

Moodle eta Learning Analytics

Iñigo Zendegi Urzelai

@izendegi

#mooteu17

Aurkibidea

Learning Analytics kontzeptua

Nola aplikatu Moodle-n

Haratago doan adibide bat

Etorkizuna imajinatzen

Learning Analytics

Definizio bat

Ikaste-prozesua hobeto ulertu eta prozesua eta gertatzen den ingurunea optimizatzeko helburuarekin egiten den ikasleen eta euren testuinguruaren inguruko datuen neurketa, bilketa, analisia eta aurkezpena

Learning Analytics

Enfokeak

Ezberdinak izan ditzake rolaren arabera

Ikaslea

bere helburu eta patroietaz ausnartu

Hezitzaileak

laguntza edo arreta beharrak detektatu

Edukien koordinatzaileak

edukiak hobetu, curriculum-ak aldatu,...

Instituzioak

marketing, efizientzia,...

Learning Analytics

Analisisa egiteko moduak

Edukiaren analisisa

Diskurtsoaren analisisa

Sare sozialen analisisa

Izaeren analisisa

Learning Analytics

Helburuaren arabera

Deskriptiboa	zer gertatu da?
Prediktiboa	zergatik gertatu da?
Diagnostikoa	zer gertatuko da?
Preskriptiboa	zer egin beharko nuke?

Learning Analytics

Emaitzaren arabera

Informazioa bistaratzea

Esku-hartzea

Pertsonalizazioa eta egokitzapena

Predikzioak

Learning Analytics

Etika eta pribatutasuna

Datuen jabetza

Anonimotasuna

Segurtasuna

Irekitasuna

Nork eta zertarako erabiliko dira datuak?

Nola aplikatu Moodle-n

Moodle estandarrean

Txostenak

Agerraldiak

Ikastaroaren jarduera

Choose which logs you want to see:

Course Fullname 101 ▾ All participants ▾ All days ▾ All activities ▾

All actions ▾ All events ▾

[Help with All events](#)

Teaching ▾

Time	User full name	Affected user	Event context	Component	Event name	Description	Origin	IP address
30 Apr. 08:09	Mr Brown	-	Forum: Poetry discussion	System	Course module updated	The forum module with instance id 40 was updated by user with id 12	web	86.130.123.176
30 Apr. 08:07	Mr Brown	-	Forum: Poetry discussion	System	Course module created	The forum module with instance id 40 was created by user with id 12	web	86.130.123.176
27 Apr. 13:11	Ms Wilson	Jacques Balmat	Assignment: Summer Poem	Assignment	Grading form viewed	The user with the id 2 viewed the grading form for the user with the id 5 for the assignment with the id 40.	web	86.130.123.176

Nola aplikatu Moodle-n

Moodle estandarrean

Jardueren osaketa

Require view Student must view this activity to complete it

Require grade Student must receive a grade to complete this activity

Require passing grade Require passing grade Or all available attempts completed

Expect completed on Enable

First name / Surname	Announcements from your tutor	Prior Knowledge assessment	Factual recall test
Frances Banks	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Mark Ellis	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Brian Franklin	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Barbara Gardner	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Amanda Hamilton	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Joshua Knight	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
George Lopez	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Anthony Ramirez	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Donna Taylor	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Brenda Vasquez	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Gary Vasquez	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Nola aplikatu Moodle-n

Moodle estandarrean

Baldintzapeko jarduerak

▼ Mugatu eskuragarritasuna

Eskuragarritasun-baldintzak

Ikaslea hurrengoak

👁️ ✕

Nola aplikatu Moodle-n

Moodle estandarrean

Ikastaro osaketa

Criteria group	Prerequisites	Activities	Grade	Approval	Course
Aggregation method	Any	Any	-	Any	All
Criteria	Course Completion 01	Lesson Activity Course ...	Quiz in Course completion 02 70% required	Teacher	Course complete
First name / Surname				Teacher	
Test User1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Test User2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Test User3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Test User4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Ikastaro-osaketaren ezarpenak editatu

Ikastaro-osaketa **Berezko jarduera-osaketa** Masiboki editatu jardueren osaketa

[Zabaldu guztia](#)

