



**Ramadiani, S.Pd., M.Si., M.Kom., Ph.D.** Born in Palembang on November 1, 1972. Work as a Lecturer at Computer Science department in the Faculty of Engineering (FT) Mulawarman University. Ramadiani received her PhD in Computer Science and Information System from University Putra Malaysia in 2015. She graduated from Indonesia University in 2000 and graduated from Gadjah Mada University in 2005 for her Computer Master. She currently works at the Department of Computer Science in Computer Science and Information System Faculty, Mulawarman University since December 2001 until now. Ramadiani does her research in software engineering, data mining, decision support system, online learning, information systems, SEM, and human-computer interaction. Her current project is 'e-Learning, Forecasting and Decision Support System'.

E-mail : [ilkom.ramadiani@gmail.com](mailto:ilkom.ramadiani@gmail.com);  
[mami\\_ugm04@yahoo.com](mailto:mami_ugm04@yahoo.com).

Scopus ID : 57160272300

SINTA ID : 5974501

Google Scholar ID: 9XnXoJgAAAAJ&hl

ORCID ID : 0000-0003-1564-2260

(<http://orcid.org/0000-0003-1564-2260>)

<https://publons.com/researcher/1494079/ramadiani/metrics/>

[https://www.researchgate.net/profile/Ramadiani\\_Ramadiani](https://www.researchgate.net/profile/Ramadiani_Ramadiani)

Mulawarman  
University Press

Ramadiani, Ph.D, Dr. Azainil, Dyna Marisa K, M.Kom, M. Labib Jundillah, M.Kom, Surya Fajar S, S.Kom

DOKUMEN UJI COBA PRODUK E-LEARNING



# DOKUMEN UJI COBA PRODUK E-LEARNING

Kesiapan Guru dan Siswa Mengembangkan  
E-Learning dan Mobile Learning Untuk Proses  
Pembelajaran di Masa Depan

**Ramadiani, Ph.D**  
**Dr. Azainil**  
**Dyna Marisa K, M.Kom**  
**M. Labib Jundillah, M.Kom**  
**Surya Fajar S, S.Kom**




**Penerbit**  
**Mulawarman University Press**  
 Anggota IKAPI dan APPTI  
 Gedung LPPM Universitas Mulawarman  
 Jl. Krayan, Kampus Gunung Kelua  
 Samarinda, Kalimantan Timur, Indonesia, 75009  
 Telp./Faks: (0541) 747432  
 Website: [www.mup.unmul.ac.id](http://www.mup.unmul.ac.id)  
 E-mail: [mup@unmul.ac.id](mailto:mup@unmul.ac.id), [mup@ppm.unmul.ac.id](mailto:mup@ppm.unmul.ac.id)





# **DOKUMEN UJI COBA PRODUK E-LEARNING**

**Kesiapan Guru dan Siswa Mengembangkan  
E-Learning dan Mobile Learning Untuk Proses  
Pembelajaran di Masa Depan**



## UU No 28 tahun 2014 tentang Hak Cipta

### **Fungsi dan sifat hak cipta Pasal 4**

Hak Cipta sebagaimana dimaksud dalam Pasal 3 huruf a merupakan hak eksklusif yang terdiri atas hak moral dan hak ekonomi.

### **Pembatasan Pelindungan Pasal 26**

Ketentuan sebagaimana dimaksud dalam Pasal 23, Pasal 24, dan Pasal 25 tidak berlaku terhadap:

- i. penggunaan kutipan singkat Ciptaan dan/atau produk Hak Terkait untuk pelaporan peristiwa aktual yang ditujukan hanya untuk keperluan penyediaan informasi aktual;
- ii. Penggandaan Ciptaan dan/atau produk Hak Terkait hanya untuk kepentingan penelitian ilmu pengetahuan;
- iii. Penggandaan Ciptaan dan/atau produk Hak Terkait hanya untuk keperluan pengajaran, kecuali pertunjukan dan Fonogram yang telah dilakukan Pengumuman sebagai bahan ajar; dan
- iv. penggunaan untuk kepentingan pendidikan dan pengembangan ilmu pengetahuan yang memungkinkan suatu Ciptaan dan/atau produk Hak Terkait dapat digunakan tanpa izin Pelaku Pertunjukan, Produser Fonogram, atau Lembaga Penyiaran.

### **Sanksi Pelanggaran Pasal 113**

1. Setiap Orang yang dengan tanpa hak melakukan pelanggaran hak ekonomi sebagaimana dimaksud dalam Pasal 9 ayat (1) huruf i untuk Penggunaan Secara Komersial dipidana dengan pidana penjara paling lama 1 (satu) tahun dan/atau pidana denda paling banyak Rp100.000.000 (seratus juta rupiah).
2. Setiap Orang yang dengan tanpa hak dan/atau tanpa izin Pencipta atau pemegang Hak Cipta melakukan pelanggaran hak ekonomi Pencipta sebagaimana dimaksud dalam Pasal 9 ayat (1) huruf c, huruf d, huruf f, dan/atau huruf h untuk Penggunaan Secara Komersial dipidana dengan pidana penjara paling lama 3 (tiga) tahun dan/atau pidana denda paling banyak Rp500.000.000,00 (lima ratus juta rupiah).

# **DOKUMEN UJI COBA PRODUK E-LEARNING**

**Kesiapan Guru dan Siswa Mengembangkan  
E-Learning dan Mobile Learning Untuk  
Proses Pembelajaran di Masa Depan**

**Ramadiani, Ph.D**

**Dr. Azainil, M.Si**

**Dyna Marisa K, M.Kom**

**M. Labib Jundillah, M.Kom**

**Surya Fajar S, S.Kom**



**Mulawarman  
University PRESS**

# **DOKUMEN UJI COBA PRODUK E-LEARNING**

**Kesiapan Guru dan Siswa Mengembangkan E-Learning dan  
Mobile Learning Untuk Proses Pembelajaran di Masa Depan**

**Ramadiani, Ph.D**  
**Dr. Azainil, M.Si**  
**Dyna Marisa K, M.Kom**  
**M. Labib Jundillah, M.Kom**  
**Surya Fajar S, S.Kom**

Desain Cover dan Tata Letak:

**Tim MUP**

Ukuran:

**xiv+73 hlm, Uk: 16 x 24 cm**

ISBN:

**978-623-7480-65-5**

Cetakan Pertama:

**April 2021**

Hak Cipta 2021, Pada Penulis

---

**Isi diluar tanggung jawab percetakan**

---

**Copyright © 2021 by MULAWARMAN UNIVERSITY PRESS**

All Right Reserved

Hak cipta dilindungi undang-undang  
Dilarang keras menerjemahkan, memfotokopi, atau  
memperbanyak sebagian atau seluruh isi buku ini  
tanpa izin tertulis dari Penerbit.

**PENERBIT MULAWARMAN UNIVERSITY PRESS**

Anggota IKAPI dan APPTI  
Gedung LP2M Universitas Mulawarman  
Jl. Krayan, Kampus Gunung Kelua,  
Samarinda, Kalimantan Timur, Indonesia, 75119  
Telp/Faks: (0541) 747432  
Website: [www.mup.unmul.ac.id](http://www.mup.unmul.ac.id)  
E-mail: [mup@unmul.ac.id](mailto:mup@unmul.ac.id), [mup@lppm.unmul.ac.id](mailto:mup@lppm.unmul.ac.id)



Puji syukur ke hadirat Allah SWT yang senantiasa memberikan petunjuk dan kemudahan dalam menyelesaikan penulisan buku dokumentasi hasil uji coba produk ini sehingga dapat diselesaikan dengan baik.

Tujuan buku ini adalah untuk mendapatkan hasil uji coba produk pengembangan system e-learning untuk penelitian Kesiapan Guru dan Siswa Mengembangkan E-Learning dan Mobile Learning Untuk Proses Pembelajaran di Masa Depan” sehingga bisa dicetak dan diterbitkan.

Penelitian ini didanai oleh Direktorat Penelitian dan Pengabdian Masyarakat, Direktorat Jenderal Penelitian dan Pengembangan Kementerian Riset, Teknologi, dan Pendidikan Tinggi Republik Indonesia sesuai dengan Kontrak Penelitian **No.197 /UN17.41/AAMD/KL/2020**.

Melalui prakata ini, Penulis ingin mengucapkan banyak terimakasih kepada:

1. Pemberi dana penelitian yaitu pemerintah Indonesia dalam hal ini Kementerian Riset Teknologi dan Pendidikan Tinggi Republik Indonesia melalui DRPM Jakarta.
2. Kementrian Pendidikan dan Kebudayaan Republik Indonesia
3. Rektor Universitas Mulawarman
4. Dekan Fakultas Teknik Universitas Mulawarman.
5. Ketua LP2M Universitas Mulawarman beserta staf dan jajarannya.
6. Kepala-Kepala Sekolah Mitra Penelitian, SMPN1, SMAN2 dan SMAN3 Samarinda beserta staf dan jajarannya
7. Keluarga tercinta

8. Rekan-rekan peneliti, staf dan mahasiswa yang terlibat dalam penelitian, dari Program Studi Informatika Fakultas Teknik Universitas Mulawarman.

Besar harapan kami kepada semua pihak kiranya dapat memberikan masukan dan saran guna penyempurnaan laporan dalam buku ini.

Samarinda, April 2021

Penulis

# Daftar Isi

---



Prakata .....	v
Daftar Isi .....	vii
Daftar Gambar .....	x
Daftar Tabel.....	xiv
Bagian 1 . Pendahuluan.....	1
1.1 Latar Belakang.....	1
1.2 Tujuan Sistem.....	2
1.3 Manfaat Sistem .....	2
Bagian 2 . Rancangan Sistem .....	3
2.1 Perangkat yang dibutuhkan .....	3
2.2 Instalasi Sistem.....	4
Bagian 3 . Pengaturan Sistem.....	11
3.1 Log in .....	11
3.2 Log out.....	12
3.3 Membuat Akun Pengguna .....	13
3.4 Pengaturan Profil.....	14
3.5 Front page settings.....	16
3.6 Course .....	16
3.6.1 Membuat <i>Course</i> .....	16
3.6.2 Mengatur courses dan categories.....	18



3.6.3	Pengaturan Course Tertentu .....	20
3.6.4	Pengelolaan Partisipan pada <i>Course</i> .....	21
3.7	Note .....	22
3.8	Calendar.....	23
3.9	Messaging.....	26
3.9.1	Mengirim Pesan .....	26
3.10	Badges.....	27
3.10.1	Badges settings .....	28
3.10.2	Manage badges.....	28
3.10.3	Add a new badges.....	30
3.11	Grades.....	31
3.11.1	General settings .....	32
3.11.2	Grade category settings .....	32
3.11.3	Grade item settings.....	33
3.11.4	Scales .....	33
3.11.5	Letters.....	34
3.11.6	Report settings .....	34
3.12	Administrasi Course .....	35
3.12.1	Course default settings.....	35
3.12.2	Course request .....	37
3.12.3	Backups .....	38
3.12.4	Upload courses .....	39

Bagian 4 . Hasil Ujicoba Sistem.....	41
Bagian 5 . Penutup.....	49
Bagian 6 . Daftar Pustaka.....	51
Lampiran .....	53
Biografi Penulis.....	73

# Daftar Gambar



Gambar 1. <i>Extract</i> sistem Moodle.....	4
Gambar 2. <i>Folder</i> sistem Moodle dipindah .....	4
Gambar 3. Membuat database .....	5
Gambar 4. Halaman awal instalasi .....	5
Gambar 5. Tampilan “Confirm Paths” .....	6
Gambar 6. Tampilan memilih <i>database</i> .....	6
Gambar 7. Mengisi form pengaturan <i>database</i> .....	6
Gambar 8. Button confirmation.....	7
Gambar 9. Halaman <i>server checks</i> .....	7
Gambar 10. Mulai instalasi .....	7
Gambar 11. Proses instalasi <i>system</i> .....	8
Gambar 12. Frontpage Setting .....	8
Gambar 13. Halaman <i>dashboard</i> admin.....	9
Gambar 14. Tampilan halaman awal .....	11
Gambar 15. Tampilan form <i>log in</i> .....	12
Gambar 16. Tampilan menu pengguna.....	12
Gambar 17. Tampilan menu Administration .....	13
Gambar 18. Tampilah <i>form</i> isian akun pengguna baru .....	14
Gambar 19. Tampilan menu “Admin User” .....	14
Gambar 20. Tampilan halaman “Admin Preferences” .....	15

Gambar 21. Tampilan halaman “Edit profile” .....	15
Gambar 22. Halaman “Front page settings” .....	16
Gambar 23. Halaman utama .....	16
Gambar 24. Tampilan halaman “Courses” .....	17
Gambar 25. Halaman konfigurasi <i>course</i> .....	17
Gambar 26. Tampilah halaman “Add a new course” .....	17
Gambar 27. Tampilan halaman “Manage Courses” .....	18
Gambar 28. Menu tambahan “Administration” .....	19
Gambar 29. Halaman <i>course</i> .....	20
Gambar 30. Halaman Manage Courses.....	20
Gambar 31. Halaman pengaturan sesi pada <i>course</i> .....	21
Gambar 32. Pop-up enrolment .....	21
Gambar 33. Tipe role pada course .....	22
Gambar 34. Halaman editing partisipan.....	22
Gambar 35. Dropdown menu Profile .....	23
Gambar 36. Halaman note.....	23
Gambar 37. <i>Dropdown menu</i> “Site page” pada menu “Navigation” ....	24
Gambar 38. Halaman “Calendar” .....	24
Gambar 39. Menu “Events Key” .....	24
Gambar 40. Halaman “New Event” .....	25
Gambar 41. Calendar preferences .....	25
Gambar 42. Dropdown menu pengguna.....	27

Gambar 43. Halaman pesan.....	27
Gambar 44. Dropdown menu Badges.....	28
Gambar 45. Tampilan halaman “Badges settings” .....	28
Gambar 46. Tampilan halaman “Manage badges” .....	29
Gambar 47. Tampilan halaman “Edit detail badges” .....	29
Gambar 48. Tampilan halaman “Criteria badges” .....	29
Gambar 49. Tampilan halaman “Message” <i>badges</i> .....	30
Gambar 50. Tampilan halaman “Recipients” <i>badges</i> .....	30
Gambar 51. Halaman “Add a new badge” .....	31
Gambar 52. Menu Administration.....	31
Gambar 53. Halaman pengaturan umum “Grade” .....	32
Gambar 54. Halaman pengaturan kategori nilai .....	32
Gambar 55. Halaman pengaturan item penilaian.....	33
Gambar 56. Halaman skala nilai .....	33
Gambar 57. Halaman Letters.....	34
Gambar 58. Menu Administration.....	34
Gambar 59. Tampilan halaman Site Administration .....	35
Gambar 60. Tampilan halaman pengaturan <i>course</i> .....	35
Gambar 61. Tampilan halaman “Course request” .....	37
Gambar 62. Halaman “General backup default” .....	38
Gambar 63. Halaman “General import default” .....	38
Gambar 64. Halaman “Automated backup setup” .....	39

Gambar 65. Halaman pengunggahan <i>course</i> .....	39
Gambar 66. Tahun Masuk Mahasiswa.....	41
Gambar 67. Mata kuliah yang diikuti.....	41
Gambar 68. Mahasiswa yang ikut daring.....	42
Gambar 69 Materi belajar melalu daring.....	42
Gambar 70 Kesiapan fasilitas pendukung.....	43
Gambar 71. Kesiapan pelaksanaan ujian.....	43
Gambar 72. Kesiapan pelaksanaan pembelajaran daring.....	44
Gambar 73. Kesiapan dosen mengajar melalui daring.....	44
Gambar 74 Proses kuliah secara daring.....	45
Gambar 75 Survey ke SMA Negeri 2 Samarinda.....	45
Gambar 76 Survey ke SMA Negeri 3 Samarinda.....	46
Gambar 77. Survey ke SMP Negeri 1 Samarinda.....	46
Gambar 78. Survey ke Dinas Pendidikan dan Kebudayaan Provinsi Kalimantan Timur.....	47
Gambar 79. Penerapan <i>E-learning</i> .....	47

# Daftar Tabel

---



Tabel 1. Spesifikasi aplikasi pendukung.....	3
Tabel 2. Spesifikasi perangkat keras .....	3
Tabel 3. Level akses sistem .....	13
Tabel 4. Menu dan fungsi .....	18
Tabel 5. Menu aksi .....	19
Tabel 6. Format waktu .....	25
Tabel 7. Administrasi Course.....	36

# Bagian 1. Pendahuluan

---



## 1.1 Latar Belakang

E-learning atau electronic learning merupakan konsep pembelajaran yang dilakukan melalui jaringan media elektronik. Perkembangan teknologi yang sangat maju di era modern dan globalisasi memungkinkan berbagai kegiatan dilakukan secara cepat dan efisien. Perkembangan teknologi sudah banyak memberi pengaruh terhadap cara hidup kita, salah satunya adalah dalam bidang pendidikan dengan penggunaan e-learning dalam kegiatan pembelajaran di sekolah, perguruan tinggi, tempat-tempat kursus bahkan komunitas-komunitas online sudah mulai menggunakan konsep seperti ini.

Seiring dengan perkembangan teknologi informasi dan tuntutan globalisasi pendidikan serta pembelajaran jarak jauh, berbagai konsep telah dikembangkan untuk menggantikan metode pembelajaran tradisional, salah satunya adalah konsep e-learning. E-learning dapat digunakan sebagai alternatif atas permasalahan dalam bidang pendidikan, baik sebagai tambahan, pelengkap maupun pengganti atas kegiatan pembelajaran yang sudah ada.

Berbagai cara untuk membangun sistem pendidikan secara elektronis (e-learning) dapat dilakukan dengan murah dan mudah pada sistem operasi Linux maupun Windows. Aplikasi untuk membangun e-learning dapat menggunakan sistem Moodle yang bebas dan open source.

Sehingga dalam modul ini akan membahas tentang panduan/user manual untuk Penerapan Sistem E-learning berbasis Web (Modular Object-Oriented Dynamic Learning Environment) yang menggunakan sistem Moodle dan dapat diinstal di komputer dan sistem operasi apapun yang bisa menjalankan PHP dan mendukung database SQL.



## **1.2 Tujuan Sistem**

Sistem ini dibuat untuk mendukung kegiatan belajar mengajar yang dilakukan melalui internet, serta meningkatkan daya serap dari para mahasiswa atas materi yang diajarkan, meningkatkan partisipasi aktif dari para mahasiswa, meningkatkan kemampuan belajar mandiri, dan meningkatkan kualitas materi pembelajaran. Diharapkan dapat merangsang pertumbuhan inovasi baru para mahasiswa sesuai dengan bidangnya masing-masing.

## **1.3 Manfaat Sistem**

Manfaat dari aplikasi ini sebagai berikut:

- E-learning memberikan fleksibilitas dalam memilih waktu dan tempat untuk mengakses pelajaran dilakukan dari mana saja.
- E-learning memberikan kesempatan bagi pembelajar secara mandiri memegang kendali atas keberhasilan belajarnya.
- Menjangkau peserta didik dalam cakupan yang luas
- Terbentuknya komunitas pembelajar yang saling berinteraksi, saling memberi dan menerima serta tidak terbatas dalam satu lokasi
- Guru atau dosen akan lebih mudah melakukan pembaruan materi maupun model pengajaran sesuai dengan tuntutan perkembangan keilmuan yang terjadi, juga dapat dengan efisien mengontrol kegiatan belajar siswanya

## Bagian 2. Rancangan Sistem



Untuk memulai penerapan Sistem E-learning berbasis *website*, pengguna dapat melakukan instalasi terlebih dahulu.

