KENYA INSTITUTE OF CURRICULUM DEVELOPMENT

STANDARDS FOR PLATFORMS (LEARNING MANAGEMENT SYSTEMS (LMS), AND E-DISTRIBUTION PLATFORMS)

APRIL 2016

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List of Abbreviations

OS	-	Operating system
DRM	-	Digital rights Management
LTI	-	Learning Tool Interoperability
BYOD	-	Bring Your Own Device
SYNC	-	Synchronization
PDF	-	Portable document format
E-Reader	-	Electronic reader
E-book	-	electronic book
E-Pub3	-	Electronic publication
ECDE	-	Early Childhood Development Education
LMS	-	Learning Management System
KICD	-	Kenya Institute Of Curriculum Development
E-Distribution	-	Electronic Distribution
PII	-	personal information identifier
E-learning	-	electronic learning
ESD	-	electronic software distribution
UI	-	User interface
WYSIWYG	-	What You See Is What You Get
WEBDAV	-	Web-based Distributed Authoring and Versioning
RMSDK	-	Adobe Reader Mobile Software development kit
WIFI	-	Wireless connectivity.

General Information

A platform is the ultimate end-to-end solution with an integrated development environment, middleware, and a seamlessly-integrated console to address the organization's entire set of mobility needs.

Platforms provide a holistic approach that gives organizations more control and predictability in the constantly changing mobile landscape, enabling swifter development, more robust and simplified integration, and easier maintenance. Platforms utilize the concept of 'write once, deploy everywhere' in which the same code can function across a variety of devices. However, not all platforms offer all of these capabilities in a seamless, complete fashion. There is a set of key business and technology criteria for evaluating a platform. Overlooking these criteria can result in compromised user experience, application performance, connectivity, and scalability and user base coverage. It can also surface a series of unanticipated costs and implementation and maintenance failures.

The categories of platform are:

i. **Learning Management Systems**

   A software application for the administration, documentation, tracking, reporting and delivery of electronic educational technology (also called e-learning) courses or training programs.

ii. **User Defined platforms**

   A platform created by a user intended to fulfil a specific purpose

iii. **E-distribution**

   Digital distribution (also called content delivery, online distribution, or electronic software distribution (ESD), among others) is the delivery or distribution of media content such as audio, video, software and video games.

SUBMISSIONS

Each submission will be evaluated solely in terms of its relevance and suitability for the requirements of the specific area and categorization i.e. ECDE, primary, Secondary levels and tertiary levels.

All parties are required to adhere to the set time lines. In the event of any need for change in any item on the Time Table; consensus will be sought from all concerned.

All submissions will be received through the Kenya Education cloud as communicated.

Eligibility

Interested parties should note that submissions will only be accepted from Platforms developers as individuals or registered groups.

Submission Areas

Eligible Platform developers are invited to submit Platforms for the levels specified above.

Categories for Submission

The choice of education level and category of material(s) to submit is entirely at the discretion and judgment of the interested/submitting educational mobile Platforms developer. Platforms developer can submit in as many levels and categories as possible i.e. ECDE, primary and Secondary levels.

Submission Requirements

Platforms developer should provide the information listed below as well as explicitly specify the area/category the platforms is suitable for. This information must be online.

- KRA Pin registration (Required)

- Certificate of originality (A declaration of originality)

- Evidence of payment of submission fee

- Evidence of official registration and incorporation in Kenya

- Evidence of agency agreement or representation authority for publishers acting on behalf of foreign firm (for non-Kenyans)

- Contacts (phone, email, physical address)

Status of Materials

All Platforms submitted for Evaluation and Approval should strictly be finished and running.

Curation Outcomes

Once they meet the set standards, they will be published in the online orange book

The notification of performance for each Platforms curated, will be availed in the Kenya Educational Cloud.

Online Orange Book

Successful Platforms that have meet the set standards will be published on the online Orange book in the Kenya Educational Cloud.

Invitation to Submit Educational Platforms

The Kenya Institute of Curriculum Development wishes to invite Platforms developers represented in Kenya to submit their **Platforms, Learning Management Systems (LMS), e-distribution platforms.** These Guidelines contain details on what to submit, conditions for and of submission, and the process of curation.

Platforms developers should therefore submit developed, completed and running platforms to the Kenya Institute of Curriculum development (KICD) in accordance with the requirements and established Guidelines as stipulated in this document.

The **Platforms standards** may be downloaded from the KICD website www.kicd.ac.ke at no cost.

All submissions should be received at the Institute should be received through the portal on dates and times specified (as communicated). All submissions must be accompanied by dully filled submission form.

The Platforms to be submitted should be appropriate for the following categories:

   a. **ECDE Level,**
   b. **Primary Level**
   c. **Secondary Level**
   d. **Teacher education and Tvet**

Each submission must be accompanied by a curation fee paid online as stated in invitation for submission

The platforms will be used for learning purposes within Kenya.