- ▶ Orokorra
- ▶ Baldintza: Jarduera-osaketa
- ▶ Baldintza: Beste ikastaro batzuen osaketa
- ▶ Baldintza: Data
- ▶ Baldintza: Matrikulazioaren iraupena
- ▶ Baldintza: Desmatrikulazioa
- ▶ Baldintza: Ikastaroaren kalifikazioa
- ▶ Baldintza: Norberak eskuz osatu
- ▶ Baldintza: Eskuz besteren batek osatu

Nola aplikatu Moodle-n

Moodle estandarrean

Galdetegiaren estatistikak

Quiz structure analysis

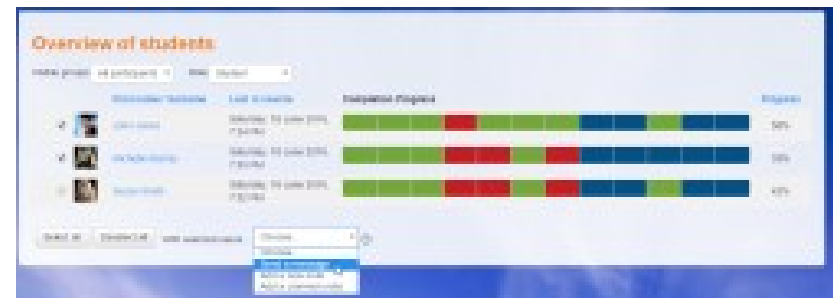
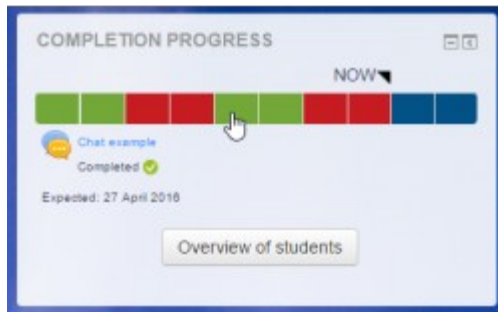
Download table data as

Q#		Question name	Attempts	Facility index	Standard deviation	Random guess score	Intended weight	Effective weight	Discrimination index	Discriminative efficiency
1		El Nino	23	43.48%	50.69%	25.00%	20.00%	34.44%	1.96%	3.16%
2		Match the river	23	95.65%	20.85%	33.33%	20.00%	17.67%	16.93%	100.00%
3		What type of water?	23	21.74%	42.17%	0.00%	20.00%	33.26%	28.51%	42.50%
4		Every 20 seconds !!!	23	91.30%	28.81%	50.00%	20.00%	14.63%	-15.77%	-35.29%
5		Rich and poor	23	0.00%	0.00%	0.00%	20.00%	0.00%		

Nola aplikatu Moodle-n

Gehigarriak

Aurrerapenaren jarraipena (2.8tik aurrera)



https://moodle.org/plugins/block_completion_progress

Nola aplikatu Moodle-n

#mooteu17

Gehigarriak

Analytics Graphs

Hits distribution

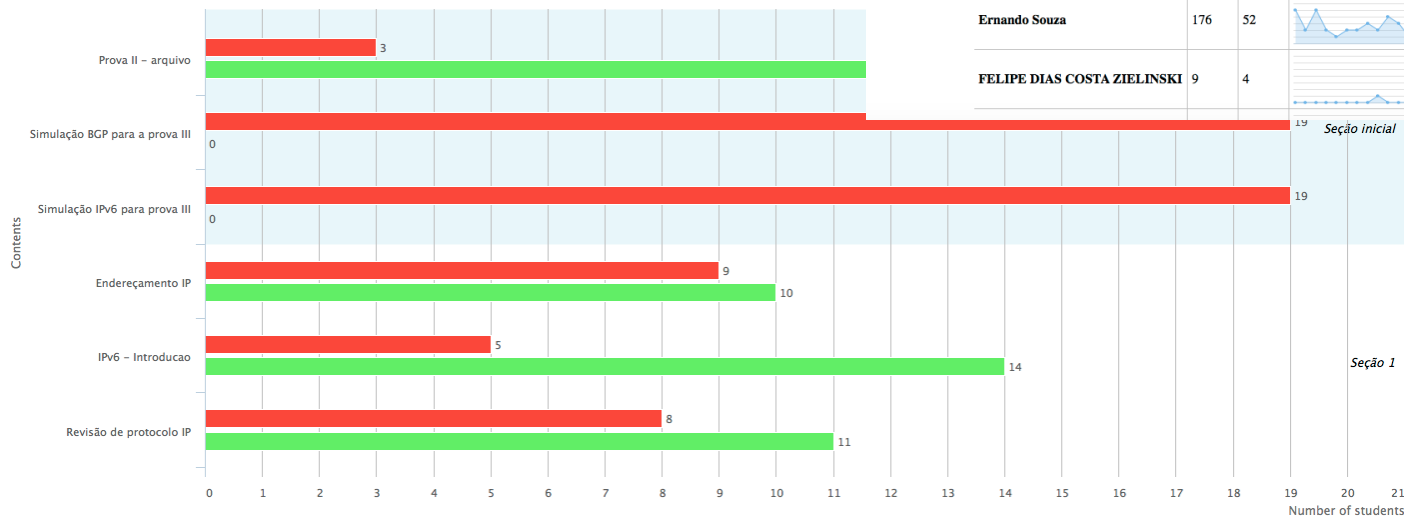
Course: 2014/2 - Roteamento - Prof. Marcelo

