who have not participated in the live discussion sessions.
9. Review students' feedback (both quantitative and qualitative, from discussion forums and surveys) about their learning or your teaching. In order to feed back about your students' views about their learning and their difficulties.

Trainings, Hands-on, workshops and Seminars to staff

- Introduction of LA
- LA initiatives promotion
- How to conduct LA at subject and lesson level
- How to enhance L&T using LA
- Teachers' sharing

Re-run Hands-on Workshop on CONDUCTING LEARNING ANALYTICS with BLACKBOARD COURSE DATA Using Excel

19 Jul 2018 10:30-12:00 TU616

Facilitators:
Chun Sang Chan, EDC
Ada Tse, EDC
Christine Armatas, EDC

Do you want to know what your students are doing in your Bb courses? What learning materials do they access and do they actively participate in discussions or just read some of the postings by others?

In this session, we will demonstrate an Excel tool that simply and easily allows you to extract and analyse up-to-date student usage information for different features and course materials in your Bb courses, including information in Grade Center and discussion forums.

This easy to use but powerful tool can help you gain insight into how your students are learning online. So please join us for this hands-on workshop to explore new possibilities for Blackboard data analytics!

Getting started with Learning Analytics

Wednesday, 23 October, 2019 12:30 PM - 2:00 PM TU411

EDC is going great! Bring your own cup to enjoy complimentary beverages.

Facilitators:
Ada Tse, EDC
Dick Chan, EDC
Christine Armatas, EDC

Interested in using learning analytics to improve your teaching but not sure where to start?

This workshop will help by providing examples of applications for **learning analytics** that provide information teachers can use to support student learning. Join us to find out more and get started with **learning analytics**.

Workshop 1

Understanding What Students are Doing Online

21 Feb 2020 (Fri) 1230-1330 Venue: Online

Find out what information is available to help you understand what your students are doing online and how you can better support their learning.

Facilitators:
Christine Armatas, Joseph Chow
Kannass Chan, Ada Tse & Dick Chan (EDC)

Registration is required.

- 1 Register at <https://polyu.hk/TkysL> on or before 21 Feb 2020 12:20
- 2 Join the webinar <https://polyu.hk/rtrfj> (Note: you must register via the above website)
- 3 If you encounter technical issues, please email chun.sang.chan@polyu.edu.hk

Educational Development Centre

If you're new to Blackboard Collaborate, please watch this video before joining: https://help.blackboard.com/Collaborate/Ultra/Participant/Get_Started

Sharing Session on Learning Analytics Evidence from Online Teaching in Semester 2, 2019/20

29 Jul 2020 (Wed) 12:30-13:30 Venue: Online

Facilitators: Christine Armatas, Kannass Chan, Joseph Chow & Ada Tse (EDC)

Are you interested in finding out what online teaching "looked" like last semester? Are you curious about what students thought about their online teaching experience? If so, you can find out more and discuss what it all means by joining this online sharing session for teachers.

Registration:

- 1 Go to <https://polyu.hk/EFzBv>
- 2 Log in using your PolyU NetID.
- 3 Just before the start time, click on **Sharing Session on Learning Analytics Evidence from Online Teaching in Semester 2, 2019/20** and then click **Join session**.

Educational Development Centre

If you're new to Blackboard Collaborate, please watch this video before joining: https://help.blackboard.com/Collaborate/Ultra/Participant/Get_Started

Using Rep...

30 Sep

Facilitator

This is a webinar about how to interpret to teaching. Ways for

Registration

To join the online w... You will receive

Generate reports to stakeholders

Management

To understand overall how students and teachers use Institutional platforms for online learning and teaching

Faculty Deans/ Department Heads

To understand what happens in their Faculties/ Departments and support or actions required

Subject teachers

To understand what students do in their courses and actions or enhancement that need to be taken

Projects

The effect of the LMS training on teachers' online teaching

use LMS data to investigate what teachers do differently after attending LMS-related training. It will also examine what effect the training has on participants' online teaching.