### 2.1 Perangkat yang dibutuhkan

Sistem Moodle dapat dibangun menggunakan *Apache*, *MySQL* /*MariaDB*/*PostgresSQL*, dan *PHP* pada sistem operasi *Windows*. Untuk aplikasi ini, *database* yang digunakan ialah *MySQL*.

- a) Perangkat Lunak *web server*
- b) Moodle mendukung server database berikut. Untuk nomor versi hanyalah versi minimum yang didukung.

Tabel 1. Spesifikasi aplikasi pendukung

Database	Minimum version
PostgresSQL	9.6
MySQL	5.7
MariaDB	10.2.29

- c) Untuk perangkat keras, adapun minimum perangkatnya sebagai berikut.

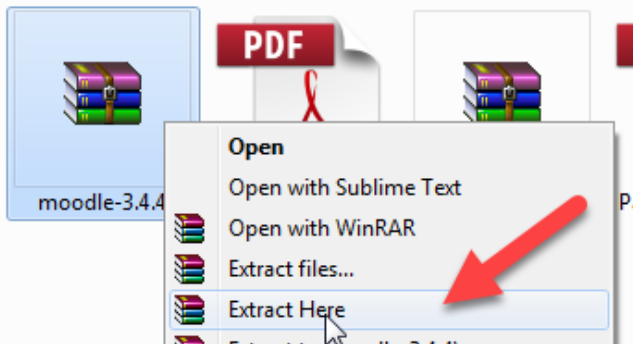
Tabel 2. Spesifikasi perangkat keras

Jenis Perangkat Keras	Minimum
Disk space	200MB untuk kode paket Moodle
Processor	1GHz (min), 2GHz dual core atau lebih direkomendasikan.
Memory	512MB (min), 1GB atau lebih direkomendasikan.

## 2.2 Instalasi Sistem

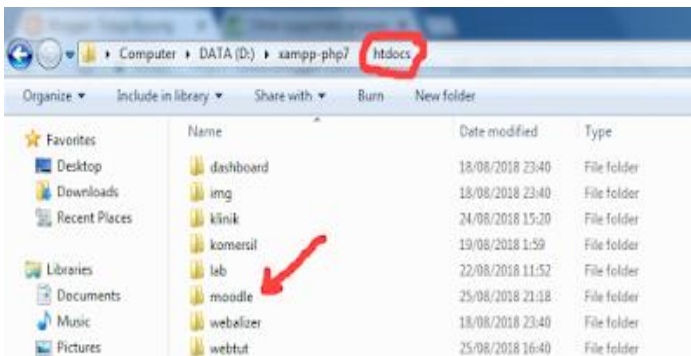
Setelah perangkat yang dibutuhkan telah terpenuhi. Berikut langkah-langkah instalasinya:

1. *Extract* sistem Moodle yang masih berbentuk zip dengan menggunakan winrar atau program sejenis lainnya.



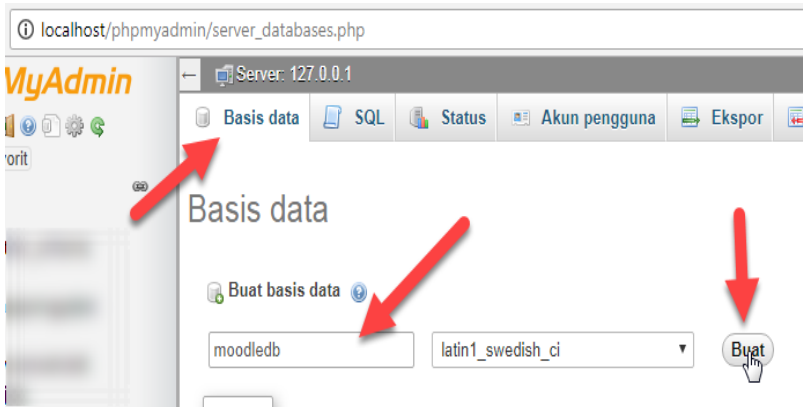
Gambar 1. *Extract* sistem Moodle

2. *Copy* folder Moodle ke root folder web server anda yang biasanya di **htdocs**.



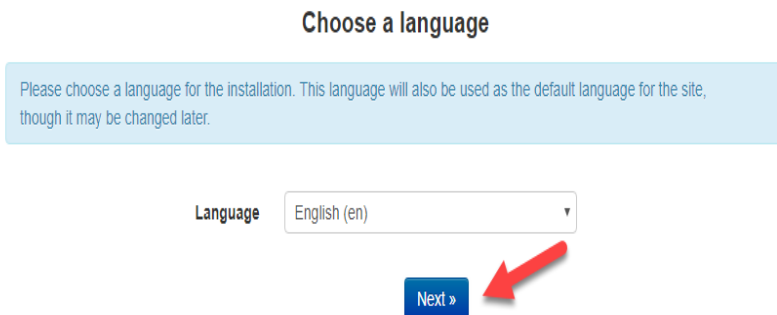
Gambar 2. *Folder* sistem Moodle dipindah

3. Membuat database melalui phpMyAdmin, dengan nama databasenya: moodledb.



Gambar 3. Membuat database

4. Selanjutnya kita mulai menginstall Moodle dengan mengakses Moodle melalui website browser dengan alamat url : <http://localhost/moodle>, dan tampilan awal instalasi moodle akan muncul seperti gambar berikut ini:



Gambar 4. Halaman awal instalasi

5. Pada tampilan berikutnya akan muncul **Confirm Paths**, yang berisi 3 komponen yaitu **Web Address**, **Moodle Directory** dan **Data Directory**. Klik tombol **Next** untuk melanjutkan instalasi.

Web address

Moodle directory

Data directory

« Previous **Next »**

Gambar 5. Tampilan “Confirm Paths”

6. Pada tampilan pilihan *database driver*, pilih **Improved MySQL(native/mysqli)** kemudian klik **Next** untuk melanjutkan instalasi.

Choose database driver

Moodle supports several types of database servers. Please contact server administrator if you do not know which type to use.

Type

« Previous **Next »**

Gambar 6. Tampilan memilih *database*

7. Pada tampilan *database setting*, lengkapi parameternya kemudian klik tombol **Next** untuk melanjutkan instalasi.

Database host

Database name

Database user

Database password

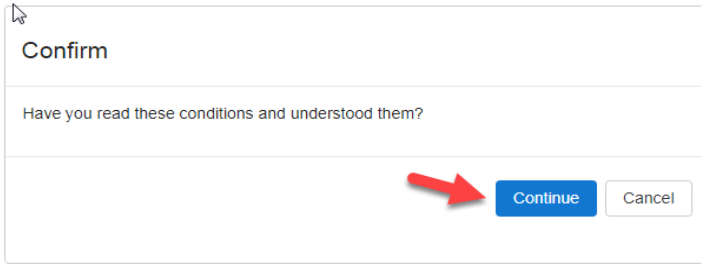
Tables prefix

Database port

« Previous **Next »**

Gambar 7. Mengisi form pengaturan *database*

8. Klik tombol **Continue** pada *Copyright confirmation*.



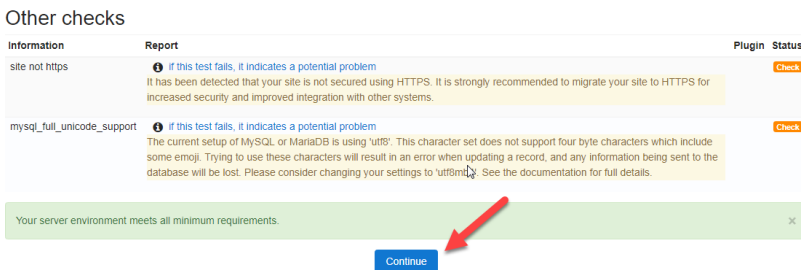
Gambar 8. Button confirmation

9. Pada halaman **Server Checks**, pastikan tidak ada status **Check** yang berwarna merah.

Name	Information	Report	Plugin	Status
database	mysql (5.5.5-10.1.34-MariaDB)	<b>!</b> must be installed and enabled Wrong \$CFG->dbtype ! you need to change it in your config.php file, from 'mysql' to 'mariadb' !		Check
php_extension	intl	<b>!</b> must be installed and enabled intl extension is required to improve internationalization support, such as locale aware sorting and international domain names.		Check
php_extension	xmllrpc	<b>!</b> should be installed and enabled for best results The XMLRPC extension is useful for web services and Moodle networking.		Check
php_extension	soap	<b>!</b> should be installed and enabled for best results Installing the optional SOAP extension is useful for web services and some plugins.		Check
php_setting	opcache.enable	<b>!</b> PHP setting should be changed PHP opcode caching improves performance and lowers memory requirements, OPcache extension is recommended and fully supported.		Check
unicode		<b>!</b> must be installed and enabled		OK

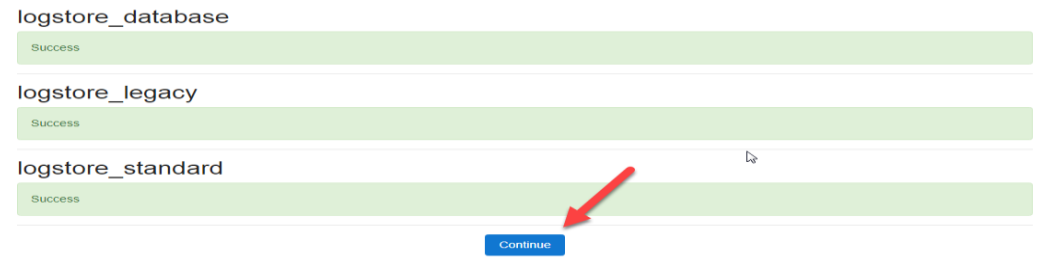
Gambar 9. Halaman *server checks*

10. Klik *Continue* untuk melanjutkan instalasi.



Gambar 10. Mulai instalasi

11. Tunggu proses instalasi sampai tampil seperti gambar berikut ini, kemudian klik *Continue*.



Gambar 11. Proses instalasi system

12. Buat *user administrator* dengan melengkapi form seperti gambar berikut, kemudian klik *Update Profile*.

The image shows a web form titled 'Installation'. At the top, there is a warning message: 'On this page you should configure your main administrator account which will have complete control over the site. Make sure you give it a secure username and password as well as a valid email address. You can create more admin accounts later on.' Below this, there is a 'General' section with several fields: 'Username' (admin), 'Choose an authentication method' (Mandatory accounts), 'New password' (with a strength indicator and a 'Force password change' checkbox), 'First name' (Administrator), 'Surname' (Itsuming), 'Email address' (dadungau.kbenleknoklingga@gmail), 'Email display' (HIDE my email address from everyone), 'City/town' (Rengku), 'Select a country' (Indonesia), 'Timezone' (Asia/Jakarta), and 'Description' (Deskripsi Admin yang ini bisa saja, tsah usah tortou dipikman...). There are also sections for 'Additional names' and 'Optional'. A blue button labeled 'Update profile' is at the bottom. A note at the bottom left says 'There are required fields in this form marked with a red dot.'.

Gambar 12. Frontpage Setting

Jika langkah demi langkah ini dilakukan dengan benar, maka Moodle sudah berhasil di install di computer anda dan akan ditampilkan halaman *dashboard* admin seperti gambar di bawah ini.

The screenshot displays the Moodle Admin Dashboard for the user 'Admin User'. The interface is organized into several sections:

- Header:** Displays the user's name 'Admin User' and a profile picture.
- Latest Announcements:** Shows a recent announcement: 'Add a new topic...' dated 9 Oct, 02:30, by Admin User, regarding 'Class Evaluation and Monitoring'.
- Upcoming Events:** States 'There are no upcoming events' and provides a link to 'Go to calendar...'
- Online Users:** Shows '1 online user (last 5 minutes)' with the user 'Admin User' listed.
- Course Overview:** Includes a 'Timeline' and 'Courses' section, indicating 'No in progress courses'.
- Private Files:** Lists various files such as 'Homeworks', 'Monitoring', '5 Bilangan Biner.pdf', 'BASIS DATA 1 (1).docx', 'Looking for Usability Problems.docx', 'MATERI PRATIUKUM ORANSIKOM.docx', 'Pemrograman Database.pptx', and 'question.docx'.
- Calendar:** Shows a calendar for November 2020.
- Course Categories:** Lists 'MK GENAP', 'INFORMATIKA CLASS', and 'MK GANJIL'.
- Admin Bookmarks:** Includes a link for 'Front page settings'.
- Footer:** Contains 'Quick Links' (About Us, Terms of use, FAQ, Support, Contact), 'Follow Us' (Facebook, Twitter, Google Plus, Pinterest), and 'Contact' information for Samarinda 75119, Kalimantan Timur, Indonesia.

Gambar 13. Halaman *dashboard* admin





# Bagian 3. Pengaturan Sistem



## 3.1 Log in

Fitur ini digunakan oleh pengguna untuk bisa mengakses sistem sesuai dengan *role* masing- masing. Pada halaman awal, akan terdapat menu sebagai berikut:

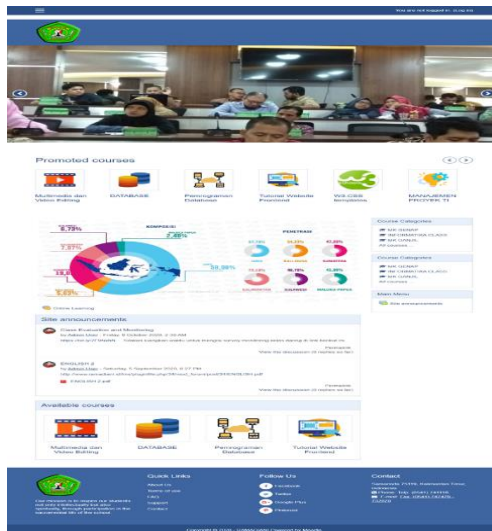
### 1. Navigation

### 2. Log in

Menu ini terdapat di sisi kanan dan kiri atas halaman Penerapan Sistem E-learning berbasis Website. Menu ini diperlukan oleh *user* untuk masuk ke sistem dengan suatu *role* tertentu. Menu dan tampilan di halaman awal tersebut, bisa diubah dan dikustomisasi oleh *admin*.

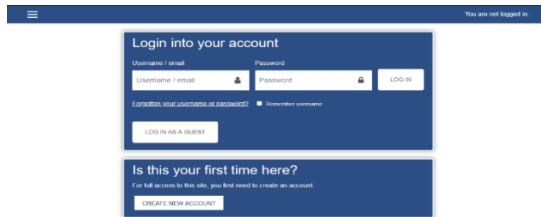
Langkah-langkah yang dilakukan untuk *Log in* adalah sebagai berikut:

- 1) Pilih menu “Log in” yang ada pada sisi kanan atas halaman.



Gambar 14. Tampilan halaman awal

Sistem akan menampilkan *form log in* sebagai berikut.



Gambar 15. Tampilan form *log in*

Berikut akan dijelaskan tentang beberapa menu yang terkait dengan role administrator. Isi semua *form* isian yang dibutuhkan, lalu klik “Log in”. Sistem akan memproses dan melakukan validasi data yang dimasukkan oleh pengguna.

### 3.2 Log out

Menu ini digunakan oleh pengguna untuk keluar dari sistem. Langkah-langkah yang dilakukan adalah sebagai berikut.

- 1) Klik “Log out” pada menu pengguna yang ada pada sisi kanan atas halaman penerapan sistem *E-learning* berbasis Website.



Gambar 16. Tampilan menu pengguna

Selanjutnya sistem akan menampilkan halaman utama penerapan sistem *E-learning* berbasis Website.

### 3.3 Membuat Akun Pengguna

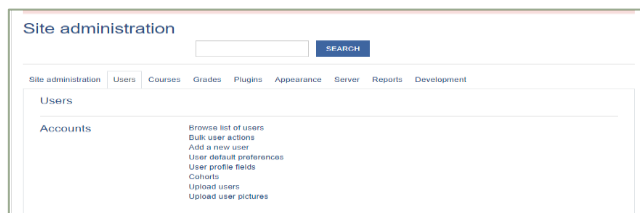
Administrator dapat membuat akun pengguna Penerapan Sistem E-learning berbasis Website dimana tiap-tiap peran memiliki kewenangan yang berbeda. Berikut merupakan tipe-tipe akun pengguna penerapan sistem *E-learning* berbasis Website:

Tabel 3. Level akses sistem

Level	Akses
Pelajar	Hanya dapat berinteraksi dengan konten yang ada pada <i>course</i>
Pengajar	Dapat mengisi <i>course</i> dengan kegiatan dan memberikan umpan balik bagi pelajar. Misalnya nilai, komentar, dan lain-lain Untuk pengajar yang tidak memiliki kewenangan mengedit, tidak bisa melakukan pengisian <i>course</i> .
Pembuat <i>course</i>	Dapat membuat <i>course</i> baru dan menetapkan pengajar.
Administrator	Dapat melakukan apapun pada aplikasi Penerapan Sistem E-learning berbasis Website.

Berikut langkah-langkah dalam pembuatan akun pengguna baru:

- 2) Klik menu “Add a new user” pada menu “Site Administration” yang tersedia pada sisi kiri halaman.



Gambar 17. Tampilan menu Administration

Sistem akan menampilkan halaman sebagai berikut.

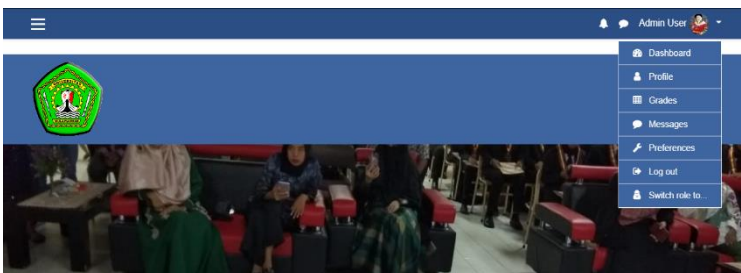
Gambar 18. Tampilah *form* isian akun pengguna baru

Setelah pengisian *form* dilakukan, klik tombol “Create my New Account” yang ada pada bagian bawah pengisian *form*. Selanjutnya sistem akan memproses data yang diisi oleh admin. Berikutnya akan muncul notifikasi keberhasilan proses pembuatan akun pengguna baru.

### 3.4 Pengaturan Profil

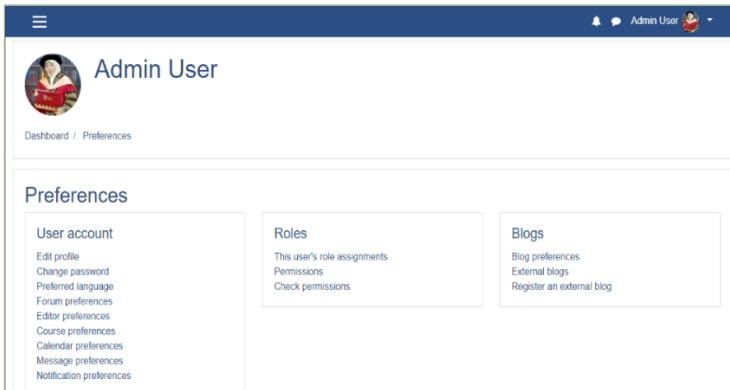
Menu ini digunakan untuk melakukan pengaturan suatu profil. Berikut langkah-langkah untuk melakukan pengaturan profil.

- 1) Pilih menu “Preferences” yang ada pada menu “Admin User” di sisi kanan halaman.