Begin date: Mon, 4 Aug 2014, 12:00 AM

Students	Course hits	Days with access	Number of days by week with access (Number of weeks: 21)	Resources with access	Number of resources accessed by week
Adair Júnior	21	11		24	
Anderson Paim dos Santos Vianna	74	31		34	
Andrés Nicolás Rivero	281	46		38	
Bruno Trevisso do Nascimento	147	38		35	
Caroline da Silva Tolfo	56	20		30	
Ernando Souza	176	52		49	
FELIPE DIAS COSTA ZIELINSKI	9	4		0	:(

Distribution of access to contents (resources)

Course: 2014/2 - Roteamento - Prof. Marcelo
Begin date: Monday, 4 August 2014, 12:00 AM

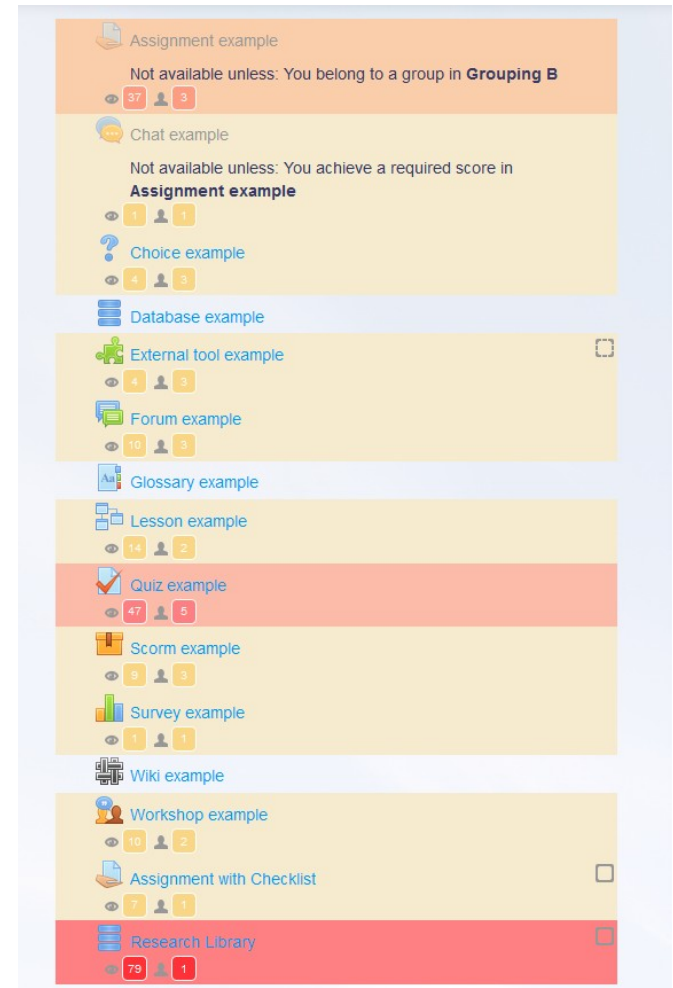


https://moodle.org/plugins/block_analytics_graphs

Nola aplikatu Moodle-n

Gehigarriak

Heat Map (2.7tik aurrera)



https://moodle.org/plugins/block_heatmap

Nola aplikatu Moodle-n

Gehigarriak

Configurable reports

Users from Spain, not madrid You are logged in as [Admin User](#) ([Logout](#))

[Moodle](#) > [CF101](#) > Users from Spain, not madrid

Report Columns Conditions Ordering Filters Permissions Calculations Plot - Graphs View report

Users from Spain, but no from Madrid, in this course. This report can be viewed only by users from Spain. A filter based on the user city must be displayed. A pie plot showing the users cities is required. A calculation table showing the total forum post views is required. The report must be order by users lastname.