Enhancing Learning Outcomes for Students through a Data-driven Review of the 4-year Curriculum (PolyU, HKBU, CUHK)

analyse the experience of graduates to identify factors that impact on student success in the 4-year curriculum (4YC) and to use this information to provide better support to current students.

LA for Enhancement of Virtual Teaching and Learning (VTL) at Subject Level: A Gap Analysis with Follow-up Training

aims to find out what data and reports are available, what data and reports are being used by teachers currently, and whether these are enough for teachers to carry out evidence-based improvements in VTL data.

Self-Service Portal for Different Stakeholders to Access Teaching and Learning Reports or Dashboards

established for staff to access interactive customised reports and dashboards drawing on learning and teaching (L&T) data.

SUPPORTING THE use of learning analytics in higher education

PRESENTER :



Prof. Abelardo PARDO
Dean of Programs & Engineering at UDESA VITER
President of the Society for Learning Analytics Research
University of South Australia

21 June 2022
Tuesday
15:30 - 16:30
Online via Zoom

The workshop is jointly organised by the CoP on Conducting Learning Analytics to Inform Teaching and Learning and EDC.

Facilitators:
Dr Henry Chan (COMP)
Mr Dick Chan (EDC)
Ms Ada Tse (EDC)

Learning analytics is the field that studies how the use of data can be used to increase our understanding and improve current learning experiences. The amount of technology mediation in current higher education institutions offers the possibility of an evidence-based approach to embed the use of data in decision-making processes related to teaching and learning. But evidence-based education of these techniques have been shown to be challenging. Effective use of Learning Analytics requires interdisciplinary teams that combine expertise in multiple disciplinary areas that are typically isolated from each other. In this talk we will review the elements that are usually present in higher education institutions when attempting to embed Learning Analytics in their operations and the leadership and structural requirements that may translate the successful adoption.

Facilitators:
Dr Henry Chan (COMP)
Mr Dick Chan (EDC)
Ms Ada Tse (EDC)

LEARNING ANALYTICS SYMPOSIUM 2020

Evidence, Analysis, Action
Using Data to Enhance Student Learning Outcomes

Date: Monday, 19 October 2020
Mode: Virtual Symposium via Zoom


Please join us online at this exciting Symposium to learn how learning analytics can support and further enhance the evidence used for programme reviews.

The Hong Kong Polytechnic University, as the lead university, will coordinate this online Symposium using Zoom video-conferencing technology. This Symposium will showcase innovative work in learning analytics from three universities in Hong Kong.

Our Keynote Speaker is
Professor Olegan Golevsk,
from Monash University, Australia,
a world-renowned expert on learning analytics in Higher Education

Registration is free and closes on 30th September 2020
Please visit the Symposium website for more detail and to register
<https://symposium.learninganalytics.edu.hk>

Use of Learning Analytics to Give Evidence of the Positive Effects of Active Learning on Student Learning Outcomes



23 April 2021 (Fri)
12:30-13:30
Venue: Online via Zoom

Presenter
Dr Fridolin Ting (AMA)

Facilitators
Dr Henry Chan (COMP), Ms Ada Tse (EDC), Mr Dick Chan (EDC)

Active teaching, broadly defined, is anything other than traditional lecturing, where there is a teacher-centered focus on the input and students are passive in their learning. Many people (correctly) assume that active learning has positive effects on student learning outcomes, but how do you give evidence to indicate the validity to this statement? In this talk, we will give a couple of examples of how active learning analytics to show how technology-enhanced active learning pedagogies, implemented in lecture or tutorial, may improve student learning outcomes.

Dr Henry Chan, Facilitator of CoP on Learning Analytics will also share his experience in using MS Forms for learning analytics purposes.

Please register at:
<https://edc.polyu.edu.hk/regform>

This activity is jointly organised by the CoP on Conducting Learning Analytics to Inform Teaching and Learning and EDC.

PAPER AWARD 2022

CoP Learning Analytics Paper Award 2022

Have you used or thought of using learning analytics in your learning and teaching research? Join this Learning Analytics Paper Award 2022 organised by the Community of Practice on conducting learning analytics to inform teaching and learning (CoP LA)!