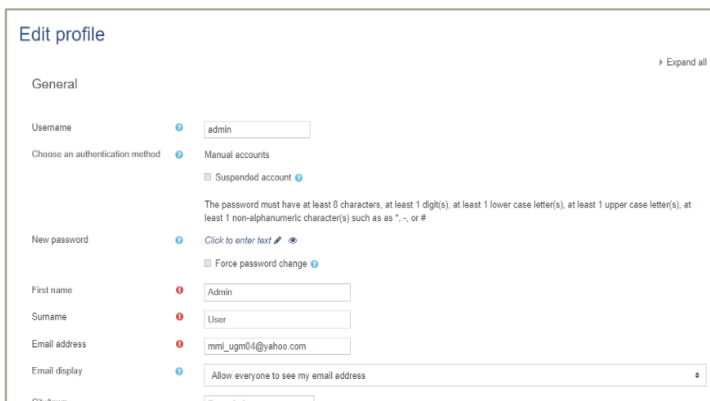
Gambar 19. Tampilan menu “Admin User”

Sistem akan menampilkan halaman sebagai berikut. Pilih menu "Edit Profile" (Gambar 20 dan Gambar 21).



Gambar 20. Tampilan halaman "Admin Preferences"

Sistem akan menampilkan halaman sebagai berikut.



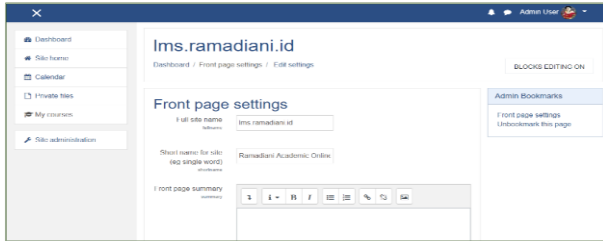
Gambar 21. Tampilan halaman "Edit profile"

Secara umum, menu yang ada pada konfigurasi profil sama dengan menu pada "Create user".

- 2) Setelah pengguna selesai mengisi dan mengubah isian *form*, klik tombol "Update profile" untuk melanjutkan dan menyimpan perubahan profil. Sistem akan melakukan pengubahan profil pengguna.

### 3.5 Front page settings

Menu ini digunakan untuk melakukan pengaturan halaman depan aplikasi Penerapan Sistem E-learning berbasis Website. Berikut tampilan menu “Front page settings” pada dashboard admin yang ada di bawah kanan halaman.



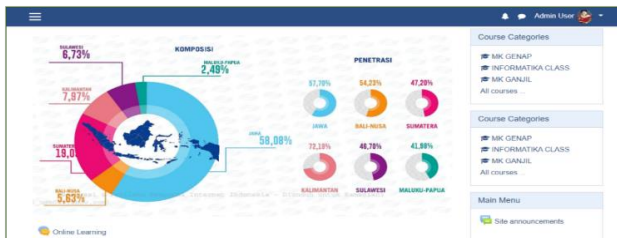
Gambar 22. Halaman “Front page settings”

### 3.6 Course

Pada bagian ini akan dijelaskan cara untuk membuat, mengubah, dan menghapus sebuah *course*. Berikut langkah langkah untuk masuk ke konfigurasi *course*.

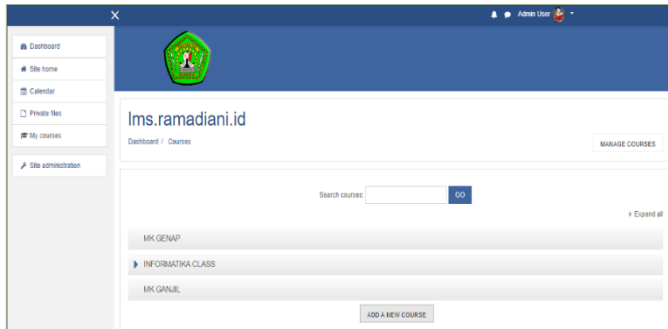
#### 3.6.1 Membuat *Course*

- Pilih menu "All Courses" yang ada pada sisi kanan bawah halaman Penerapan Sistem E-learning berbasis Website.



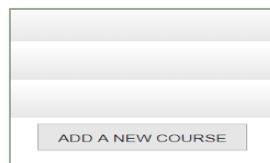
Gambar 23. Halaman utama

Sistem akan menampilkan halaman sebagai berikut



Gambar 24. Tampilan halaman “Courses”

- Pilih tombol “Add a new course” jika ingin membuat *course* baru. Lihat gambar berikut.



Gambar 25. Halaman konfigurasi *course*

Sistem akan menampilkan halaman sebagai berikut.

The screenshot shows the 'Add a new course' form. The form is titled 'Add a new course' and has an 'Expand all' link on the right. The form is organized into a 'General' section. It contains the following fields:

- Course full name: A text input field with a red error icon and a blue help icon.
- Course short name: A text input field with a red error icon and a blue help icon.
- Course category: A dropdown menu with 'INFORMATIKA CLASS' selected.
- Course visibility: A dropdown menu with 'Show' selected.
- Course start date: A date and time picker set to 26 November 2020 00:00.
- Course end date: A date and time picker set to 25 November 2020 10:00, with an 'Enable' checkbox.
- Course ID number: A text input field with a blue help icon.

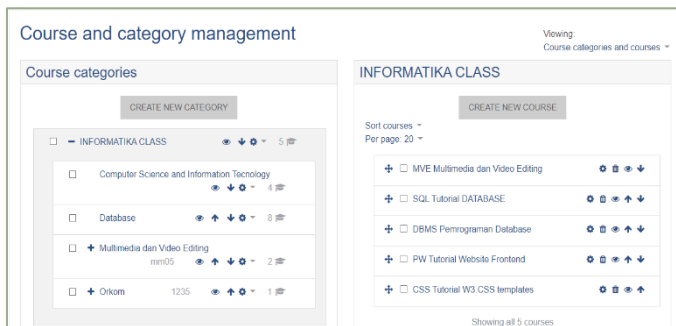
Gambar 26. Tampilah halaman “Add a new course”



Setelah pengisian *form* dilakukan. Klik tombol “Save change” yang ada pada bagian bawah *form*. Sistem akan memproses dan melakukan validasi data, dan membuat *course* baru. Jika ingin mencari suatu *course* tertentu, isi kata kunci pada kotak “Search course”, kemudian klik tombol “Go”. Sistem akan melakukan pencarian sesuai dengan kata yang dimasukkan.

### 3.6.2 Mengatur courses dan categories

Jika ingin melakukan pengaturan *course*, klik tombol “Manage courses”. Sistem akan menampilkan halaman sebagai berikut.



Gambar 27. Tampilan halaman “Manage Courses”

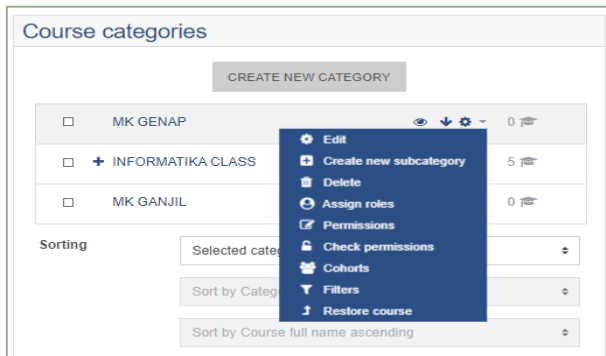
Pada halaman tersebut terdapat beberapa menu sebagai berikut.

Tabel 4. Menu dan fungsi

Menu	Fungsi
<b>Viewing</b>	Untuk opsi tampilan
<b>Create new category</b>	Berfungsi untuk membuat kategori baru course
<b>Create new course</b>	Berfungsi untuk membuat course baru
<b>Sort course</b>	Mengurutkan daftar course dengan urutan tertentu
<b>Per page</b>	Opsi jumlah course yang ditampilkan dalam satu halaman

Menu	Fungsi
<b>Sorting</b>	Berisi menu pengaturan pemilihan metode pengurutan
<b>Move selected course to</b>	Untuk memindahkan suatu course terpilih
<b>Move selected category to</b>	Untuk memindahkan suatu kategori terpilih

Pada bagian menu “Administration” juga terdapat beberapa menu tambahan sebagai berikut:



Gambar 28. Menu tambahan “Administration”

Fungsi dari menu-menu tersebut adalah:

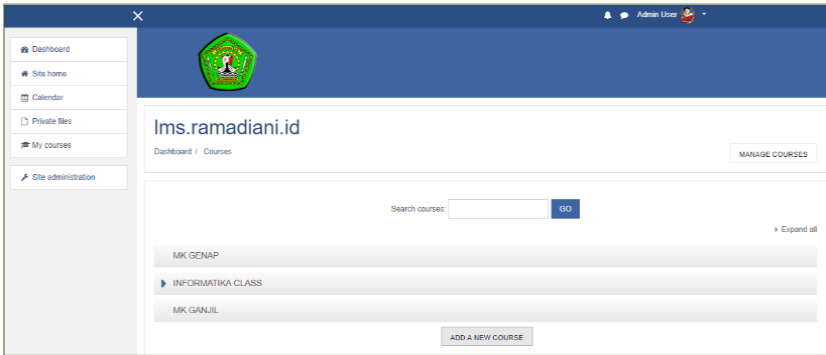
Tabel 5. Menu aksi

Aksi	Fungsi
<b>Edit this category</b>	Untuk mengedit kategori yang sedang dipakai
<b>Add a subcategory</b>	Untuk menambahkan kategori baru
<b>Assign roles</b>	Untuk menunjuk role baru

### 3.6.3 Pengaturan Course Tertentu

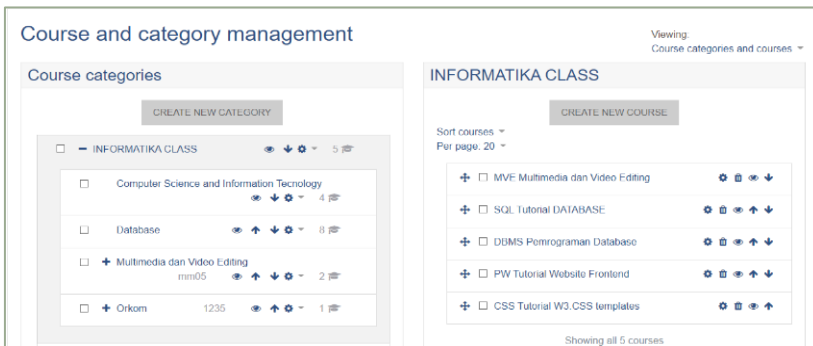
Untuk memodifikasi suatu halaman *course*, langkah-langkah yang dilakukan adalah sebagai berikut:

Pilih *course* yang akan diatur. Halaman akan menampilkan halaman seperti berikut.




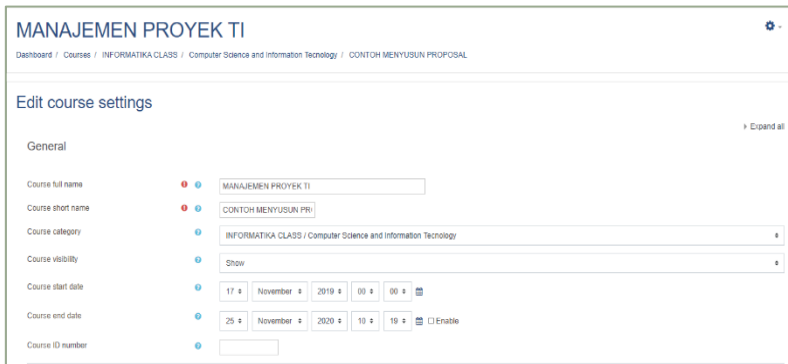
Gambar 29. Halaman *course*

Untuk pembuatan forum, berita, dan event baru. Untuk membuat konten di halaman *course*, pengguna bisa mengklik menu “Manage courses” pada sisi kanan atas halaman. Sistem akan menampilkan halaman sebagai berikut.



Gambar 30. Halaman Manage Courses

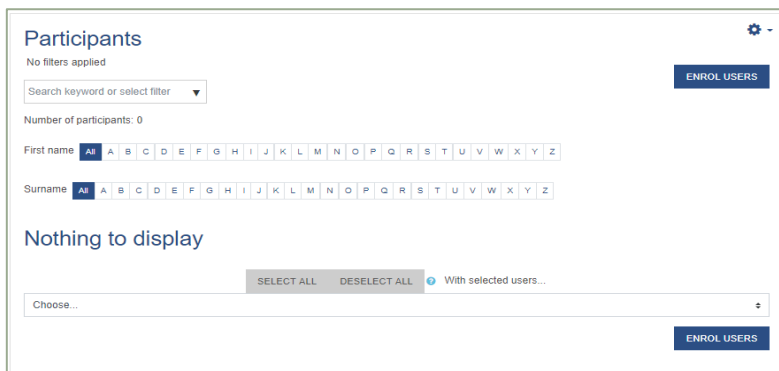
Pengguna bisa melakukan edit tiap sesi dengan mengklik *icon* . Sistem akan menampilkan halaman sebagai berikut.



Gambar 31. Halaman pengaturan sesi pada *course*


### 3.6.4 Pengelolaan Partisipan pada *Course*

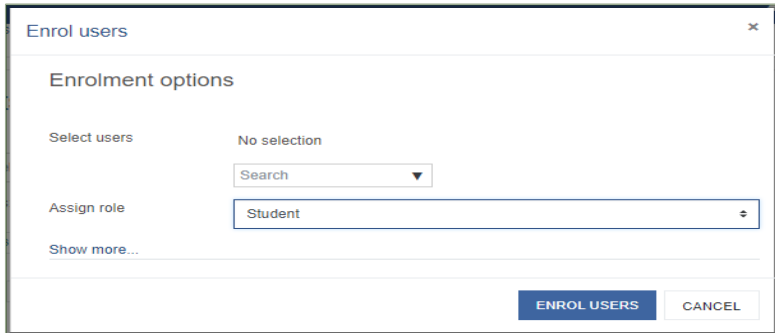
Admin *course* bisa mengelola partisipan pada suatu *course* dengan mengklik menu “Participants” pada sisi kiri halaman. Halaman ini akan menampilkan daftar pengguna yang tergabung dalam *course* tersebut. Admin *course* juga bisa menambahkan partisipan dengan mengklik tombol “Enrol Users”. Sistem akan menampilkan *pop-up* yang berisi daftar pengguna.




Gambar 32. Pop-up enrolment

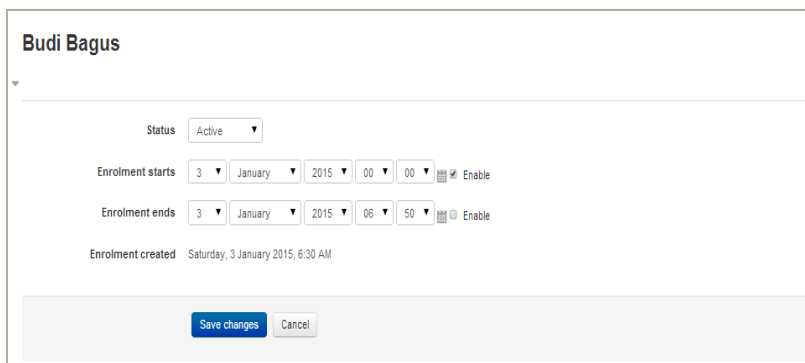
Klik tombol “Enrol” pada tiap pengguna yang ingin ditambahkan. Kemudian, klik tombol “Finish enrolling users” untuk menambahkan pengguna. Admin *course* juga bisa meng-*assign role* suatu pengguna

pada *course* tersebut. Klik *icon*  untuk menentukan *role*. Sistem akan memunculkan pilihan berikut.




Gambar 33. Tipe role pada course

Jika ingin memberikan periode masa berlaku pada pengguna, klik *icon* . Sistem akan menampilkan halaman sebagai berikut.



Gambar 34. Halaman editing partisipan

Klik tombol “Save changes” untuk menyimpan perubahan. Untuk meng-*unenrol* seorang pengguna dari suatu *course*, klik *icon* .

### 3.7 Note

Menu ini digunakan oleh pengguna untuk membuat catatan. Berikut langkah-langkah yang dilakukan: Pilih menu Home > Profile dan klik

menu Notes yang berada di bawah halaman dan pilih “Add a new note” sesuai *course* yang ada.



Gambar 35. Dropdown menu Profile

Sistem akan menampilkan halaman sebagai berikut.

A screenshot of a web application form titled 'Admin User' with a sub-section 'Note'. The form has two main sections: 'Content' and 'Context'. The 'Content' section has a red error icon and a large empty text area. The 'Context' section has a blue error icon and a dropdown menu currently showing 'COURSE'. At the bottom of the form, there are two buttons: 'SAVE CHANGES' and 'CANCEL'. A red error message at the bottom left states: 'There are required fields in this form marked'.

Gambar 36. Halaman note

Setelah mengisi konten catatan, klik “Save changes” untuk menyimpan catatan.

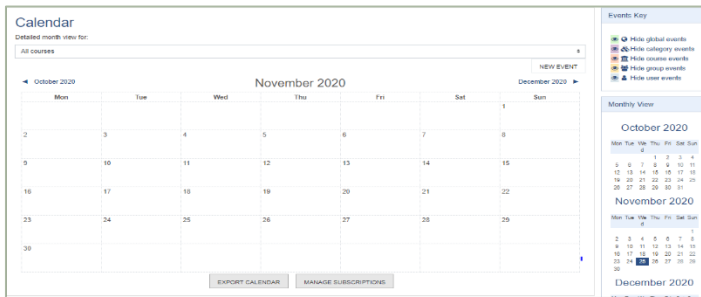
### 3.8 Calendar

Menu ini digunakan oleh pengguna untuk melihat event tertentu yang telah dibuat. Pilih menu "Calendar" yang ada pada menu "Navigation".



Gambar 37. Dropdown menu “Site page” pada menu “Navigation”

Sistem akan menampilkan halaman sebagai berikut.



Gambar 38. Halaman “Calendar”

Pada fitur ini, terdapat beberapa kategori event yang dibagi berdasarkan hak masing-masing pengguna dalam melihat suatu event.



Gambar 39. Menu “Events Key”

Klik tombol “New event” untuk menambahkan kegiatan baru yang akan dilakukan. Sistem akan menampilkan halaman sebagai berikut.

Gambar 40. Halaman “New Event”

Pengguna mengisi isian yang tersedia. Setelah pengisian *form* dilakukan, klik tombol “Save” untuk memproses data. Untuk melakukan pengaturan pada kalender, pengguna dapat mengklik pada *Preferences* di *dropdown menu* pengguna dan mengklik tombol *Calendar preferences*. Sistem akan menampilkan halaman sebagai berikut.

## Calendar preferences

Time display format ?	Default
First day of week ?	Monday
Maximum upcoming events ?	10
Upcoming events look-ahead ?	3 weeks
Remember filter settings ?	No

SAVE CHANGES    CANCEL

Gambar 41. Calendar preferences

Tabel 6. Format waktu



Format	Fungsi
Time display format	Menentukan format waktu, apakah format 24 jam atau 12 jam
First day of week	Pengaturan tampilan urutan koloh hari pada kalender
Maximum upcoming events	Jumlah maksimal <i>event</i> yang akan terjadi
Upcoming events look-ahead	Menetapkan jumlah <i>event</i> kedepan yang harus dimulai dan ditampilkan sebagai <i>upcoming event</i>
Remember filter settings	Pilihan apakah sistem akan mengingat pengaturan filter sebelumnya, dan secara otomatis mengembalikannya ketika <i>log in</i>

Klik tombol “Save changes” setelah melakukan perubahan pengaturan kalender.