All enquiries should be directed to:

The Director/CEO

Kenya Institute of Curriculum Development

P O Box 30231 – 00100 NAIROBI GPO – Kenya

Tel (254 2) 3749900-9, 3748204, 3747994; (254) 20 – 2053419 Fax (254 2) 3639130

E-Mail: info@kicd.ac.ke

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Submission, Curation and Approval Schedule

NO	ACTIVITY
1.	Formal invitation for submission of platforms online
2.	Payment of submission fees
3.	Submission of platforms
4.	Curation process
5.	Formal approval and recommendation
6.	Release of curation results
7.	Uploading of the platform on the cloud
8.	Uploading the approved materials

General Standards

i. **Education Centric**

The Platforms must be an Education Centric. Platforms submitted will be evaluated based on educational considerations.

ii. **Collaboration**

The Platforms should allow students and (if appropriate) educators to work together to reach a goal.

iii. **Communication**

Platforms will be evaluated based on how it allows students to comprehend, critique and share thoughts, questions, ideas, and solutions.

iv. **Stability and Data Handling**

Platforms should not crash, unexpectedly close, freeze or otherwise behave abnormally at any time while running on any targeted device. It should preserve sufficient state information to cope with forcible close by the system. It should not lose any information that it implies would be preserved, nor become difficult to use subsequently, as a result of a forcible closure by the system.

v. **User Interface**

UI should be simple, easy to use, intuitive and relatively easy to navigate without guidance. It should let users control their experience.

a) **Touch screen use**

For Platforms used in a touch screen device without stylus, on-screen elements should be of sufficient size and responsiveness to provide a good user experience.

b) **Consistency**

The UI should be consistent and understandable throughout, e.g. displaying a common series of actions, action sequences, terms, layouts, soft button definitions and sounds that are clear and understandable.

c) **User Interface & Graphics**

It should support both landscape and portrait orientations if possible. The application should expose largely the same features and actions in both orientations, and preserve functional parity. Minor changes in content or views, or UI changes to provide greater functionality in a landscape widescreen tablet display, are acceptable.

d) Visual Quality

The Platform should display graphics, text and other UI elements without noticeable distortion, blurring or pixilation. The platform should provide high-quality graphics for all targeted screen sizes and form factors, including for larger-screen devices such as tablets.

vi. Security Measures

Understand the security risks associated with platforms such as the sensitivity of any information collected and stored and the number of people using the platforms. All platforms that access, use, or transfer individuals' data should be tested rigorously for security purposes and comply with current security best practices. Implementing data retention policies and security measures will help ensure user data is properly safeguarded.

Specific Standards

I LMS Standards and User Developed Platforms (UDP)

Where many LMSs focus on the training administration, an ideal LMS should put the learner experience as the center of the platform resulting in better learning, increase retention via a pleasurable user experience.

The Platforms should enable instructors to create and manage course content, utilize world class publisher content, evaluate performance and communicate with students. Standards for LMS and User Developed Platforms are:

a) **Content Authoring**

LMS should have WYSIWYG (What You See Is What You Get) editing tool that provides a rich text editing interface similar to a word processor.

b) **Adaptive Release**

The platform should allow instructors to create custom learning paths by determining when students can access content items, discussions, assessments, assignments or other learning activities. Syllabus Builder enables instructors to upload an existing syllabus or use the built-in creation functionality to easily design and develop their own syllabus and lesson plans.

c) **Course Cartridges**

The LMS should support course cartridge offered by a publisher as a great way for instructors to supplement their course site such as additional reading materials, updated information, multimedia interactive contents, vocabulary/glossary, question pools and test banks.

d) **Discussion Board**

LMS should support threaded, asynchronous discussions. Instructors can use multiple forums around different topics and embed these into appropriate content areas.

e) **Assessments and Surveys**

LMS must allow instructors to deliver online, automatically-scored assessments and surveys. They can create assessments from scratch or draw upon personal institutional, or commercially-available "test banks" of questions. Varied question types (e.g., True/False, Multiple Choice, and Calculated) can be used.

f) **User Management**

LMS must allow Management of trainers and learners with just one account. Set user permissions, upload learners in bulk, manage groups and more.

g) User Permissions

The LMS must allow the Setting up of users such as administrators, instructors, or learners to ensure they have access to the features and data they need.

h) Grade book

The LMS must store student performance results, including support for custom grading scales, grade weighting, item analysis and multiple grade book views.

i) Reporting and Performance Dashboard

LMS should provide a view of a learner's progress and indicates whether students have reviewed specific content items. It should as well, enable usage data to be viewed for an entire course

j) Community Building Tools

Community collaboration tools should be included, so as to enable users to collaborate and communicate more effectively. LMS should allow clubs and interest groups to communicate with members through an online environment similar to the course sites they already know.