Filter

City/town:



Name	Lastname	City	Views of forum (Section 1 forum)
Student	Mac	Seville	0
Student	Sam	Barcelona	0
Student	Timth	Seville	0

Custom Calculations

Name	Lastname	City	Views of forum (Section 1 forum)
			0

Download reports: [PDF](#) [Excel](#) [XLS](#)

Moodle Tools for this page


You are logged in as [Admin User](#) ([Logout](#))

https://moodle.org/plugins/block_configurable_reports

Nola aplikatu Moodle-n

Gehigarriak

Engagement Analytics (2.7 arte)

Engagement analytics 

- Ken Student 75%
- Angela Edgar 75%
- Frances Smart 44%
- Dougal McFarlane 36%

[View course report](#)

Engagement analytics for course: MBA - HRM

Scores are shown as *weighted score (raw score)*

Username	Assessment Activity	Forum Activity	Login Activity	Total ↑
Ken Student	25% (50%)	30% (100%)	20% (100%)	75%
Frances Smart	10% (20%)	30% (100%)	4% (20%)	44%
Dougal McFarlane	2% (4%)	30% (100%)	4% (20%)	36%
Angela Edgar	25% (50%)	30% (100%)	20% (100%)	75%

https://moodle.org/plugins/view.php?plugin=mod_engagement
https://moodle.org/plugins/view.php?plugin=block_engagement
https://moodle.org/plugins/report_engagement


Nola aplikatu Moodle-n


Gehigarriak

Ikastaroaren dedikazioa

▼ Course dedication configuration

Select the range of dates and the maximum time between clicks of the same session.

Start of the period 

End of the period 

Limit between clicks (in minutes)

Calculate

All course members dedication. Click on any name to see a detailed course dedication for it.



Period since *Tuesday, 26 March 2013, 11:00 PM* to *Monday, 17 February 2014, 4:07 PM*

Elapsed time: 327 days 17 hours

Total dedication: 47 hours 15 mins

Mean dedication: 23 hours 37 mins

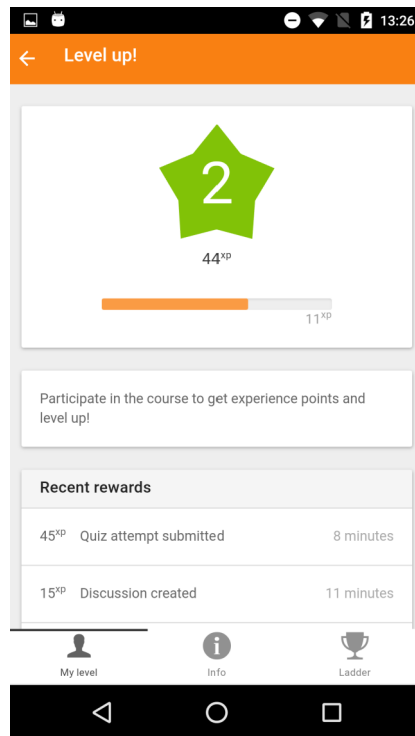
Download in Excel format

	First name	Surname	Group	Course dedication	Connections per day
	alumno1	alumno1	Grupo B	3 hours 17 mins	0.02
	Admin	Usuario	Grupo A	43 hours 57 mins	0.13













Nola aplikatu Moodle-n

Gehigarriak

Level up!