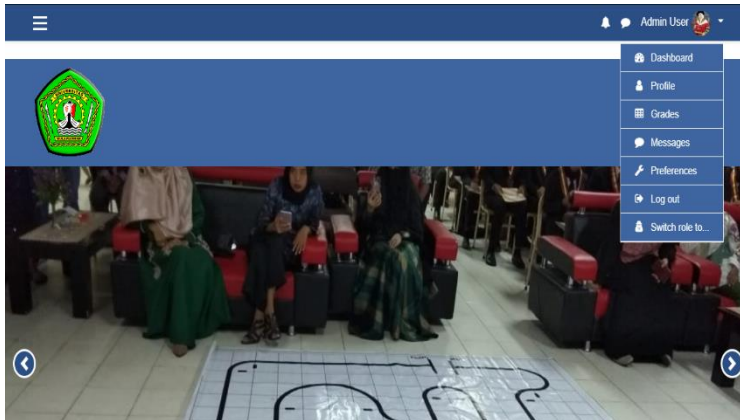
### 3.9 Messaging

Menu ini digunakan untuk melakukan pengaturan metode pemberitahuan untuk suatupesan yang masuk. Pengguna bisa menyesuaikan apakah ingin menerima pemberitahuan ketika setiap kali *log in* ke sistem (dengan memilih “When I’m logged in”) atau ingin menerima pemberitahuan ketika sedang tidak aktif di sistem (dengan memilih “When I’m offline”).

#### 3.9.1 Mengirim Pesan

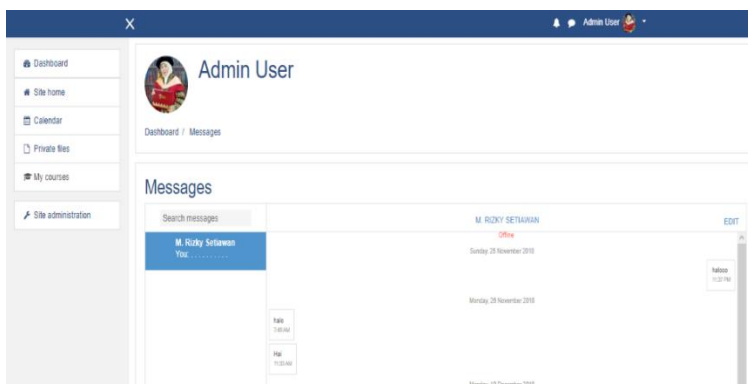
Untuk mengirim pesan, langkah-langkah yang dilakukan adalah:

Klik menu “Messages” yang terdapat pada *dropdown menu* seperti berikut.



Gambar 42. Dropdown menu pengguna

Sistem akan menampilkan halaman berikut ini.

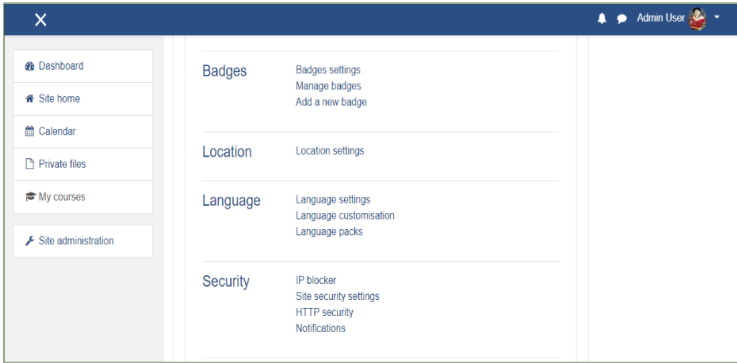


Gambar 43. Halaman pesan

Pilih kontak yang akan menerima pesan, setelah pesan ditulis, klik tombol “Send” untuk melanjutkan proses pengiriman pesan.

### 3.10 Badges

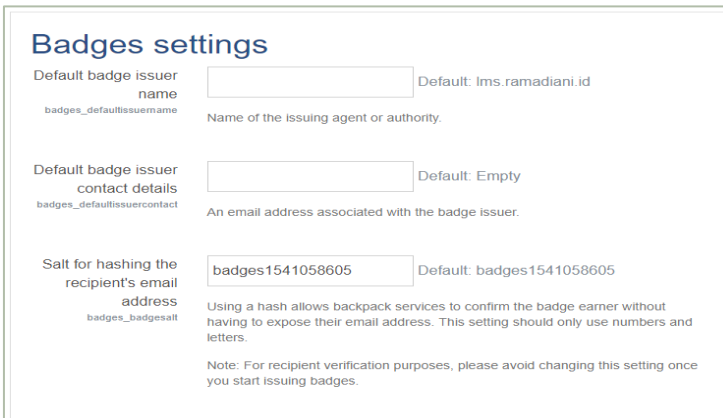
Menu ini terdapat pada bagian menu “Site Administration”. Terdapat beberapa submenu pada “Badges” seperti gambar di berikut ini.



Gambar 44. Dropdown menu Badges

### 3.10.1 Badges settings

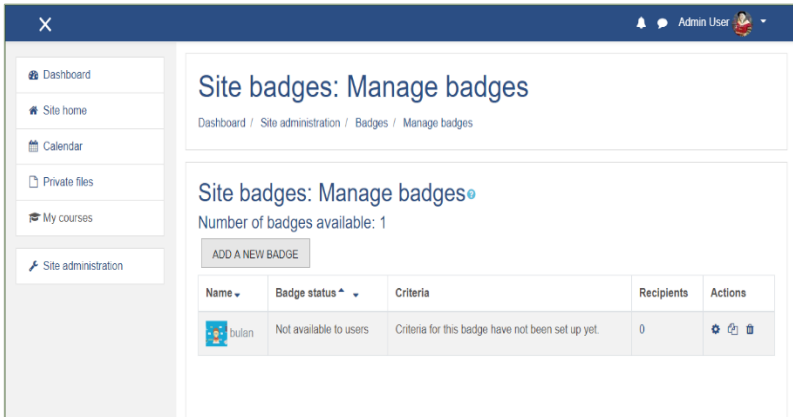
Menu ini memungkinkan admin untuk mengkonfigurasi halaman depan dan nama dari situs baru. Berikut tampilan halaman “Badges settings”



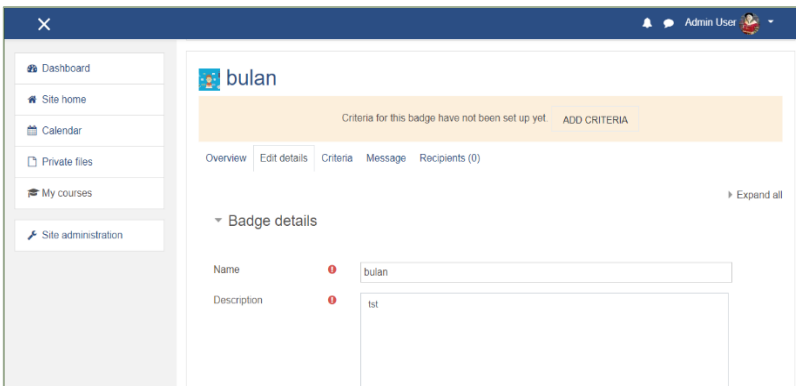
Gambar 45. Tampilan halaman “Badges settings”

### 3.10.2 Manage badges

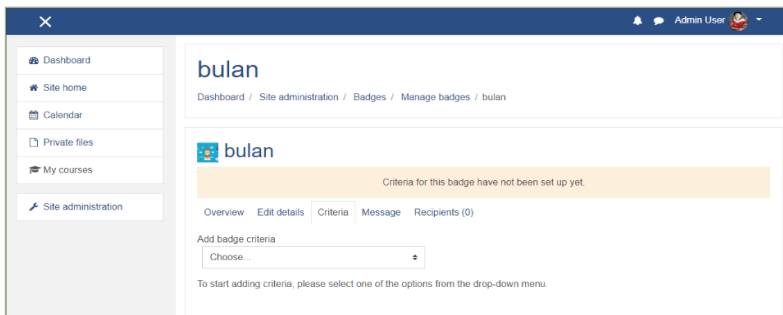
Menu ini digunakan untuk melakukan pengaturan untuk *Badges*. Berikut tampilan halaman “Manage badges”.



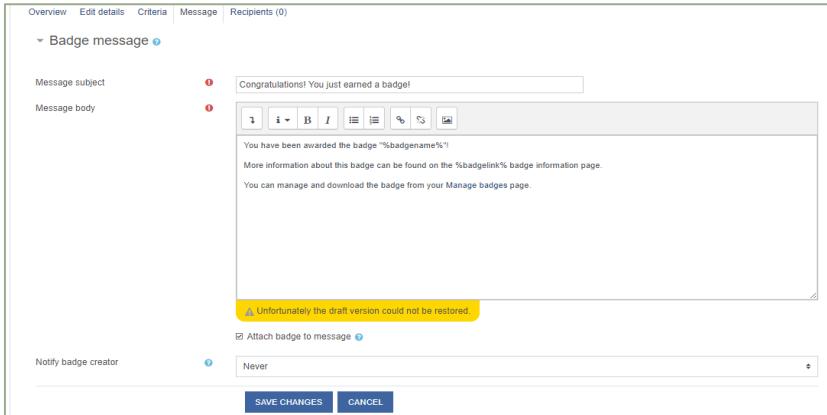
Gambar 46. Tampilan halaman “Manage badges”



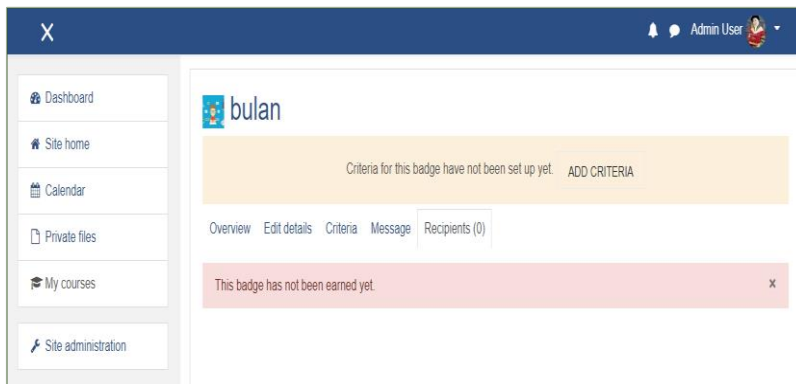
Gambar 47. Tampilan halaman “Edit detail badges”



Gambar 48. Tampilan halaman “Criteria badges”.



Gambar 49. Tampilan halaman “Message” *badges*

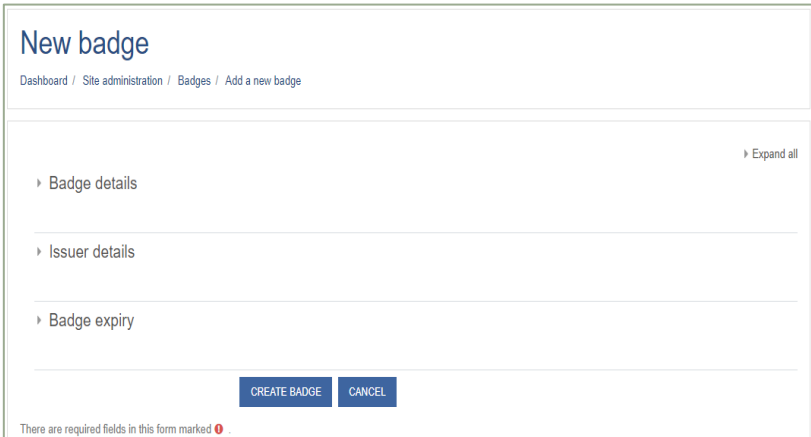


Gambar 50. Tampilan halaman “Recipients” *badges*

### 3.10.3 Add a new badges

Menu ini digunakan untuk membuat *badge* baru. Langkah-langkah yang dilakukan adalah

Klik menu “Add a new badge” pada menu “Site Administration”. Sistem akan menampilkan halaman berikut.

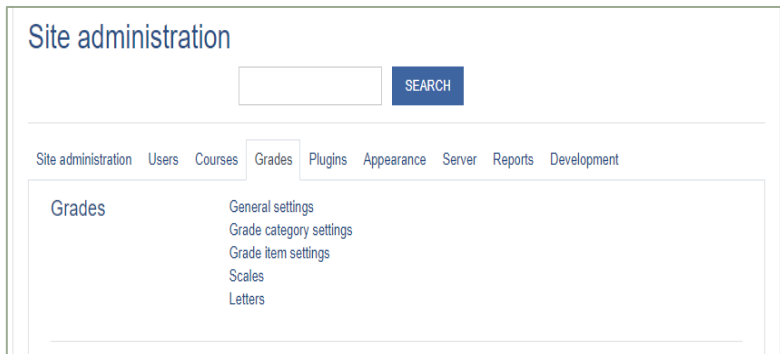


Gambar 51. Halaman “Add a new badge”

Klik tombol “Create badge” untuk memproses pembuatan *badge* baru. Pengguna mengisi *form* yang tersedia. Setelah melakukan pengisian *form*, klik tombol “Save”.

### 3.11 Grades

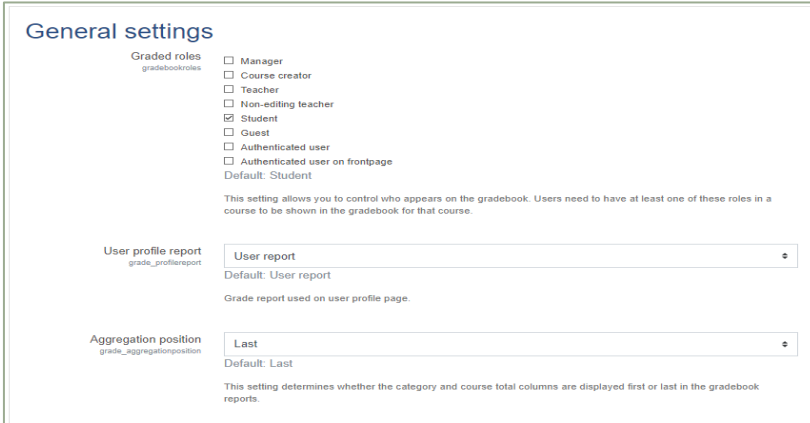
Menu ini digunakan untuk melakukan pengaturan untuk nilai. Pilihan menu “Grades” terdapat pada menu “Administration”.



Gambar 52. Menu Administration

### 3.11.1 General settings

Menu ini berisikan menu umum terkait pengaturan sistem nilai. Berikut tampilan halaman pada pengaturan umum “Grade”.



The screenshot shows the 'General settings' interface for 'Grade'. It includes three main sections: 'Graded roles', 'User profile report', and 'Aggregation position'. Each section has a list of options and a default value.

**General settings**

**Graded roles**  
gradebookroles

- Manager
- Course creator
- Teacher
- Non-editing teacher
- Student
- Guest
- Authenticated user
- Authenticated user on frontpage

Default: Student

This setting allows you to control who appears on the gradebook. Users need to have at least one of these roles in a course to be shown in the gradebook for that course.

**User profile report**  
grade\_profilereport

User report

Default: User report

Grade report used on user profile page.

**Aggregation position**  
grade\_aggregationposition

Last

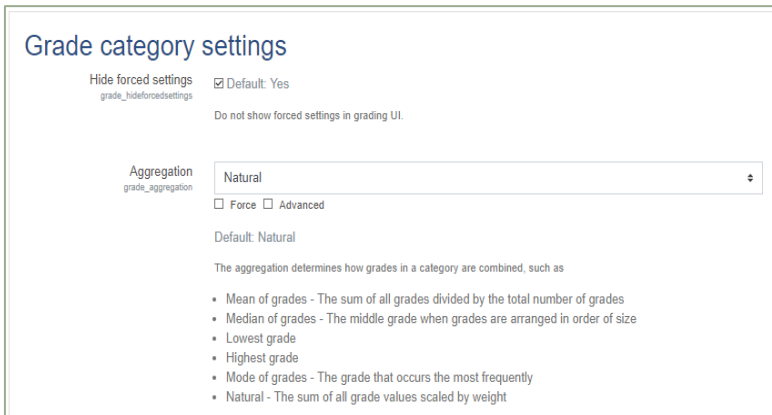
Default: Last

This setting determines whether the category and course total columns are displayed first or last in the gradebook reports.

Gambar 53. Halaman pengaturan umum “Grade”

### 3.11.2 Grade category settings

Menu ini berisi pengaturan tentang kategori nilai.



The screenshot shows the 'Grade category settings' interface. It includes two main sections: 'Hide forced settings' and 'Aggregation'. Each section has a list of options and a default value.

**Grade category settings**

**Hide forced settings**  
grade\_hideforcedsettings

Default: Yes

Do not show forced settings in grading UI.

**Aggregation**  
grade\_aggregation

Natural

Force  Advanced

Default: Natural

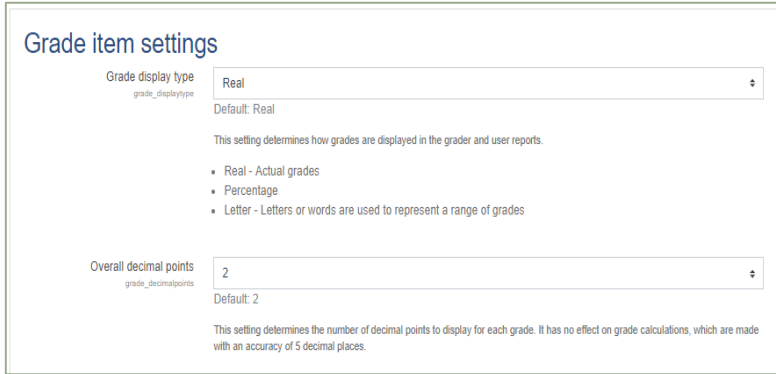
The aggregation determines how grades in a category are combined, such as

- Mean of grades - The sum of all grades divided by the total number of grades
- Median of grades - The middle grade when grades are arranged in order of size
- Lowest grade
- Highest grade
- Mode of grades - The grade that occurs the most frequently
- Natural - The sum of all grade values scaled by weight

Gambar 54. Halaman pengaturan kategori nilai

### 3.11.3 Grade item settings

Menu ini berisi tentang pengaturan tipe nilai yang diberikan. Apakah berupa huruf, angka, persentase, dan lain-lain.



**Grade item settings**

Grade display type grade\_displaytype    
Default: Real

This setting determines how grades are displayed in the grader and user reports.

- Real - Actual grades
- Percentage
- Letter - Letters or words are used to represent a range of grades

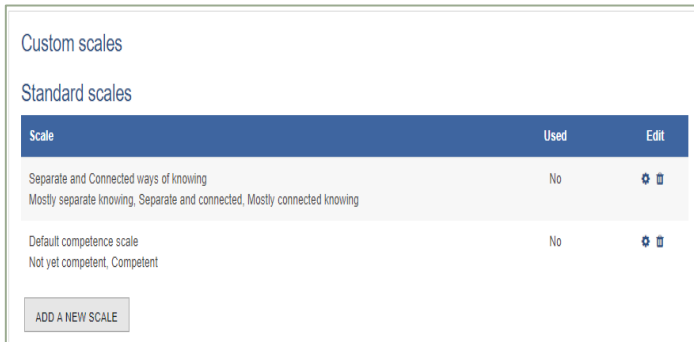
Overall decimal points grade\_decimalpoints    
Default: 2

This setting determines the number of decimal points to display for each grade. It has no effect on grade calculations, which are made with an accuracy of 5 decimal places.

Gambar 55. Halaman pengaturan item penilaian





### 3.11.4 Scales

Menu ini digunakan untuk menentukan skala penilaian.



Custom scales

Standard scales

Scale	Used	Edit
Separate and Connected ways of knowing Mostly separate knowing, Separate and connected, Mostly connected knowing	No	 
Default competence scale Not yet competent, Competent	No	 

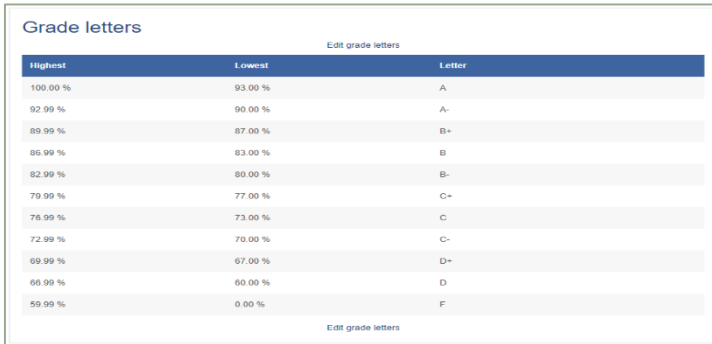
[ADD A NEW SCALE](#)

Gambar 56. Halaman skala nilai



### 3.11.5 Letters

Halaman ini berisi daftar skala nilai dalam huruf. Berikut tampilan halaman "Letters".