k) Portal Web Services

LMS should provide a rich set of standards-based web services that can act as a standalone portal or as a feed to multiple institutional portals on and off campus. They should also enable a central point of access for academic and administrative activities.

l) Multi-Institution Branding and Management

The LMS should facilitate separation of multiple institutions, departments or groups on one Blackboard server. Separate schools can now manage and brand their own domains.

m) Modules and Channels

Modules and channels are similar to the content boxes (e.g. Finance, Shop, Jobs) seen in portals. A Module is a container for content or interactive tools; a Channel uses the RSS content syndication format to deliver regularly-updated headlines and content.

n) Role-based Information Delivery

The LMS should let instructor to customize the content received through tabs, modules, channels, tools, courses and organizations based on institution roles. Users can also control and customize both the information delivered and its presentation.

o) Content and File Management

LMS should allow content and files to be managed and shared without the need for duplication. Features enable collaboration across educational institutions.

p) Versioning

The LMS should allow users to automatically archive and track previous versions of their files. The system creates separate copies after each contributor changes the document, thus providing an automatic backup for overwritten files.

q) Workflow

The LMS should support activities that provide users with the ability to route content to others for review or approval, designating settings such as priority, deadline, and permissions.

r) e-Portfolios

LMS should enable students and tutors to assemble and share information online for documenting academic growth, progression and course preparation.

s) Collaborative Web-enabled File Storage

Platform should include dedicated file and content storage areas for individual users, courses, organizations, the library and constituent groups within the institution – all leveraging the WebDAV standard (Web-based Distributed Authoring and Versioning". It is a set of extensions to the HTTP protocol which allows users to collaboratively edit and manage files on remote web servers.).

t) Learning Object Catalog

Platform should enable a searchable, hierarchical taxonomy to catalog learning objects and resources accessible by individuals inside and outside the institution.

II E-Distribution Platform

The Platform should consist of tools that enables:

a) Publishers to create and distribute eBook files

b) Retailers and libraries to securely distribute these files to consumers

c) Device manufacturers to enable e-readers and smartphones to access eBook files

d) Consumers to download and read eBooks

The E-Distribution Platform should meet the following standards:

a) Seamless fulfilment of e-books across devices

Offer great ease-of-use as the books your customers purchase, appear automatically across all their eBook readers.

b) Resource Level DRM for Better Protection

Distributors can choose to enforce a stronger DRM on specific books. When this flag is set, the book can be opened only by readers based on RMSDK 10.0 or above.

c) School Model

Allow schools to access e-books in their own devices through distributor's content management platform. Students can access books on their own device or pooled school devices.

d) Bulk Fulfillment (Preloaded books)

Enable distributors to pre-load and license DRM books for distribution in a school using multiple devices. Minimize operational overheads for schools by preloading books on devices. Multiple downloads of the same book onto the device or student login will not be required.

e) Publish in industry standard file formats

Sell or lend rights-protected eBooks in PDF, EPUB or EPUB3, a reflowing industry-standard format for digital eBooks.

f) Mobile and desktop support

Enable Students to read their digital rights-protected eBooks on Apple iOS and Android mobile devices, Mac OS, Windows PC Linux and dedicated reading devices.

g) Flexible permissions

Assign custom print, copy, and expiration permissions to eBook files, including limits on printing and copying over specified time periods.

h) Multichannel support

Distribute content to multiple retail and library websites.

i) Secure distribution

It should take advantage of the latest encryption technology.

Appendix: Submission Form & Meta Data

Where applicable, the following information should be provided when submitting online content in order to generate a tracking number.

KRA PIN Registration: ……………………………………….

Declaration of Originality: By agreeing with this statement, I hereby declare that this is my original work and that any additional sources of information have been appropriately acknowledged.

I agree ☐   I disagree ☐

Evidence of payment of submission fee: ....

Evidence of official registration and incorporation in Kenya: (Scan and attach copy of registration document): …………………....

Evidence of agency agreement or representation of Evidence of official registration and incorporation in Kenya (Scan and attach copy of agreement document):

....

Contact (Phone, e-mail and physical address): ………………….

Meta Data

Subject ……………………………………   Level ………………………..……

Class ……………………………

Category of Learners (Regular or SNE)..

Category of Special Need (if Applicable)

For Example, Visually Impaired – VI, Hearing Impaired – HI,

Others (specify)..

Title...

Submission Code……………………………………16…………………...………………

Teacher's Guide (TG) Code (Where Applicable)..

Author(s)...

Author(s) Credentials…………………………………………………………………….

Publisher.. Publisher's Code......................................

Country……………………………………………………………………………………….

Community of Practice (Where Applicable)……………………………………………....

Language …………………………………………………………………………………..

Brief Description:

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Format (e-Pub, Interactive Digital Content)…...

Year of Production...

Edition/Version Number………………………………………………………………….

Rights (Where application) …………………………………………………………………

Size (Bytes) …………………..…………… Code of Curator ………………………....……

Price... Date ………................................