Ladder

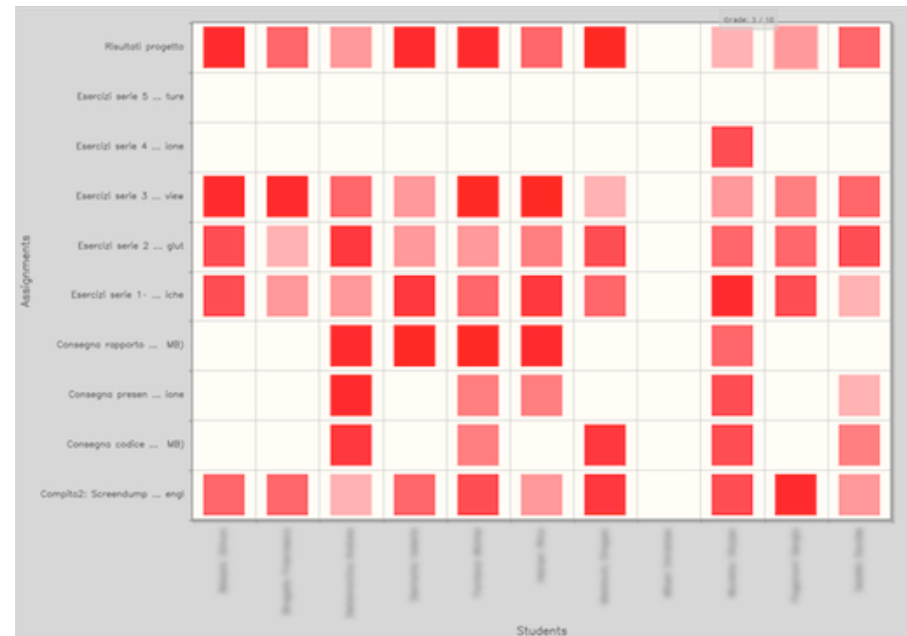
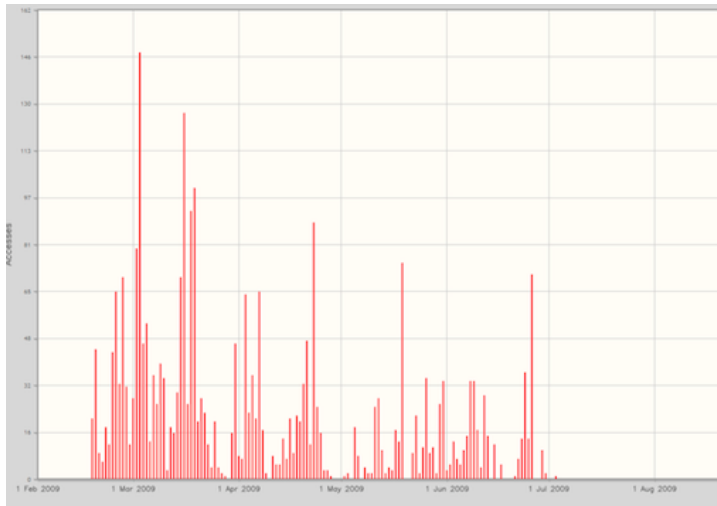
Level	Participant	Total	Progress
6	 Aubrey Howard	1,203 ^{XP}	 329 ^{XP} to go
5	 Austin Harris	972 ^{XP}	 114 ^{XP} to go
4	 Eleanor Shelton	535 ^{XP}	 208 ^{XP} to go
3	 Enola Noel	302 ^{XP}	 177 ^{XP} to go
2	 Joris Robert	214 ^{XP}	 62 ^{XP} to go
1	 Vedat Durmaz	103 ^{XP}	 17 ^{XP} to go

https://moodle.org/plugins/block_xp
https://moodle.org/plugins/availability_xp

Nola aplikatu Moodle-n

Gehigarriak

GISMO (2.8 arte)



https://moodle.org/plugins/block_gismo

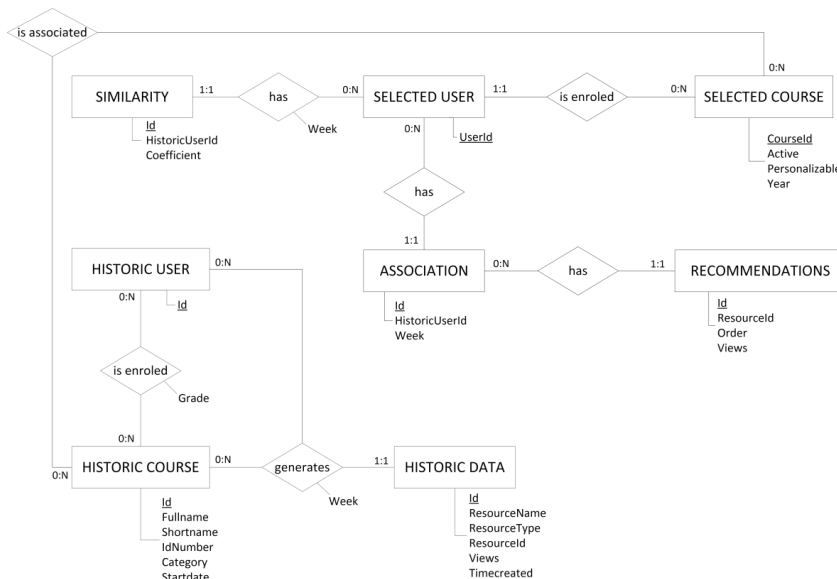
Adibidea: MyCourse

Helburua

Ikasle bakoitzari aurreko edizioetako ikasle arrakastatsu antzekoena aurkitu eta bere emaitza hobetzeko astero jarduera zerrenda pertsonalizatua proposatzea