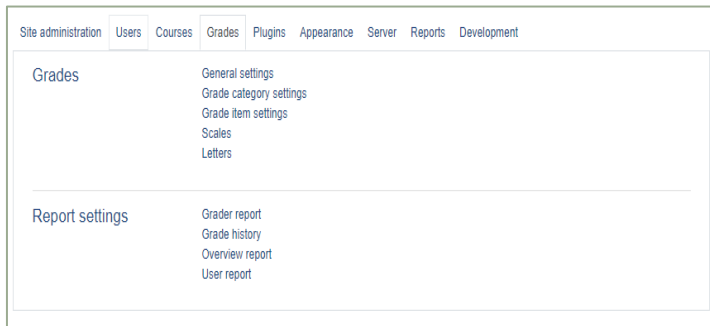


Highest	Lowest	Letter
100.00 %	93.00 %	A
92.99 %	90.00 %	A-
89.99 %	87.00 %	B+
86.99 %	83.00 %	B
82.99 %	80.00 %	B-
79.99 %	77.00 %	C+
76.99 %	73.00 %	C
72.99 %	70.00 %	C-
69.99 %	67.00 %	D+
66.99 %	60.00 %	D
59.99 %	0.00 %	F

Gambar 57. Halaman Letters

### 3.11.6 Report settings

Pada menu ini terdapat beberapa submenu untuk pengaturan laporan nilai.



Site administration	Users	Courses	Grades	Plugins	Appearance	Server	Reports	Development
Grades								
General settings								
Grade category settings								
Grade item settings								
Scales								
Letters								
Report settings								
Grader report								
Grade history								
Overview report								
User report								

Gambar 58. Menu Administration

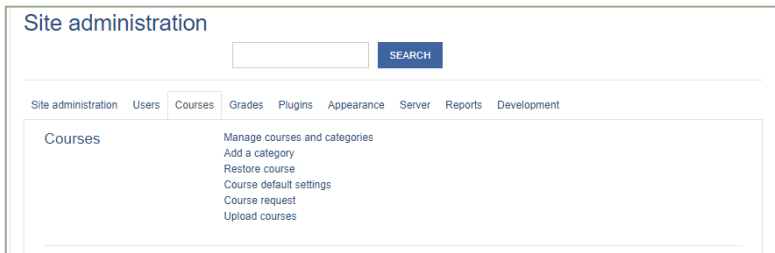
Adapun submenu tersebut adalah:

Grader report : Berisi pengaturan tampilan laporan penilaian

- Grade history : Berisi pengaturan jumlah entri *history* perhalaman
- Overview report : Terdapat pengaturan pilihan suatu total nilai ditampilkan atau tidak
- User report : Berisi pengaturan tampilan *report* untuk pengguna

### 3.12 Administrasi Course

Untuk melakukan pengaturan pada *course*, pengguna dapat memilih menu “Courses” yang ada pada menu “Site Administration”.



Gambar 59. Tampilan halaman Site Administration

#### 3.12.1 Course default settings

Menu ini merupakan menu utama untuk melakukan pengaturan pada *course*. Berikut tampilan halaman pengaturan *course*.



Gambar 60. Tampilan halaman pengaturan *course*

Pada halaman tersebut ada beberapa poin pengaturan, yaitu:

Tabel 7. Administrasi Course

Course format	
Format	Menentukan format tampilah <i>course</i>
Maximum number of sections	Menentukan nilai maksimal pada <i>dropdown menu</i> sesi
Number of sections	Menentukan jumlah sesi pada <i>course</i>
Hidden sections	Menentukan sesi apa saja yang akan disembunyikan
Course layout	Menentukan apakah seluruh <i>course</i> ditampilkan dalam satu halaman atau dibagi atas beberapa halaman
Appearance	
Force Language	Pilihan apakah ada ketentuan untuk memakai suatu bahasa khusus
News items to show	Menentukan jumlah item baru pada forum berita suatu halaman <i>course</i>
Show gradebook to students	Pilihan apakah nilai bisa dilihat oleh pelajar atau tidak
Show activity reports	Pilihan apakah laporan aktivitas akan ditampilkan atau tidak
Files and uploads	
Maximum upload size	Jumlah maksimum <i>file</i> yang bisa diunggah
Completion tracking	Jika diset "enable", maka <i>completion condition</i> akan dimasukkan ke pengaturan aktivitas
Groups	
Group mode	Memungkinkan pengguna untuk mengatur apakah ada atau tidaknya grup
Force	Pilihan untuk mewajibkan aktivitas di dalam suatu <i>course</i> harus dikerjakan dalam bentuk grup

### 3.12.2 Course request

Menu ini digunakan untuk permintaan pemberitahuan untuk suatu *course* tertentu.

The screenshot shows the 'Course request' configuration interface. It includes the following elements:

- Enable course requests:** A checkbox labeled 'Enable course requests' (with the ID `enablecourserequest`) is currently unchecked. Below it, the text states: 'Default: No. This will allow any user to request a course be created.'
- Default category for course requests:** A dropdown menu labeled 'Default category for course requests' (with the ID `defaultrequestcategory`) is set to 'INFORMATIKA CLASS'. Below it, the text states: 'Courses requested by users will be automatically placed in this category.'
- Enable category selection:** A checkbox labeled 'Enable category selection' (with the ID `requestcategoryselection`) is currently unchecked. Below it, the text states: 'Default: No. Allow the selection of a category when requesting a course.'
- Course request notification:** A dropdown menu labeled 'Course request notification' (with the ID `courserequestnotify`) is set to 'Nobody'. The dropdown options are 'Nobody', 'Everyone who can Approve course creation', 'Admin User', and 'Ramadani Ramadani'. Below it, the text states: 'Default: Nobody. Users who will be notified when a course is requested. Only users who can approve course requests are listed here.'

A 'SAVE CHANGES' button is located at the bottom center of the form.

Gambar 61. Tampilan halaman “Course request”

Pada halaman ini terdapat beberapa pengaturan, yaitu:

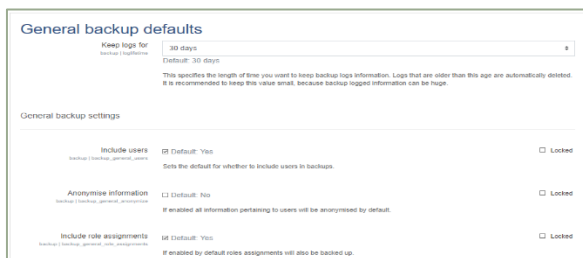
- Enable course requests** : Memungkinkan adanya permintaan notifikasi.
- Default category for course requests** : *Course* yang diminta oleh pengguna akan otomatis ditempatkan dalam kategori tertentu
- Enable category selection** : Memungkinkan pemilihan kategori ketika meminta *course*
- Course request notification** : Pilihan untuk permintaan notifikasi suatu *course*

### 3.12.3 Backups

Menu ini digunakan untuk mengatur cadangan informasi dari masing-masing *course* yang ada pada aplikasi.

#### 3.12.3.1 General backup defaults

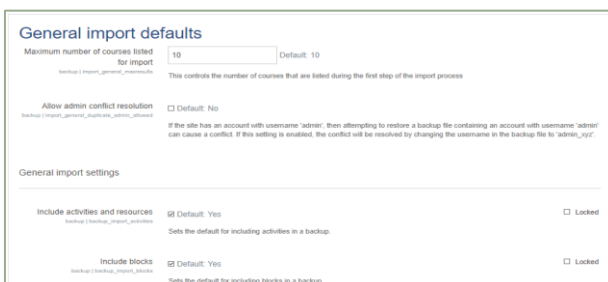
Pada halaman ini, berisi konfigurasi tentang penentuan peran, *block*, filter, komentar, log, *history*, dan hal lain yang menyangkut informasi umum mengenai *course*.



Gambar 62. Halaman “General backup default”

#### 3.12.3.2 General import defaults

Halaman ini berisi pengaturan jumlah maksimal daftar *course* yang bisa diimport.



Gambar 63. Halaman “General import default”

### 3.12.3.3 Automated backup setup

Halaman ini berisi pengaturan untuk melakukan *backup* secara otomatis atau manual. Jadwal *automatic backup* dapat diatur pada hari dan jam tertentu. Selain itu, juga bisa ditentukan penyimpanan *backup file*.

Automated backup setup

Active: Disabled

Default: Disabled

Choose whether or not to do automated backups. If manual is selected automated backups will be possible only by through the automated backups CLI script. This can be done either manually on the command line or through cron.

Schedule

Sunday  
 Monday  
 Tuesday  
 Wednesday  
 Thursday  
 Friday  
 Saturday  
Default: None

Choose which days of the week to perform automated backups.

Execute at

0

0

Default: 0:0

Choose what time automated backups should run at.

Gambar 64. Halaman “Automated backup setup”

### 3.12.4 Upload courses

Pada halaman ini, pengguna dapat mengunggah suatu *course file*.

Upload courses

General

File

CSV delimiter: ,

Encoding: UTF-8

Preview rows: 10

Import options

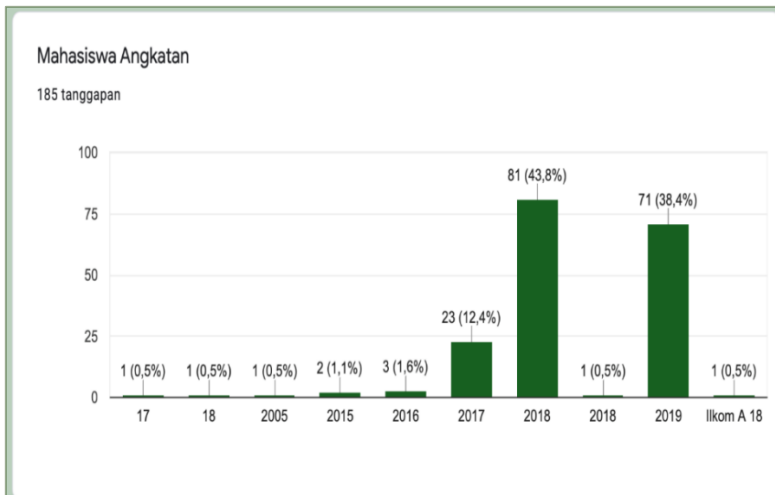
Gambar 65. Halaman pengunggahan *course*



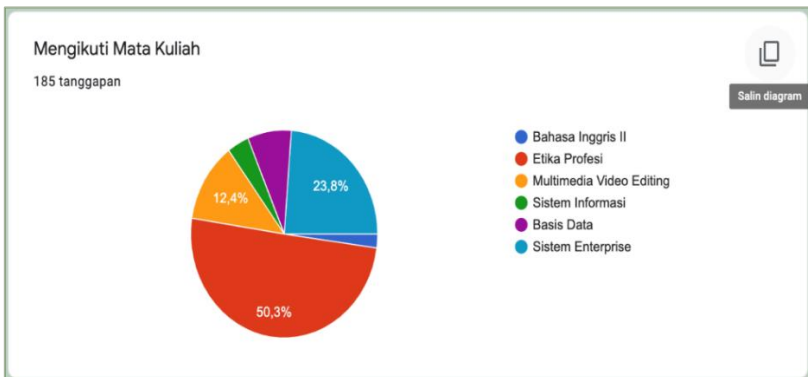
## Bagian 4. Hasil Ujicoba Sistem



Hasil survei dari penerapan sistem *E-learning* berbasis website sebagai berikut:

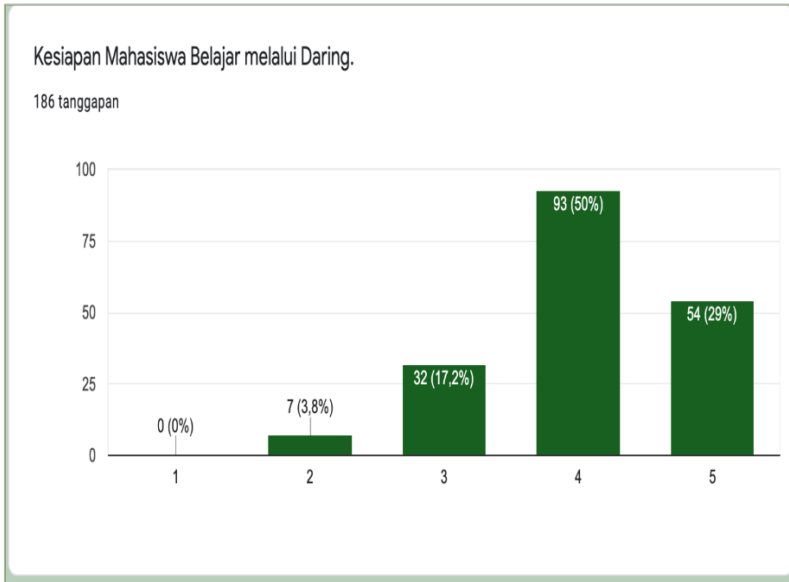


Gambar 66. Tahun Masuk Mahasiswa

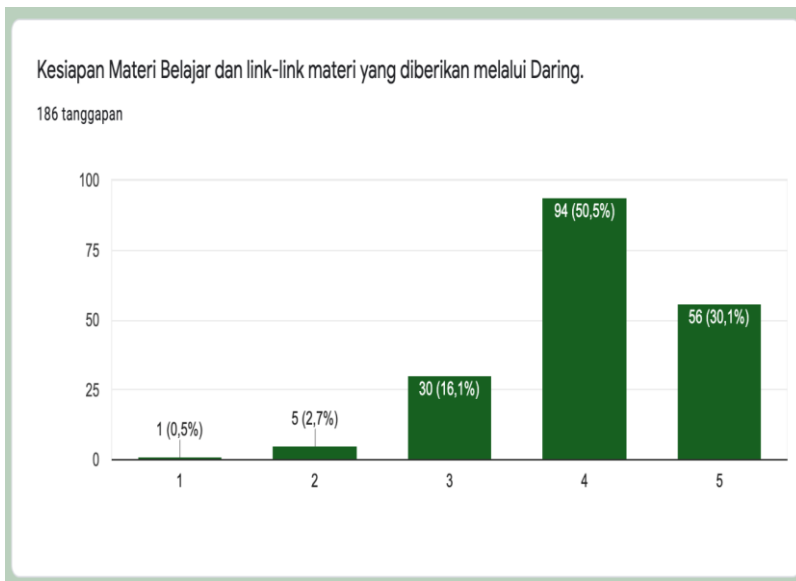


Gambar 67. Mata kuliah yang diikuti

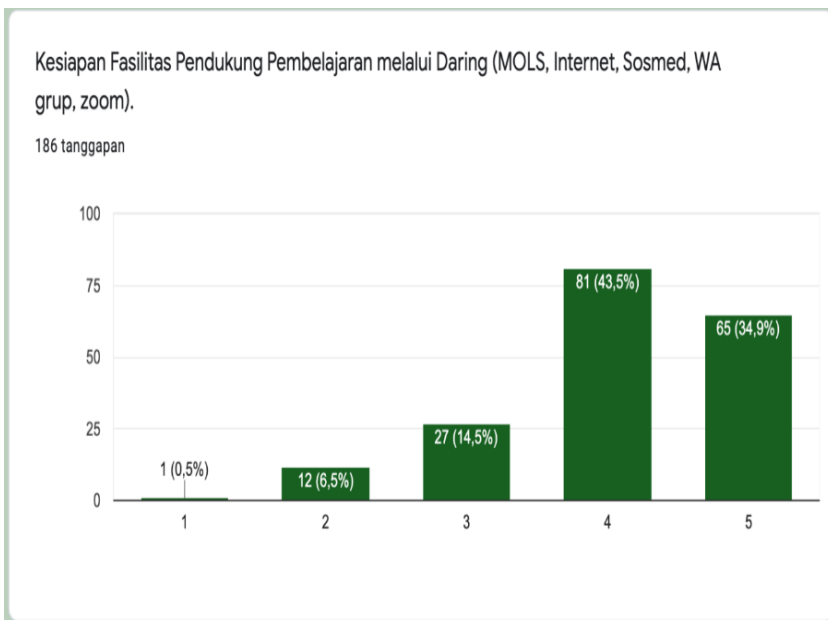




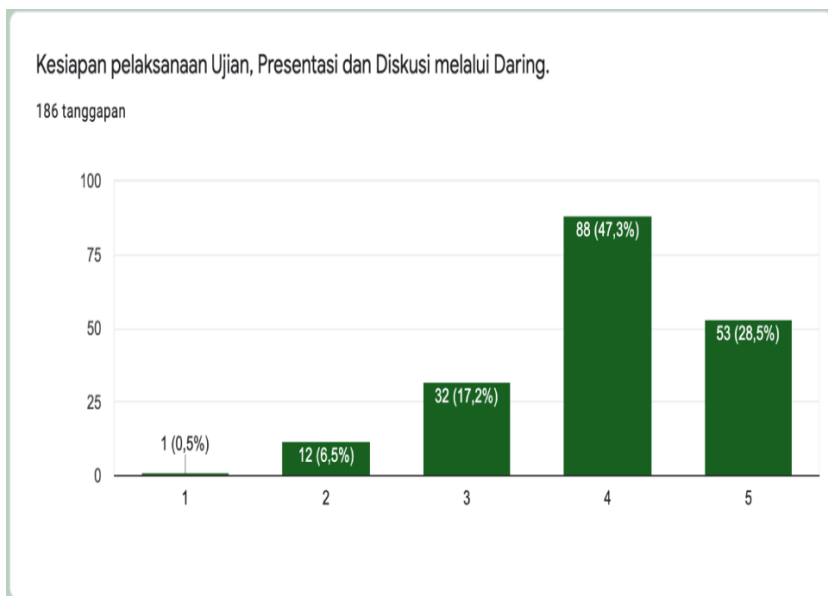
Gambar 68. Mahasiswa yang ikut daring



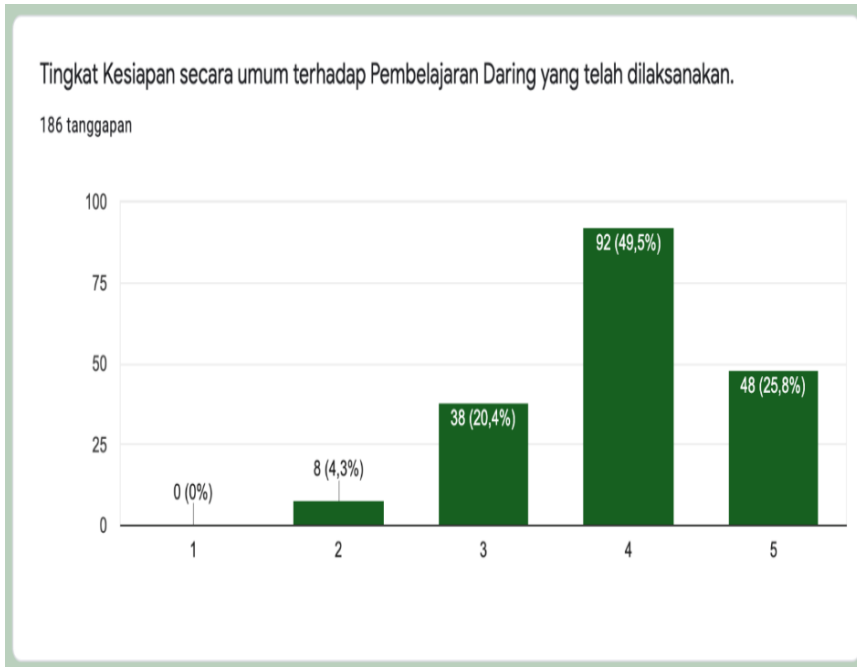
Gambar 69 Materi belajar melalu daring



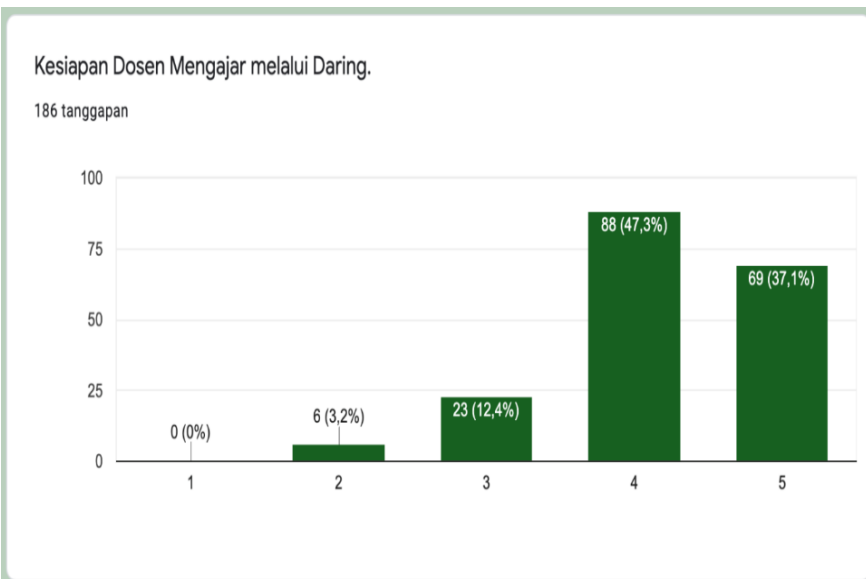
Gambar 70 Kesiapan fasilitas pendukung



Gambar 71. Kesiapan pelaksanaan ujian

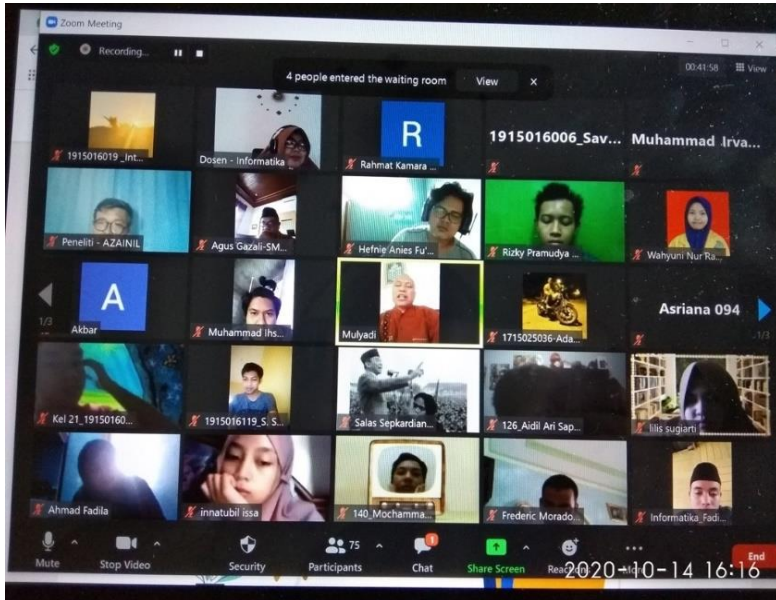


Gambar 72. Kesiapan pelaksanaan pembelajaran daring



Gambar 73. Kesiapan dosen mengajar melalui daring

Hasil dari kunjungan ke lapangan sebagai berikut:



Gambar 74 Proses kuliah secara daring



Gambar 75 Survey ke SMA Negeri 2 Samarinda



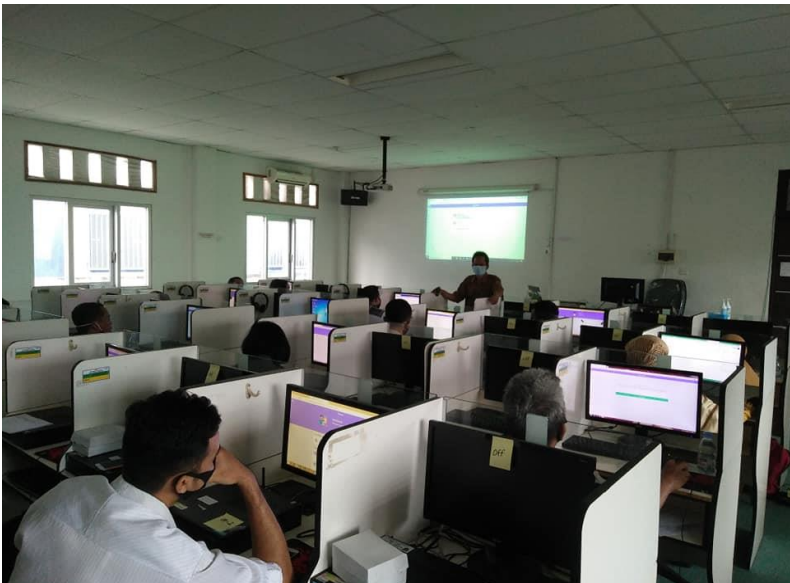
Gambar 76 Survey ke SMA Negeri 3 Samarinda



Gambar 77. Survey ke SMP Negeri 1 Samarinda



Gambar 78. Survey ke Dinas Pendidikan dan Kebudayaan Provinsi Kalimantan Timur



Gambar 79. Penerapan *E-learning*



## **Bagian 5. Penutup**

---



Dengan penerapan E-learnig berbasis website sangat memudahkan mahasiswa dalam pembelajaran secara daring. Serta memudahkan para dosen maupun para pengajar dalam proses pembelajaran secara daring.

Sistem ini sangat mudah di aplikasikan ke beberapa sekolah yang ingin menerapkan pembelajarang secara daring. Oleh sebab itu beberapa sekolah hanya menyiapkan perangkat untuk menggunakan sistem ini.

Semoga penerapan E-learning berbasis website ini sangat bermanfaat buat para dosen maupun para pengajar dan juga untuk sekolah yang ingin proses pengajaran ingin secara daring.





## Bagian 6. Daftar Pustaka

---



Ramadiani, et al (2017). User Satisfaction Model for e-Learning Using Smartphone. *Procedia Computer Science*. 116, pp. 373-380. <https://doi.org/10.1016/j.procs.2017.10.070>

Kenneth Wong; Reggie Kwan; Fu Lee Wang; Louise Luk, (2015). A pilot study on students' learning experience on the e-learning using social networking. *Int. J. of Innovation and Learning*, 18(3): pp. 299–312. DOI: 10.1504/IJIL.2015.071501

Iin Karmila Yusri, Robert Goodwin, Carl Mooneya, (2015). Teachers and mobile learning perception: towards a conceptual model of mobile learning for training. *Procedia - Social and Behavioral Sciences*, 176, pp. 425 – 430.

Ramadiani, et al. (2013) E-Learning User Acceptance based on Analysis of User's Style, Usability, and User Benefits, *Jurnal Sistem Informasi (JSI) UI*, 9(1): pp. 6-12

Ozlem Ozan, Gonca Telli Yamamoto, Uğur Demiray, (2015). Mobile learning technologies and educational applications. *FORMAMENTE- Anno X*. 3(4): pp. 97-109.

Ramadiani, et al, (2015). Integrated Acceptance Model for E-Learning. International Conference on Engineering and Technology for Sustainable Development (ICET4SD) 11-12 Nov, Indonesia. *IOP Conference Series: Materials Science and Engineering*, 105(1): pp. 1-9.

Ramadiani, R. Atan, M. H. Selamat, R. Abdullah, N. C. Pa and Azainil, (2016). User difficulties in e-learning system. 2nd International Conference on Science in Information Technology (ICSITech). Balikpapan. IEEE Xplore. 2017 (7852626): 158-162.

Guralnick, D. 2006. "How to Design Effective, Motivating User Interfaces." American Society for Training & Development TechKnowledge Conference, Denver, CO. pp.1-11.

Minsun Shim, Heui Sug Jo, (2020). What quality factors matter in enhancing the perceived benefits of online health information sites? Application of the updated DeLone and McLean Information Systems Success Model, *International Journal of Medical Informatics*. Vol. 137,104093, pp. 1-7. <https://doi.org/10.1016/j.ijmedinf.2020.104093>.

I-Fan Liu, Meng Chang Chen, Yeali S. Sun, David Wible, Chin-Hwa Kuo,(2010). Extending the TAM model to explore the factors that affect Intention to Use an Online Learning Community, *Computers & Education*, Volume 54, Issue 2, pp. 600-610.

Ramadiani, et. al. (2018). Model dan Bentuk Penelitian e-Learning Menggunakan Structural Equation Model . *Mulawarman University Press*. ISBN; 978-602-6834-64-05

R Ramadiani, A Azainil, F Frisca, AN Hidayanto, H Herkules (2019). An integrated model of e-learning continuance intention in Indonesia. *International Journal of Innovation and Learning*. 26(1): 1-26.

Ramadiani (2010) Structural Equation Model Untuk Analisis Multivariate Menggunaka LISREL. *Jurnal Informatika Mulawarman*, 5(1): pp.14-18 DOI:<http://dx.doi.org/10.30872/jim.v5i1.48>

Ramadiani, Azainil, Hidayanto, A. N., Khairina, D. M., & Jundillah, M. L. (2020). Teacher and student readiness using e-learning and m-learning. *Bulletin of Electrical Engineering and Informatics*, 9(3), 1176-1182. <https://doi.org/10.11591/eei.v9i3.2006>

Katherine M, Kimberly O, Roxanne R, Maria K.H, John J.F & Katherine B (2016). Teaching in a Digital Age: How Educators Use Technology to Improve Student Learning, *Journal of Research on Technology in Education*, 48 (3): pp. 194-211.

Rhonda Christensen, Gerald Knezek, (2017). Readiness for integrating mobile learning in the class room; challenges, preferences and possibilities. *Computers in Human Behavior*. 76, pp. 112-121.

J.R.van Seters, M.A.Ossevoort, J.Tramper, M.J.Goedhart, (2012). The influence of student characteristics on the use of adaptive e-learning material, *Computers & Education* 58 (3) April, pp. 942-952.



1. International Conference on Education, Leadership and Innovation 2020 <http://iceli.pascasarjana.uad.ac.id/>



## **FACTORS AFFECTING THE FAILURE AND THE SUCCESS OF ONLINE LEARNING IN SAMARINDA**

**Ramadiani Ramadiani<sup>1)</sup>, Azainil Azainil<sup>2)</sup>, Dyna Marisa Khairina<sup>3)</sup> and Muhammad Labib Jundillah<sup>4)</sup>**

<sup>1,3,4</sup> Informatics Department, Faculty of Engineering, Mulawarman University, Samarinda, Indonesia

<sup>2</sup> Master of Education, Faculty of Teacher and Training, Mulawarman University, Samarinda, Indonesia

✉ Corresponding author e-mail: [likorn.ramadiani@gmail.com](mailto:likorn.ramadiani@gmail.com)

**Abstract.** This study aims to determine the implementation of online learning at schools and colleges in Samarinda, as well as what factors become obstacles and influence the success of online learning. With the COVID-19 pandemic, schools, teachers and local governments are required to be more active, creative, and concerned about evaluating learning models and distance learning readiness, either through LMS, online learning, mobile learning, blended or hybrid learning. This study uses literature reviews, observations, questionnaires and field interviews to collect relevant data from various sources of respondents. Based on the research results, there are several problems with distance education, including: readiness of students, readiness of parents, readiness of schools, and readiness of internet facilities. The other supporting variables in this study are: age, motivation to learn, educational background, ease of application, user psychology, and learning support facilities. The data processing method uses the Structural Equation Model and Descriptive Statistics using the Lisrel and SPSS applications. The place where this research was conducted was Public School and University, namely Junior High School 1, Senior High School 2, Senior high school 3 and Mulawarman University with a total of 186 respondents. The result of this research is that Samarinda is quite ready to implement online learning, with 10 recommended benefits and obstacles that still need to be fixed.

**Keywords:** Online Learning, Readiness, Structural Equation Model, User Benefit Model, User Interface.

**How to Cite:** APA style. Author. [year]. Paper Title. Name of Journal. x(x), xxx-xxx. doi:<http://dx.doi.org/10.17509/Journal...xxxx.xxxxx>.

**INTRODUCTION** – Online Learning has been around for decades and is one of the most significant recent development in IS industry. The purpose of online learning like any other learning approach is to achieve the learning objective. Online learning has been viewed as synonymous with web-based learning (WBL), internet based training (IBT), advanced distributed learning (ADL), web based Instruction (WBI), and open/flexible learning (OFL). Some crucial critical successful factors in online learning are; information technology, student related, instructor related, institution support, developer and designer, learning content and admin. Online learning model are synchronous (real time) and asynchronous (anytime and any where) or mix of two. The interesting problem when some online learning website seems to be more successful than other (Ramadiani, 2017), (Kenneth, 2015) and (Karmila,2015).

Online learning is a distance learning system which offers several training courses that has custom tailored to learner's need (Ramadiani, 2013). As we know, online learning is one of the supporter methods in education world. The delivery of course content in electronic media, such as; internet, intranet, satellite broadcast, interactive TV, audio/video, smartphone etc. It is expected to facilitate the weakness that existed or found in the conventional education (Ozlem, 2015). Through Online learning is hoped education become more accessible, cheaper, more fun and easier to share and to learn. But in reality, the online learning was not entirely successful as expected (Ramadiani, 2015). They are many causes why the students rarely use online learning.

There are some features in the user interface still less efficient, Ramadiani (2016). Unusable user interfaces are probably the single largest reasons why on all sides of interactive systems computers fail in actual use. The design of applications purposes in term of ease of use is not an easy of task. Usability is important to determine whether something is useful. It matters that something is easy but it's not what you want. Many theories that discuss the interface evaluation design, but the fact still weak and do not work in accordance with the online learning user interface expected, Ramadiani (2017) and Guralnick (2006).

The first and the most important reason why online learning doesn't function properly because are not in accordance with the user need. According to Davis, 1989, in his TAM theory said that the actual usage of the system that depends on the intention to use, whereas the intention to use is directly impacted by Attitude toward the use (Minsun, 2020). A toward the use was divided into 2 causes, perceived usefulness and perceived ease of use. Perceived Usefulness is the degree to which users believe that using online learning would enhance their productivities. Whereas Perceived ease of uses is the degree an individual believes that using online learning should be free of effort (I-Fan Liu, 2010). Based on this theory, the students does not use the online learning because of these reasons, PU and PE of U. if they feel the system has benefit and help to solve their problem, automatically the usage of Online learning will be increase (Ramadiani, 2016).

#### **Bulletin of Electrical Engineering and Informatics**

The other reason the student rarely use online learning because the purpose the application to provide ease of use, not to answer the difficulties was faced by students. The matter is, the application is easy to use but it is not what you want or need. Unusable user interface on all interactive system computer fall in actual usage because of the online learning interface design purpose in term of ease to use, is not an easy task. To design interface should be determined by 'how people learn' and 'the task they need to perform in the program'.

Based on the statement problems above, it can be concluded that the issues to be examined in this research are: User Interface is very important to encourage using the application (Ramadiani, 2019). Many theories had discussed about the interface usability evaluation and user technology acceptance separately, to enhance online learning process. Therefore, the evaluation model for online learning interface acceptance is considered important to investigate.

#### **METHOD**

User online learning interface acceptance which is measured by the user benefits categories, 4 hypotheses; 1 independent variable, 3 dependent variables and 9 criteria. Respondents of this research are 185 respondents from Junior High School 1, Senior High School 2, Senior high school 3 and Mulawarman University students. Online learning Software uses LMS Moodle v1.9. Statistics Software; EXCEL, SPSS, SEM, LISREL, PRELIS, SIMPLIS. The aim of this research is to evaluate the factors affecting the failure and success of online learning In Samarinda based on user acceptance and user benefit model (Ramadiani, 2018).

#### **Requirement Specification**

A requirement is always needed in all designers. Requirement is any simple statements describing any functionalities and behaviors that someone expected of system. The more details we have in requirement, the easier for us to test. Acceptance in human physiology is a person's assent to the reality of a situation, recognizing a process or condition without attempting to change it. The concept is close in meaning to agreement. The acceptance of a system means you are confident it will give benefit to the user. It will give anything positive influence to the user (Ramadiani, 2020), (Katherine, 2017) and (Rhonda, 2017). Not all individuals view the technology as beneficial. Some individuals are uncomfortable with technological change, do not enjoy the uncertainty and are quiet to embrace these tools and ideas whereas others welcome them and enjoy the challenge. A person who believes that system performing will lead to positive outcomes, will hold a favorable attitude, but if they believe the system performing will lead to negative outcomes, will hold unfavorable attitude. The user benefits in this research: Media Elements, Communicativeness, User expectation (Tabel 1).

---

**Journal**                      **homepage:**

Table 1. User Benefits Model

User Benefits		Variables
Media Elements	Measure of capability of a software product to help users pursue what he/ she aim in a specified context of GUIs-style applications.	Variations in the form of exam and practice questions To update Material Unclear function icon Menu back forward
Communicativeness	In formaliveness, guidance, explanation ability, expressiveness, esthetic/cultural acceptance.	Group Discuss Share video, photos and Information Message
User expectation	Can be generally different from one to another user with the context of users' characteristics and task characteristics.	To finish their work rapidly To get the best grade To complete their tasks To enhance their knowledge To prepare for their exam To practice some material To spent their leisure time

The acceptance of a system means you are confident it will give benefit to user. It does not mean that it only meets the original specification as requested (Ramadiani, 2019) and (J.R.van, 2012). It is realized that it will give anything positive to user, or may even damage the institution. In this research, there are four hypotheses (Figure 1):

- H1 Is there any relationship between Media elements and User Benefits
- H2 Is there any relationship between Communicativeness and User Benefits
- H3 Is there any relationship between User expectation and User Benefits
- H4 Is there any relationship between User Benefits and User Interface Acceptance

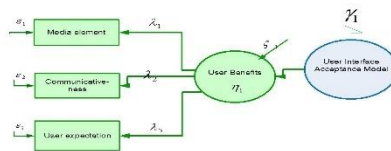


Figure 1. User Benefits Model



**Buletin of Electrical Engineering and Informatics**

Factor analysis: Use to test hypotheses about underlying structure or to understand underlying structure. SEM: Combine factor analysis, canonical correlation, and multiple regressions. The technique evaluates whether the model provides a reasonable fit to the data and the contribution of each of IVs and DVs. (Ramadiani, 2010). Path Analysis: Utilizes multiple applications of multiple regression to estimate causal relations among several variables and to test the acceptability of the causal model hypothesized by the researcher (Ramadiani, 2018). Path coefficients are calculated to estimate the strength of the relationships in the hypothesized causal model. LISREL consist of two distinct parts; the confirmatory factor model and the structural equation model. The Confirmatory factor model specifies the relations of the observed factor to their hypothesized underlying construct. The structural equation model specifies the relationship of the constructs to one another as hypothesized by research model (Ramadiani, 2020).

**RESULTS**

**Research Respondents**

In this research, there are 186 respondents; 107 males and 79 females (Figure 3). The media used for online teaching and learning are MOLS, Internet, Social Media, WA group, zoom <https://mols.unmul.ac.id/dosen/login> (Figure 4).