Prizes for award winners

First prize
HK\$1000 supermarket voucher & a certificate

Second prize
HK\$500 supermarket voucher & a certificate

Third prize
HK\$200 supermarket voucher & a certificate

Merit prize
A certificate of merit will be given to selected participants

*All award winners will be invited to present their paper at a later session.

Deadline of paper submission
23:59
6 June 2022
Monday

Notification of results
Summer 2022

Prizes for award winners

First prize
HK\$1000 supermarket voucher & a certificate

Second prize
HK\$500 supermarket voucher & a certificate

Third prize
HK\$200 supermarket voucher & a certificate

Merit prize
A certificate of merit will be given to selected participants

*All award winners will be invited to present their paper at a later session.

visit <https://www.polyu.edu.hk/CoP2022/LA/awards.html>

Details of application

Communities of Practices (CoP) – Learning Analytics

1. to expand the community of PolyU staff in applying LA for enhancing L&T;
2. to provide a platform for sharing experience and good practice in applying LA at PolyU;
3. to provide advice to the University on matters related to the use of LA and to support the University's initiatives for L&T; and
4. to exchange and share PolyU LA practices and experience with local, regional and international educators and researchers in the higher education field.

The background of the slide shows a blurred image of several people, likely teachers, gathered around a table. They appear to be in a collaborative meeting, with some individuals looking at documents or devices. On the left side of the image, there are several colorful sticky notes (pink, orange, yellow) attached to a surface, possibly a whiteboard or a wall. The overall lighting is bright and warm, suggesting an indoor setting with natural light.

Consultation to Teachers

- How to conduct LA
- How to extract data
- What should teachers look for
- How to analyse the data
- How to interpret the results
- What should teachers do with the numbers
- What skills are needed to do LA

Develop tools for teachers to conduct learning analytics

- Develop from teachers' perspective
- Easy to use

Online Activity Analysis Tool (OAAT)

an Excel add-in which empowers teachers to extract and analyse data from the learning management system to understand students' online behaviours, improve their teaching and assist students to be successful in their studies.

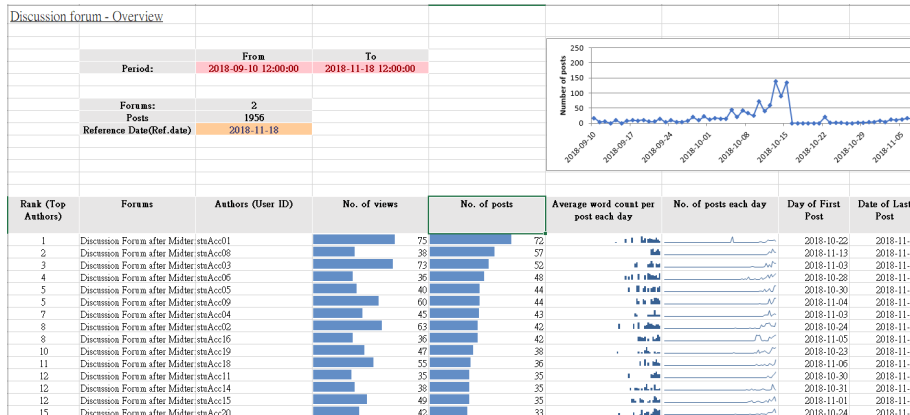
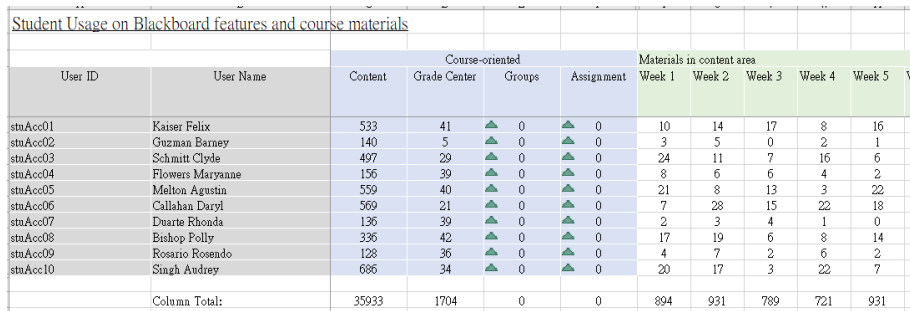
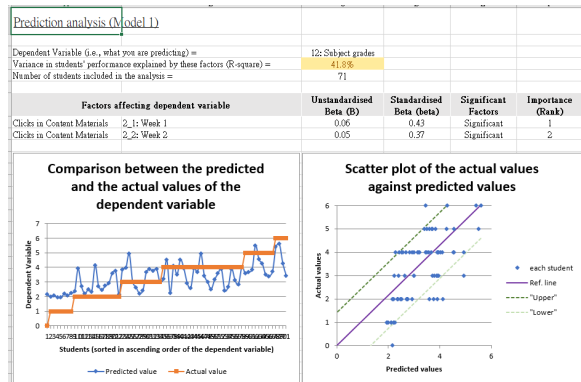
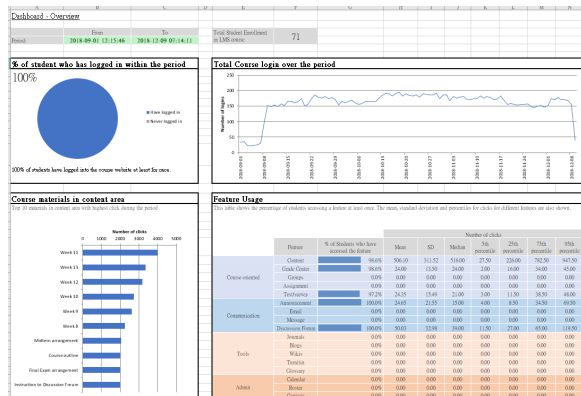
ChatAnalyser