Adibidea: MyCourse

- Aurreko edizioetako ikasle eredugarrien datuak anonimo bihurtu eta gorde
- Martxan dagoen edizioko ikasleen datuak bildu eta aurreko ikasle eredugarri antzekoena aurkitu
- Horren arabera asteka jardueren gomendioak egin



Adibidea: MyCourse


Baldintzak

- Edizioen eduki gehienak berdinak izatea (>%80)
- Edizioen iraupena eta plangintza antzekoa izatea
- Ikastaroko kalifikazioak Moodle-n sartzea

Adibidea: MyCourse

Funtzionamendua

- Ikastaroan MyCourse blokea gehitu
- Aurreko edizioetako edukien taula inportatu
- Astero ikasleei gomendioak egin



MYCOURSE

RECOMMENDATIONS

1. Presentación del Curso
2. Manual Web Server Defacement
3. Ejercicio 5: Auditoría de contraseñas



MYCOURSE

RECOMMENDATIONS

1. Presentación del Curso
2. Ejercicio 1: Esnifando el tráfico
3. NetCraft

Adibidea: MyCourse

Gure gehigarriaren ezarpenak

- Astekako gomendioak
- Ikasleen %50ak jasoko dituzte

Adibidea: MyCourse

Recommendations as a key aspect for online learning personalization: teachers' and students' perceptions.

Nagore Ipiña, Rosa Basagoiti, Olaia Jimenez, Iñigo Arriaran



MONDRAGON
UNIBERTSITATEA

#mooteu17

Etorkizuna imajinatzen

MoodleHQ Project Inspire

Machine Learning bidezko LA

Etorkizuna imajinatzen

Une honetan LMSetan oinarritutako erremintak dira nagusi

Etorkizunean ikasleen arrasto digital guztiak kontuan hartuz gero datu esanguratsu gehiago lortu ahalko dira

Etorkizuna imajinatzen

- LMSko informazioa
- Geokokapenaren informazioa
Eskolan, etxean, autobusean,...
- Orduen informazioa
- Internet konexioaren informazioa
WiFi, 3G, 4G, offline...
- Web nabigazioaren informazioa
Google Analytics, Piwik,...
- App vs. Web bidezko erabilera
- Bestelako erreminten erabilera
Posta elektronikoa, YouTube, Twitter,...

Etorkizuna imajinatzen

- Datu demografikoak
- Ikaslearen espedientea
- Hautatutako ikasgaiak
- Liburutegiko datuak
- Klaseetako asistentzia

Etorkizuna imajinatzen

- Nola ikusten duzue hau guztia?

Interesgarria?

Baliagarria?

Kezkagarria?

Arriskutsua?

Eskerrik asko

www.mondragon.edu

Estekak

https://docs.moodle.org/33/en/Learning_analytics
https://en.wikipedia.org/wiki/Learning_analytics
https://docs.moodle.org/dev/Learning_Analytics_Specification
<https://moodle.com/2017/07/17/inspired-open-source-solution-learning-analytics-project-inspire/>
<https://moodle.org/course/view.php?id=17233>
<https://www.slideshare.net/ghenrick/gavin-henrick-analysing-learning-analytics>
https://www.youtube.com/watch?v=_-PPp1LdE5c

https://moodle.org/plugins/block_completion_progress
https://moodle.org/plugins/block_analytics_graphs
https://moodle.org/plugins/block_heatmap
https://moodle.org/plugins/block_configurable_reports
https://moodle.org/plugins/view.php?plugin=mod_engagement
https://moodle.org/plugins/view.php?plugin=block_engagement
https://moodle.org/plugins/report_engagement
https://moodle.org/plugins/block_dedication
https://moodle.org/plugins/block_xp
https://moodle.org/plugins/availability_xp
https://moodle.org/plugins/block_gismo