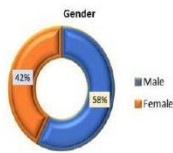


Figure 3. Students Gender

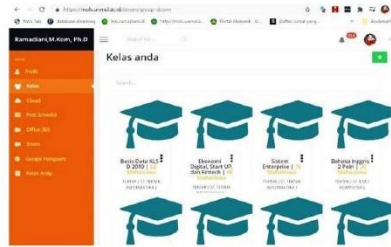


Figure 4. Online Learning Too

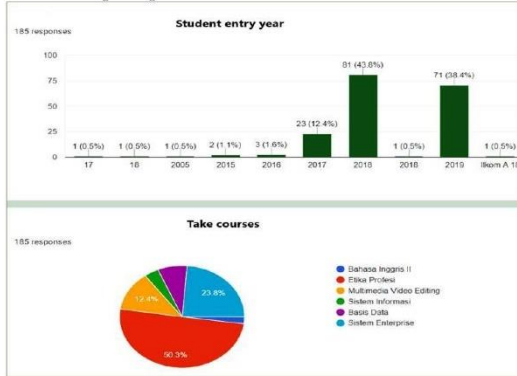


Figure 5. Students as Research respondents

Readiness of Students and Material in Online Learning in Figure 6.

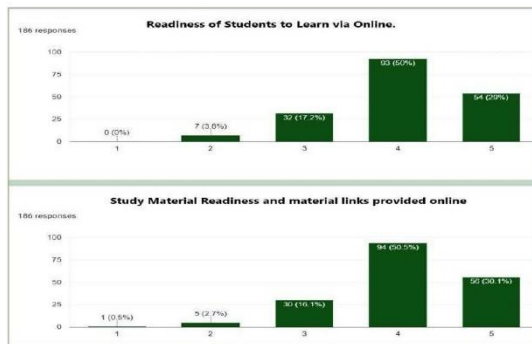
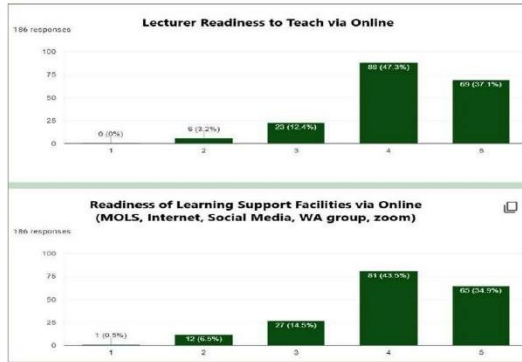


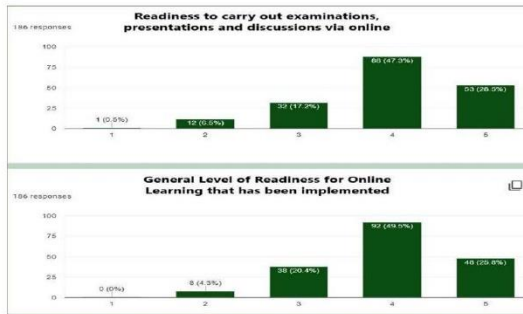
Figure 6. Readiness of Students and Material in Online Learning

**Bulletin of Electrical Engineering and Informatics**  
 Readiness of Lecturer and Learning Support Facilities in Figure 7.



**Figure 7.** Readiness of Lecturer and Learning Support Facilitie

Readiness of Exam, Discussion and Presentation via online in Figure 8.



**Figure 8.** Readiness of Exam, Discussion and Presentation via online

**Journal homepage:**

The advantage and disadvantages of online learning according to these research respondents, we can see in Table 2.

Table 2. The 10 advantages and the disadvantages of online learning in Samarinda

No.	The advantages of online learning	The disadvantages of online learning
1.	Learning online is very helpful because we don't need to leave the house during the Covid-19 pandemic	Lack of motivation
2.	Save time, cost and effort	Internet network is not stable
3.	The material can be accessed anywhere	Internet quota fee increases
4.	Study time can be at any time	Lack of understanding of the material
5.	Ease of time management	Remote areas are difficult to get the internet
6.	Flexible	Lack of interaction, the lecturer did not pay attention
7.	Learning material is more varied	Lots of homework
8.	Learning is easier	Lack of discipline, not attending lectures
9.	Learning is cheaper	Less focus on learning, not paying attention
10.	The teaching and learning process can be documented	e-learning server sometimes down

### DISCUSSION

The data collected in this study is ordinal data and the estimation method used is the method of maximum likelihood (Ramadiani, 2010). The data was processed by using SEM and Lisrel v8.80. The result of model measurement is very significant correlation between variables Ramadiani (2019). Variable indicator User's benefits are consisting of Y1, Y2, Y3, in the measurement estimation (Table 3 and Table 4) for the hypotheses results. User Benefits:  $t$  value = 7.04,  $\lambda=0.80$ ,  $R^2 = 0.63$ . Tabel 5 is the construct validity and reliability for User Benefits model.

Table 3. The Measurement Estimation

Variables	Estimates ( $\lambda$ )		Standardized Solution ( $\lambda$ )		
	User Benefits	Err ( $t$ )	User Benefits	Err ( $t$ )	$R^2$
Y1	0.93	0.56 {0.10}	0.78	0.39	0.61
Y2	0.97 {0.11}	0.30 {0.080}	0.87	0.24	0.76

Journal homepage:

Variables	Estimates ( $\lambda$ )		Standardized Solution ( $\lambda$ )		
	User Benefits	Err (t)	User Benefits	Err (t)	$R^2$
	8.93	3.80			
Y3	5.54 [0.80]	39.91 (6.00)	0.66	0.67	0.43
	6.94	6.66			

Table 4. Research Hypothesis Results

Variables	Factors	Lambda ( $\lambda$ ) Gamma ( $\gamma$ )	T value	H <sub>0</sub>	Research Hypothesis
Y1	Media element	0.93	5.58	rejected	H103 accepted (Significant)
Y2	Communicativeness	0.97	3.80	rejected	H113 accepted (Significant)
Y3	User expectation	5.54	6.66	rejected	H123 accepted (Significant)
$\eta$ 1	User Benefit	0.80	7.04	rejected	H154 accepted (Significant)

Table 5. Validity and Reliability

Variables	Construct Reliability (>0.70)	Variance Extracted (>0.50)
User Benefit	0.86	0.60
Acceptance	0.73	0.69

• Construct Reliability user Benefit;

$$(\sum \text{Standardized Loading})^2 = (0,77 + 1,06 + 0,44)^2 = 2,27^2 = 5,1529$$

$$\sum e_j = 0,41 + 0,15 + 0,52 = 1,08$$

$$\text{Construct Reliability User Style} = 5,1529 / (5,1529 + 1,08) = 5,3361 / 6,2329 = \mathbf{0,86}$$

• Variance Extracted user Benefits;

$$\sum \text{Standardized Loading}^2 = 0,77^2 + 1,06^2 + 0,44^2 = 0,5929 + 1,1236 + 0,1936 = 1,9101$$

$$\sum e_j = 0,41 + 0,15 + 0,52 = 1,08$$

$$\text{Variance Extracted User Style} = 1,9101 / (1,9101 + 1,08) = 1,8009 / 2,9901 = \mathbf{0,60}$$

## CONCLUSION

Online learning is not going to work if the system is not used in accordance with user needs. User Interface is very important to encourage using the application. Failure in using online learning

**Journal** **homepage:**

#### **Bulletin of Electrical Engineering and Informatics**

interface because the reason of application development doesn't provide ease of use, neither answer the difficult task faced by its users. Many theories has discussed about user interface benefits evaluation and technology acceptance separately, so we need to make correlation between interface usability evaluation and user acceptance to enhance online learning process. Therefore, the evaluation model for online learning interface acceptance is considered important to investigate.

Based on the statistical value in the model, the model of online learning user benefits has a highly significant correlation values and strong construction between variables, which is evidenced by the size of the construct reliability values above 0.70 and the value of its variance extracted 0.50. According to the research questioner analysis and Goodness of Fit measurement, it is shown that the high reliability in this study indicates that an indicator variable is consistently high in measuring latent constructs. Test reliability used two types of measurements composite construct reliability and variance extracted measure.

#### **ACKNOWLEDGMENTS**

This research was funded by the Directorate of Research and Community Service, Directorate General of Research and Development, Ministry of Research, Technology and Higher Education of the Republic of Indonesia in accordance with Research Contract **183 / SP2H / AMD / LT / DRPM / 2020** and **SK no. 25 / E1 / KPT / 2020**.

#### **REFERENCES**

- Ramadiani, et al (2017). User Satisfaction Model for e-Learning Using Smartphone. *Procedia Computer Science*. 116, pp. 373-380. <https://doi.org/10.1016/j.procs.2017.10.070>
- Kenneth Wong; Reggie Kwan; Fu Lee Wang; Louise Luk, (2015). A pilot study on students' learning experience on the e-learning using social networking. *Int. J. of Innovation and Learning*. 18(3): pp. 299-312. DOI: 10.1504/IJIL.2015.071501
- Iin Karmila Yusril, Robert Goodwin, Carl Mooneya, (2015). Teachers and mobile learning perception: towards a conceptual model of mobile learning for training. *Procedia - Social and Behavioral Sciences*, 176, pp. 425 – 430.
- Ramadiani, et al. (2013) E-Learning User Acceptance based on Analysis of User's Style, Usability, and User Benefits. *Jurnal Sistem Informasi (JSI) UI*. 9(1): pp. 6-12
- Ozlem Ozan, Gonca Telli Yamamoto, Uğur Demiray, (2015). Mobile learning technologies and educational applications. *FORMAMENTE- Anno X*. 3(4): pp. 97-109.
- Ramadiani, et al. (2015). Integrated Acceptance Model for E-Learning. International Conference on Engineering and Technology for Sustainable Development (ICE14SD) 11-12 Nov, Indonesia. *IOP Conference Series: Materials Science and Engineering*, 105(1): pp. 1-9.
- Ramadiani, R. Atan, M. H. Selamat, R. Abdullah, N. C. Pa and Azainil, (2016). User difficulties in e-learning system. 2nd International Conference on Science in Information Technology (ICSITech). Balikpapan. IEEE Xplore. 2017 (7852626): 158-162.

---

**Journal**                      **homepage:**

**Bulletin of Electrical Engineering and Informatics**

Guralnick, D. 2006. "How to Design Effective, Motivating User Interfaces." American Society for Training & Development TechKnowledge Conference, Denver, CO, pp.1-11.

Minsun Shim, Heui Sug Jo, (2020). What quality factors matter in enhancing the perceived benefits of online health information sites? Application of the updated DeLone and McLean Information Systems Success Model. *International Journal of Medical Informatics*. Vol. 137,104093. pp. 1-7. <https://doi.org/10.1016/j.ijmedinf.2020.104093>.

I-Fan Liu, Meng Chang Chen, Yeall S. Sun, David Wible, Chin-Hwa Kuo,(2010). Extending the TAM model to explore the factors that affect Intention to Use an Online Learning Community. *Computers & Education*,Volume 54, Issue 2, pp. 600-610.

Ramadani, et. al. (2018). Model dan Bentuk Penelitian e-Learning Menggunakan Structural Equation Model . *Mulawarman University Press*. ISBN: 978-602-6834-64-05

R Ramadani, A Azainil, F Frisca, AN Hidayanto, H Herkules (2019). An integrated model of e-learning continuance intention in Indonesia. *International Journal of Innovation and Learning*. 26(1): 1-26.

Ramadani (2010) Structural Equation Model Untuk Analisis Multivariate Menggunakan LISREL. *Jurnal Informatika Mulawaman*, 5(1): pp.14-18 DOI:<http://dx.doi.org/10.30872/jim.v5i1.48>

Ramadani, Azainil, Hidayanto, A. N., Khaiina, D. M., & Jundillah, M. L. (2020). Teacher and student readiness using e-learning and m-learning. *Bulletin of Electrical Engineering and Informatics*, 9(3), 1176-1182. <https://doi.org/10.11591/eei.v9i3.2006>

Katherine M, Kimberly O, Roxanne R, Maria K.H, John J.F & Katherine B (2016). Teaching in a Digital Age: How Educators Use Technology to Improve Student Learning. *Journal of Research on Technology in Education*, 48 (3): pp. 194-211.

Rhonda Christensen, Gerald Knezek, (2017). Readiness for integrating mobile learning in the class room: challenges, preferences and possibilities. *Computers in Human Behavior*. 76, pp. 112-121.

J.R.van Seters, M.A.Ossevoort, J.Tramper, M.J.Goedhart, (2012). The influence of student characteristics on the use of adaptive e-learning material, *Computers & Education* 58 (3) April, pp. 942-952.

---

**Journal**                      **homepage:**

## 2. Kekayaan Intelektual

  
REPUBLIC INDONESIA  
KEMENTERIAN HUKUM DAN HAK ASASI MANUSIA

### SURAT PENCATATAN CIPTAAN

Dalam rangka perlindungan ciptaan di bidang ilmu pengetahuan, seni dan sastra berdasarkan Undang-Undang Nomor 28 Tahun 2014 tentang Hak Cipta, dengan ini menerangkan:

Nomor dan tanggal permohonan : EC00201951577, 21 Agustus 2019

**Pencipta**

Nama : **Ramadiani, M.Kom., Ph.D**

Alamat : Perumahan Dosen UNMUL Sidomulyo Jl. Pakis 1 No. 05,  
Samarinda, Kalimantan Timur, 75242

Kewarganegaraan : Indonesia

**Pemegang Hak Cipta**

Nama : **Ramadiani, M.Kom., Ph.D**

Alamat : Perumahan Dosen UNMUL Sidomulyo Jl. Pakis 1 No. 05,  
Samarinda, Kalimantan Timur, 75242

Kewarganegaraan : Indonesia

Jenis Ciptaan : **Program Komputer**

Judul Ciptaan : **Ramadiani Academic Online**

Tanggal dan tempat diumumkan untuk pertama kali di wilayah Indonesia atau di luar wilayah Indonesia : 10 Agustus 2019, di Samarinda

Jangka waktu perlindungan : Berlaku selama 50 (lima puluh) tahun sejak Ciptaan tersebut pertama kali dilakukan Pengumuman.

Nomor pencatatan : 000151922

adalah benar berdasarkan keterangan yang diberikan oleh Pemohon.  
Surat Pencatatan Hak Cipta atau produk Hak terkait ini sesuai dengan Pasal 72 Undang-Undang Nomor 28 Tahun 2014 tentang Hak Cipta.

a.n. MENTERI HUKUM DAN HAK ASASI MANUSIA  
DIREKTUR JENDERAL KEKAYAAN INTELEKTUAL



Dr. Freddy Harris, S.H., LL.M., ACCS.  
NIP. 196611181994031001





### 3. Bulletin of Electrical Engineering and Informatics Vol 9, No

<http://beei.org/index.php/EEI/article/view/2006/>

Bulletin of Electrical Engineering and Informatics

Vol. 9, No. 3, June 2020, pp. 1176-1182

ISSN: 2302-9285, DOI: 10.11591/eei.v9i3.2006

□ 1176

#### Teacher and student readiness using E-learning and M-learning

Ramadani<sup>1</sup>, Azaini<sup>2</sup>, Achmad Nizar Hidayanto<sup>3</sup>, Dyna Marisa Khairina<sup>4</sup>,  
Muhammad Labib Jundillah<sup>5</sup>

<sup>1,4,5</sup>Faculty of Computer Science and Information Technology, Mulawarman University, Indonesia

<sup>2</sup>Faculty of Teacher Training and Education, Mulawarman University, Indonesia

<sup>3</sup>Faculty of Computer Science, Indonesia University, Indonesia

##### Article Info

###### Article history:

Received Aug 15, 2019

Revised Nov 1, 2019

Accepted Jan 28, 2020

###### Keywords:

E-learning  
IPA  
M-learning  
Schools  
Students  
Smartphone

##### ABSTRACT

This research is about the readiness of teachers and students to develop E-learning and M-learning for the learning process. Before developing and implementing an E-learning and M-learning system, it is important to ensure the user's readiness for the technology. Users' perceptions will affect their willingness and readiness to use the system. This study aims to investigate the teachers and students perceptions about E-learning and M-learning, ensuring their readiness to involve in developing online learning process. The study was conducted by survey methods, questionnaires and direct interviews with prospective users in the schools, students, teachers and principals. Research respondents were from Junior High School and Senior High Schools in Samarinda. The questionnaires will be carried out in two stages, before and after the development of E-learning and M-learning systems. The findings obtained from this study indicate that research partner schools are ready and able to participate in developing E-learning and M-learning systems.

*This is an open access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.*



##### Corresponding Author:

Ramadani,  
Faculty of Computer Science and Information Technology,  
Mulawarman University,  
Barong Tongkok Gunung Kelua, Samarinda, East Kalimantan, 75121, Indonesia.  
Email: [ikomramadani@gmail.com](mailto:ikomramadani@gmail.com)

#### 1. INTRODUCTION

E-learning is a system that provides various services to handle all aspects of the learning process, through an intuitive and consistent web interface. The E-learning system begins to change the orientation of learning, which previously relied on the teachers, then becomes a process of independent learning by the users, making it possible to play an active and responsible role for them. E-learning is expected to facilitate the weaknesses was found in conventional education. Through E-learning education becomes more accessible, cheaper, more enjoyable and easier to share and to learn. E-learning provides flexibility for students to be able to learn anytime and anywhere [1-5].

In the current smartphone era, information lines are wide open and easily spread so there is no more privacy in an area or country. Everyone can share information using their smartphone very quickly and easily. Events in one area can be known in other areas in seconds [1-5]. So do not be surprised if the smartphone becomes something that must be owned by everyone. If the prices of smartphones and tablets are getting cheaper, schools will be more interested in using the technology to create a learning environment for students. It is expected to positively compare to the use of E-learning and mobile learning, where students can bring their own smartphones, tablets or laptops to school [6-10]. National policy requires schools to provide wireless internet access in all classrooms so students can use their devices for learning

*Journal homepage:* <http://beei.org>

activities. Open Wi-Fi networks in some schools can be a practical strategy for creating a smart school learning environment [6-10].

Some problems that still we have for developing E-learning and mobile learning are: 1) Negative views of the community and teachers about the use of mobile phones in schools. 2) Smartphones are still considered to interfere with education but their use in schools is still limited. 3) They assume that the device is nothing more than a toy that disturbs the educational value. 4) Parents and educators worry that smartphones allow inappropriate behavior such as; cheating and cyber-bullying. 5) Some schools are still reluctant to implement policies to promote M-learning [11-15].

How to develop positive M-learning content are still needs to be done and recovered. Making it easier for users to access learning material, do practice exercises and examinations, understand how to calculate mathematics quickly and other lesson formulas, whenever and wherever they need. In addition to the problems above regarding negative public views, user safety and the limitation of smartphone use in schools by policy makers. There are still more problems with other supporting facilities, electricity, internet and smartphone device. Although we believe stakeholders always enhance smartphone capabilities to become superior products. The research objectives of teacher and student readiness to develop E-learning and M-learning for this learning process are as follows:

- To measure the schools readiness using E-learning and M-learning to support their learning process.
- To build positive views and attitudes of students, teachers and the community in the face of progress in the digital era, especially schools in Samarinda.

To increase awareness and the role of teachers, students and the community related to the use of positive content on smartphones as an alternative learning.

## 2. RELATED WORKS

Internet users in Indonesia in 2018 amounted to 171,176,716.8 with a percentage of 1 year user growth (10.12%), or there was a growth of internet users in 2017-2018 of 27,916,716, while the total population of Indonesia in 2018 was 264,161,600 with a percentage of population growth of 1 year population of (0.63%). So it can be said that the increase in internet users is higher than the growth of Indonesia's population itself. Based on the survey results, internet users in East Kalimantan amounted to 67.8% of the total population in the province, with the most age of users at the age of 15-19 by 91%, ages 20-24 by 88.5% and ages 25-29 by 82.7% [16].