an Excel add-in which produces a formatted chat history from online conferencing tools, generating useful figures, summaries and tables for teachers to understand students' engagement in the chat and further enhance their teaching.

Program Review Tool (PRT)

an Excel add-in which uses LA to convert students' academic records from a programme into outputs to address programme review questions for academic decision-making and internal and external reporting requirements.

Online Activity Analysis Tool (OAAT)



ChatAnalyser

No. of participants

 **111**

No. of authors

 **60**

Participation rate

 **54%**
Good

Total no. of posts

 **559**

Posts per author

 **9.3**

Chat time (minutes)

 **113**
One post in every 0.2 mins

Word count

 **653**

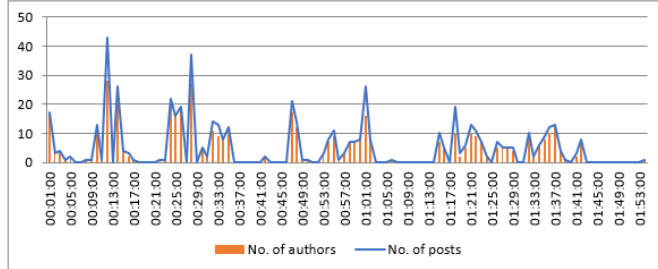
Word count per post

 **1.2**

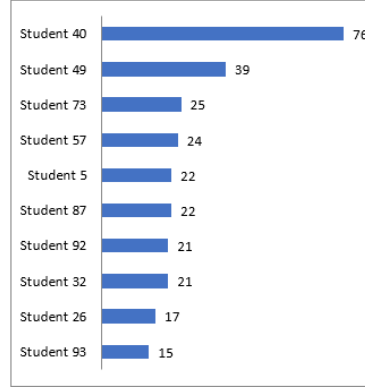
Questions asked

 **9**
[More...](#)

At what times do people chat?



Who posts most frequently? (Top 10)



How do people interact?

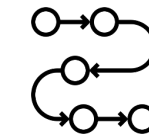
Person A Person B No. of interactions



Summary of
each class



Participation of
each student



Understanding
of correlation
between
resources

Learning Analytics Platform (LAP)

- For teachers, programme leaders, Heads/Deans, Management
- One stop online platform
- Reports and statistics for different institutional online platform and student learning experience surveys
- To provide a holistic picture of students' learning in the subjects

LA Learning Analytics Platform version 1.01 Beta

Please click here to fill in a short survey to let us know your comments. Your feedback on the LAP would be greatly appreciated!

Subject e-Engagement Report (SeER)

The Subject e-Engagement Report (SeER) includes information related to your student's use of PolyU's online learning platforms, such as Learn@PolyU (Blackboard), Collaborate Ultra, MS Teams, Panopto and Zoom. You can use the SeER to help you gain a better understanding of your student's online behaviour and learning progress during the semester.

Institutional Surveys on Learning Experience (ISLE) Reports

The Institutional Surveys on Learning Experience (ISLE) is designed to capture first-year and final-year degree and higher diploma students' perceived learning gains regarding their graduate attributes, learning experience and views on different learning and teaching areas.

Download Center

You can download reports and tables related to your subject here.

Disclaimer [GO TO IT AND HELP](#)

Please note that this site contains confidential information and is intended for use by staff to enhance their teaching and students' learning. Decoding, copying, distributing or any other use of this information for any purpose other than disclosed is prohibited.

LMS (Learn@PolyU)

Student Engagement

Percentage of enrolled students who logged in to the LMS during the report week

Category	Percentage
Students who logged in to LMS	93.0%
Students who did not log in to LMS	7.0%

Student Engagement

Number of students who logged in to LMS during different teaching weeks

Teaching Week	Active students	Enrolled students
1	250	250
2	250	250
3	250	250
4	250	250
5	250	250
6	250	250
7	250	250
8	250	250
9	250	250
10	250	250
11	250	250
12	250	250
13	250	250

Student Engagement

Number of student logins from web browser and LMS mobile app

Teaching Week	Web login	Mobile login
1	1000	1000
2	1000	1000
3	1000	1000
4	1000	1000
5	1000	1000
6	1000	1000
7	1000	1000
8	1000	1000
9	1000	1000
10	1000	1000
11	1000	1000
12	1000	1000
13	1000	1000

Top 20 Frequently Accessed Materials

CSV PDF PRINT

Search:

Title	Number of Times Accessed (Total)	Number of Times Accessed (This Week)
Subject Outline	1012	62
Lecture Four PPT	776	12

Online survey results about how PolyU teachers use data to enhance L&T in 2021

January – April 2022

(n=178 staff with teaching duties, 11.2%)



75%+

To enhance L&T, respondents read:

- Student performance data
- Student feedback questionnaire
- Usage of LMS
- Usage of IN-class activities



64%+

Purposes of reading those figures:

- Get immediate feedback
- Evaluate teaching performance
- Enhance students' satisfaction with learning experiences

Online survey results about how PolyU teachers use data to enhance L&T in 2021

January – April 2022

(n=178 staff with teaching duties, 11.2%)



75%+

Respondents agreed that:

- Using LA would improve my teaching performance
- Using LA would enhance my effectiveness in teaching
- Overall, I find LA useful to my teaching



70%+

Respondents agreed that:

- I intend to use LA in the next 3 months
- I plan to use LA in the next 3 months

To sum up...

At university, department and programme level

- ✓ promote using LA to enhance L&T → Aware and Use
- ✓ bring the diverse data together and allow stakeholders to access → Convenience
- ☹ Quality of data, technical issues (e.g. multiple L&T platforms)

At teacher level

- ✓ Promote using LA to enhance their classes → Aware and Use
- ✓ Develop tools and reports → Convenience
- ☹ Different subjects have different learning designs, which require different LA
- ☹ Different levels of analysis: *advanced analysis vs descriptive statistics*
- ☹ Different levels of skills: *by themselves vs more guidance*

Future

- **Further enhance our support (e.g. tools, reports and the online Learning Analytics Platform)**
- **Extend the promotion of LA to faculties & Departments**
- **Design and develop new workshops/trainings**
- **Share good LA practices**

END