Teachers make up 100% of work based internet users. Users make smartphones a source of information to support their study and work. They make smartphones as a source of information at 100%, in addition to being a communication tool at 24.1%, social media at 18.9%, supporting work at 11.5% and learning resources 9.6% and further the reasons to find entertainment, transactions online and job demands [16].

M-learning is a part of E-learning and d-learning [10-12]. M-learning is a learning model that has characteristics, independent of location and time, is also expected to be able to provide knowledge sharing and visualization facilities so that knowledge becomes more interesting and easier to understand. The concept of M-learning is expected to encourage the realization of a new learning atmosphere and can motivate the spirit of learning and the teacher.

### 2.1. The research problems

Mobile learning is one of the potential alternatives to expand access to education. However, there is not much information regarding the use of smartphones, as learning media. This is unfortunate the level of usage is not settled for education (9.6%). Most of the content circulating is still dominated by communication, social media, and entertainment. Many factors that become the limitations of the use of M-learning are also related to device, limited screen display, storage capacity and limited power. M-learning also has a learning environment that is different from E-learning or conventional learning. In M-learning more users utilize it in their free time, so the time to access learning is also limited [6-12].

Although it has several advantages, M-learning will not completely replace E-learning. This is because M-learning has limitations, in terms of learning media. The weakness of M-learning is gradually being overcome, with the development of advanced technology [10-15]. The Junior High School and the Senior High Schools are the few agents of change in Samarinda. The principals, students and teachers are expected as the leaders in the improving and applying the better learning process in this area. Data in this research was collected by survey and interviews about their knowledge, readiness, perception, school facilities and policy to support E-learning and M-learning. The data used open questioner and the likert scale questioners as can be seen in Table 1.

---

*Teacher and student readiness using E-learning and M-learning (Ramadani)*

Table 1. Data survey of schools readiness on E-learning and M-learning

No.		Schools readiness on implementing E-learning and M-learning
1	Knowledge	Users are familiar or not with application, contents, devices, learning method, online for um; web based learning; assessment
2	Perception	Users' opinion towards implementing online learning: easy to learn, easy to understand, easy to remember, easy to use, flexible, effective, benefit, efficient, productive, according to the needs, according to ability.
3	School facilities	Availability of facilities; the appropriate mobile device and wifi internet, rooms, electricity; the processor speed; memory capacity; the output display to the tv/projector; human resource.
4	Policy	A technical support for implementing online learning; pedagogy; roles; integrated learning; financial support; lecture attendance.

### 3. RESEARCH METHOD

#### 3.1. The use of M-learning

Many factors influence a person to choose and use an application that is planted on a smartphone including M-learning. Variables that will be hypothesized in this study are used to build models of M-learning user acceptance. Variables that are important to observe are user knowledge, user perception, schools facilities, policy and readiness [1-6, 15-20]. The respondents in this study came from 3 schools; namely SMPN1, SMAN2 and SMAN3 Samarinda, which consists of three school principals, five deputy principals, seven teachers and sixty students.

#### 3.2. Importance performance analysis (IPA)

User satisfaction is the user's perception; this is related to user expectations, product quality, and services from the organization. The IPA method can measure the level of user satisfaction from the results of the user questionnaire based on components of service and product attributes, namely: The importance of the services and products to users and the level of organizational performance in providing these services and products.

The IPA technique combines measures of performance and perceived interests of users into a two-dimensional plot to facilitate interpretation of data [21-26]. This plot groups attributes into four quadrants to specify in allocating limited resources. Four quadrants are usually identified as the main priority (quadrant I), maintain performance (quadrant II), low priority (quadrant III), and excessive (quadrant IV).

### 4. RESULT AND DISCUSSION

#### 4.1. Survey results

In the Figure 1, there is a strong correlation (0.709) between E-learning and quality of learning, this shows that the stronger the understanding of E-learning, the stronger the quality of the institution. There is a correlation/positive relationship (of 0.361) between E-learning and the use of smartphones, this shows that the more smartphone users the better the E-learning understanding. There is no relationship between E-learning and smartphone usage behavior. There is a correlation of 0.284 between the uses of smartphones with the quality of learning; this shows that the more smartphone usage, the better the quality of learning will increase. There is no relationship between the behaviors of smartphone users with the quality of learning. There is a relationship of 0.487 between smartphone users and smartphone user behavior. As many as 35% of the teacher use the internet to access information, 25% for learning process, 15% to increase human resource and 12% for the technological progress as shown in Table 2.

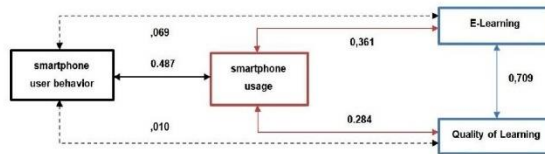


Figure 1. The correlation between smartphone usages to E-learning

In the next table describe the school policy on how to divide the internet into spaces, and use it to support their E-learning process. The policy was prepared by the school principals and teachers according to the constitution, the student parents, and local government's roles as shown in Table 3. E-learning website that is always used by the respondents is YouTube (19%), mangguru.com (12%), edmodo (11%), mmah belajar (9%), quizizz (8%), schoology (14.29), and one stop E-learning and zenius.net in 6%. The quipper and the ministry of education and culture learning website are 5% as we can see in Table 4. In Table 5, most respondents use E-learning (26%) to enhance their abilities and knowledge, and to provide online assignments and exams, (18%) facilitate access to assessment and (13%) to support their learning material.

Table 2. Teacher's reasons use the internet

No	Reason	Amount	Percentage (%)
1	Accessing Information	9	35
2	E-learning process	6	23
3	Increase IIR	4	15
4	Technological Progress	3	12
5	For UTBK, UNBK, PPDB, etc	2	8
6	Use the school database	2	8
		26	100

Table 3. The school policy to support online learning

No	Reason	Amount	Percentage (%)
1	Dividing the internet into rooms	8	30
2	Given a different password every room	4	15
3	Internet usage settings for each students	3	10
4	Part of it is used in the digital library	4	15
5	Used when learning	8	30
		27	100.00

Table 4. Learning websites which the respondents always used

No	E-learning	Amount	Percentage (%)
1	YouTube	45	19
2	Ruangguru.com	29	12
3	edmodo	25	11
4	mmah belajar	22	9
5	Quizizz	19	8
6	schoology	16	7
7	one stop E-learning	15	6
8	ZENIUS.NET, Quipper	25	11
9	learn Kamendikbud	11	5
10	gengsbra	9	4
11	dapodik	8	3
12	Kahoot, sigel	11	5
		235	100.00

Table 5. The purpose of using E-learning websites

No	The purpose of using E-learning websites	Amount	Percentage (%)
1	Enhancing abilities and knowledge	60	26
2	provides online assignments and exams	60	26
3	facilitates access to assessments	43	18
4	accessing learning material and media	30	13
5	many features for learning	22	9
6	help students in learning	18	8
		233	100

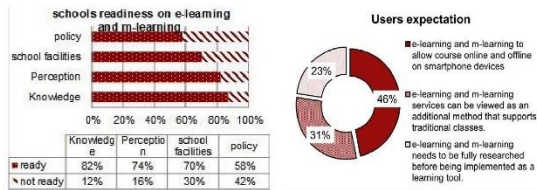


Figure 2. The user readiness and use expectation on E-learning and M-learning

Schools readiness on E-learning and M-learning in Figure 2 was collected from seventy-five respondents consist of twenty-five head master and teachers and also sixty students. The question is about their knowledge, their perception, school facilities and policy. Their knowledge are familiar or not with the application. Their perception is about implementing online learning, availability of facilities and the policies or technical support for implementing online learning as shown in Table 1. Figure 3 describes the chart of distribution IPA quadrants based on the coordinate points.

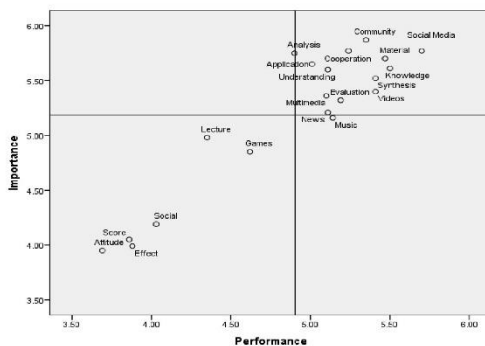


Figure 3. Distribution of IPA quadrants

Based on the results of the four quadrant IPA graphs in the Figure 3 and Table 6, it can be concluded the criteria that fall into each quadrant are: quadrant I has a relatively high level of importance but has lacking performance so it needs to be improved in E-learning performance. The category included in this quadrant is analysis. Quadrant II has a relatively high level of importance with a relatively high level of performance so that it is in accordance with the expectation of the user and must be maintained. The categories included in this quadrant are community, collaboration, materials, social media, knowledge, synthesis, application, understanding, multimedia, evaluation, video, and news. Quadrant III has a relatively low level of importance with a relatively low level of performance so that it does not need to make improvements because it is not a top priority of the user. Categories included in this quadrant are lecture, games, social, values, effects, and attitudes. Quadrant IV has a relatively low level of importance but has a relatively high level of performance so the school needs to relocate these excess performance resources to other quadrants that need performance improvement. The category in this quadrant is music.

Table 6. IPA coordinates

No	Category	Importance	Performance	Quadrant
1	Material	5.70	5.47	Quadrant II
2	Community	5.87	5.35	Quadrant II
3	Lecture	4.98	4.35	Quadrant III
4	Cooperation	5.77	5.24	Quadrant II
5	Multimedia	5.36	5.10	Quadrant II
6	Knowledge	5.61	5.50	Quadrant II
7	Understanding	5.60	5.11	Quadrant II
8	Application	5.65	5.01	Quadrant II
9	Analysis	5.75	4.90	Quadrant I
10	Synthesis	5.52	5.41	Quadrant II
11	Evaluation	5.32	5.19	Quadrant II
12	Videos	5.40	5.41	Quadrant II
13	Social Media	5.77	5.70	Quadrant II
14	Music	5.16	5.14	Quadrant IV
15	Games	4.85	4.62	Quadrant III
16	News	4.21	5.11	Quadrant II
17	Attitude	3.95	3.69	Quadrant III
18	Social	4.19	4.03	Quadrant III
19	Score	4.05	3.86	Quadrant III
20	Effect	3.99	3.88	Quadrant III

## 5. CONCLUSION

According to this research, it can be concluded that analysis has a relatively importance in E-learning and M-learning, but it needs to be improved in E-learning performance. Community, cooperation, materials, social media, knowledge, synthesis, application, understanding, multimedia, evaluation, video, and news should be has in E-learning and M-learning. They are very importance and high performance accordance to their user expectation and must be maintained (in quadrant II). Gana, attitude, social value, effect and music is not important but music has high performance. The suggestions to the next research to involve more respondents from various schools, institutions, and places in Indonesia to measure their readiness on implementing E-learning and M-learning.

## ACKNOWLEDGEMENTS

This research was funded by the Directorate of Research and Community Service, the Directorate General of Research and Development of the Ministry of Research, Technology and Higher Education of the Republic of Indonesia.

## REFERENCES

- [1] Ramadiani et al., "User satisfaction model for E-learning using smartphone," *Proc. CompSx*, vol. 116, pp. 373-380, 2017.
- [2] Ramadiani et al., "Integrated model for E-learning acceptance," *IOP Conf. Series: Materials Science and Engineering*, vol. 05, pp. 1-9, 2016.
- [3] Ramadiani et al., "E-learning user acceptance based on analysis of user's style, usability, and user benefits," *Jurnal Sistem Informatika*, vol. 9, no. 1, pp. 6-12, 2013.
- [4] Ramadiani et al., "Model dan bentuk penelitian E-learning menggunakan structural equation model," *Adiwarnan University Press*, 2018.
- [5] R. Ramadiani, A. Azainil F. Frisca, A. N. Hidayanto H. Herkules, "An integrated model of E-learning continuance intention in Indonesia," *International Journal of Innovation and Learning*, vol. 26, no. 1, pp. 1-26, 2019.
- [6] R. Christensen and G. Knezek, "Readiness for integrating mobile learning in the class room: Challenges, preferences and possibilities," *Computers in Human Behavior*, vol. 76, pp. 112-121, 2017.
- [7] A. Abu-AL-Aish, S. Lovic, and Z. Humati, "Mathematics students' readiness for mobile learning," *International Journal of Mobile and Blended Learning*, vol. 4, no. 4, pp. 1-20, 2012.
- [8] Ramadiani, R. Atan, M. H. Selamat, R. Abdullah, N. C. Pa and Azainil. "User difficulties in E-learning system," *2nd International Conference on Science in Information Technology (ICSITech)*, pp. 158-162, 2017.
- [9] O. Ozan, G. T. Yamamoto, and U. Demray, "Mobile learning technologies and educational applications," *FORUM INTEL: Jema X*, vol. 3, no. 4, pp. 97-109, 2015.
- [10] UNESCO Working Paper Series on Mobile Learning, "Turning on mobile learning in Europe: illustrative initiatives and policy implications," *United Nations Educational, Scientific and Cultural Organization*, 2012.
- [11] I. Rakhmani and S. A. Fangerapan, "Profil pengguna internet di Indonesia 2014," *APJII and PusKatKom UI*, 2015.
- [12] M. Akintola, O. Adelere, and D. R. Nzama, "Attitude of learners toward the use of mobile technology for adult literacy programmes," *J. of Gender, Information and Development in Africa (GIDA)*, vol. 8, no. 1, pp. 63-82, 2019.
- [13] I. K. Vuseri, R. Goodwin, and C. Mooney, "Teachers and mobile learning perception: Towards a conceptual model of mobile learning for training," *Procedia - Social and Behavioral Sciences*, vol. 178, pp. 425-430, 2015.
- [14] M. Sharples, "Disruptive devices: Mobile technology for conversational learning," *International Journal of Continuing Education and Lifelong Learning*, vol. 12, no. 5-6, pp. 504-520, 2002.
- [15] M. Sharples, "Mobile learning: research, practice and challenges," *Dist. Edn. in Cina*, vol. 3, no. 5, pp. 5-11, 2013.
- [16] Tim APJII, "Survei nasional penetrasi pengguna internet 2018," *Buletin APJII, Pollns Indonesia*, no. 1-51, 2018.
- [17] E. S. Georgieva, A. S. Smirakarova, and T. S. Georgieva, "Evaluation of mobile learning system," *Procedia Computer Science*, vol. 3, pp. 632-637, 2011.
- [18] H. Ekeren and S. Kocakoyun, "The evaluation of the most used mobile devices applications by students," *Procedia - Social and Behavioral Sciences*, vol. 89, pp. 756-760, 2013.
- [19] A. Mohamed, "Mobile learning: Transforming the delivery of education and training," *Edmonton: AU Press Issues in Distance Education series, Athabasca University*, 2009.
- [20] Y. Padmasatyan, and I. N. Jogulu, "Mobile learning readiness among Malay sian poly technic students," *Journal of Information System and Technology Management*, vol. 3, no. 8, pp. 113-125, 2018.
- [21] A. Z. Shaqour, "Students' readiness towards m-learning: A case study of pre-service teachers in Palestine," *Journal of Educational and Social Research*, vol. 4, no. 6, pp. 19-26, 2014.
- [22] H.H. Lin, S. Lin, C.H. Yeh, and Y.S. Wang, "Measuring mobile learning readiness: scale development and validation," *Internal Research*, vol. 26, no. 1, pp. 265-287, 2016.
- [23] J. A. Martilla and J. C. James, "Importance-performance analysis," *J. of Marketing*, vol. 41, no. 1, pp. 77-79, 1977.
- [24] M. S. Wong, H. Nishimoto, and G. Philip, "The use of importance performance analysis (IPA) in evaluating Japan's e-government services," *J. of Theo. and Appl. Elec. Commerce Research*, vol. 6, no. 2, pp. 17-30, 2011.
- [25] S. Fatima and P. O. Fernandes, "Empirical study on the student satisfaction in higher education: Importance-satisfaction analysis," *World Academy of Science, Engineering and Technology*, vol. 6, pp. 1075-1080, 2012.

---

*Teacher and student readiness using E-learning and M-learning (Ramadiani)*

- [26] C. H. Wu, Y.-C. Lee, Y.-C. Cheng, and S.-B. Tasi, "The use of importance performance analysis (IPA) in evaluating bank services," *Int. Conf. on Serv. Syst. and Service Management (ICSSSM)*, vol. 11, pp. 654–657, 2012.

#### BIOGRAPHIES OF AUTHORS



**Ramadani** obtained her Ph.D in Information System from Universiti Putra Malaysia (UPM) in 2015. She received her first degree from Mulawarman University (1996), her M.Kom. in Computer Science from Gadjah Mada University (2006). Ramadani currently works at the Department of Computer Science, Mulawarman University. Ramadani does research in Software Engineering, Information Systems and Human-computer Interaction. Her current project is 'e-Learning' and Decision Support System.



**Azainil** received his first degree from Sriwijaya University (1990), his M.Si from Bogor Agricultural University (2003). He completed his Dr. in Education Management degree from Jakarta State University in 2012. Currently, he is a senior lecturer at Faculty of Teacher Training and Education, Mulawarman University. His research mainly focuses on Education Management, Management information System, Education Quality Management, Information and Communication Technology, Mathematics Education.



**Achmad Nizar Hidayanto** obtained his Dr. in Computer Science from Indonesia University in 2008. He received her first degree and Magister in Computer Science also from Indonesia University in 1999 and 2002. Achmad Nizar Hidayanto currently works as head of Information Systems Program, Indonesia University. He does research in Information Systems, IT Adoption, Digital Economic, and Financial technology.



**Dyna Marisa Khairina** S.Kom, M.Kom. She graduated her master degree in Information System (2012) from Diponegoro University Semarang Indonesia. He obtained his S.Kom from Mulawarman University (2007) Samarinda. His research interests area in Information System, Decision Support System, Enterprise Resource Planning and Management information System.



**Muhammad Labib Jundillah** S.Kom, M.Kom received his M.Kom degree in Information System (2019) from Diponegoro University Semarang Indonesia. He obtained his S.Kom from Mulawarman University (2017) Samarinda. His research interests area in Information System, Decision Support System, E-learning, and User Satisfaction.



**Ramadiani, S.Pd., M.Si., M.Kom., Ph.D.**

Born in Palembang on November 1, 1972. Work as a Lecturer at Computer Science department in the Faculty of Engineering (FT) Mulawarman University.

Ramadiani received her PhD in Computer Science and Information System from University Putra Malaysia in 2015. She graduated from Indonesia University in 2000 and graduated from Gadjah Mada University in 2005 for her Computer Master. She currently works at the Department of Computer Science in Computer Science and Information System Faculty, Mulawarman University since December 2001 until now. Ramadiani does her research in software engineering, data mining, decision support system, online learning, information systems, SEM, and human-computer interaction. Her current project is 'e-Learning, Forecasting and Decision Support System'.

E-mail : [ilkom.ramadiani@gmail.com](mailto:ilkom.ramadiani@gmail.com);  
          : [mmi\\_ugm04@yahoo.com](mailto:mmi_ugm04@yahoo.com).  
Scopus ID : 57160272300  
SINTA ID : 5974501  
Google Scholar ID : 9XnXoJgAAAAJ&hl  
ORCID ID : 0000-0003-1564-2260 (<http://orcid.org/0000-0003-1564-2260>)  
<https://publons.com/researcher/1494079/ramadiani/metrics/>  
[https://www.researchgate.net/profile/Ramadiani\\_Ramadiani](https://www.researchgate.net/profile/Ramadiani_Ramadiani)