

Learning Object (traditional)	Description	System Requirements*	Creative Commons	Supports a variety of file formats	Modules/Plugins	Collections / Rating	Taxonomy	Metadata schema	Class space?	Private / public space	Public interface / Portal	Harvest / Export / Import	Web based Admin	Templates	Variety of User Roles	Personalized dashboard	Upload/Download	Networking / Collaborative Space	Social media tools	Mobile	Accessibility	Notes	
Availon	Early development repository software framed on Ruby on Rails, a Hydra fork. Strong support for multimedia and video; good metadata support demo: <a href="https://avaypa.illb.indiana.edu">https://avaypa.illb.indiana.edu</a>	Hydrant Rails ; Hydra; Fedora; Sofr	YES	YES with support for embedded viewers	Uncertain	YES	YES	Supports metadata	NO	YES	YES - limited but native design is elegant	To some extent	YES	YES	YES	Set according to admin and user rights	Yes per user roles	NO - although private spaces could be created for sharing content	NO	Strong support	Have not addressed (asked recently at a webinar)	Fairly strong academic support thus far	
Hydra	Availon actually has a stronger design premise: Early development repository software framed on Ruby on Rails. Strong support for multimedia and video; good metadata support <a href="http://project.hydra.org/">http://project.hydra.org/</a>	Hydrant Rails ; Hydra; Fedora; Sofr Fedora Linux not repository software. Core 4. Linux Apache Tomcat 8.5.17 SQL 8.13, and Oracle Version 13.2. Externalize list here <a href="http://www.dspace.org/whats-dspace/requirements/01/requirements_Versions/0_May2011.pdf">http://www.dspace.org/whats-dspace/requirements/01/requirements_Versions/0_May2011.pdf</a>	YES	Yes, through setup	Uncertain	YES	YES as established	Supports metadata and Dublin core	NO	YES	YES	To some extent	YES	YES, although Availon has more	YES	Set according to admin and user rights	Yes per user roles	NO - although private spaces could be created for sharing content	NO	Strong support	Have not addressed	Strong support but still in development; system reqs may make integration harder	
Dspace	Very popular repository software used by USG and others; traditionally a repository for text based documents THEOS (The Texas Higher Education Coordinating and SCORM), but development seems to have stalled; currently does support learning objects as an zipped file. <a href="http://www.dspace.org/">http://www.dspace.org/</a>	Full list: minimum installation requires 15 Megabytes 90 MB; Apache MySQL 4.0.15; PHP 5.4 or higher (same as Drupal); Linux <a href="https://www.drupal.org/requirements">https://www.drupal.org/requirements</a>	YES	Yes, through setup, although less native support for multimedia using embedded viewers	Some but limited	YES, but limited in hierarchies and crosslinking	YES as established	Supports metadata and Dublin core	NO	YES	YES - somewhat limited in design	YES!	YES	YES, albeit limited	YES	Set according to admin and user rights	Yes per user roles	NO - although private spaces could be created for sharing content	NO	Uncertain		Supports WAI Accessibility. Discussion of bridging Sakai <a href="https://wiki.duraspace.org/display/DSPACE/SakaiIntegration">https://wiki.duraspace.org/display/DSPACE/SakaiIntegration</a> - SWORD plugin to upload to dspace and link to moodle	
Drupal	Can be built into an LMS but as a default installation works more as a repository + forum; strong support; no gradebook or built in class space	Full list: minimum installation requires 15 Megabytes 90 MB; Apache MySQL 4.0.15; PHP 5.4 or higher (same as Drupal); Linux <a href="https://www.drupal.org/requirements">https://www.drupal.org/requirements</a>	Yes, through modules	Yes, through modules help support multimedia display	Numerous	Yes	YES as established	Support for semantic web and openability	NO	YES	YES - easily customized	To some extent through Migration and Import modules	YES	YES	Assigned and created; granular permissions can be limited to specific web spaces and collections	Set according to admin and user rights but can be customized if rights allow	Yes per user roles	Yes, per user roles	Yes sharing through modules	Yes, through Drupal 8	Somewhat but no native scorm	Strong community and flexibility of software; would need to evaluate whether Drupal out of the box (default) has more sustainability than the Drupal LMS project (below)	
Fedora Commons	More of a back-end and would need to have a front end (public space) development: <a href="https://wiki.duraspace.org/display/FEDORACRETE/Tutorials+Introduction+to+Fedora+Commons+in+Fedora+Drupal+paired+together">https://wiki.duraspace.org/display/FEDORACRETE/Tutorials+Introduction+to+Fedora+Commons+in+Fedora+Drupal+paired+together</a> <a href="http://fedora.org/">http://fedora.org/</a>	TomCat, Java SE Development Kit, MySQL, Maven (download from site) <a href="http://wiki.duraspace.org/display/FEDORACRETE/Tutorials+Introduction+to+Fedora+Commons+in+Fedora+Drupal+paired+together">http://wiki.duraspace.org/display/FEDORACRETE/Tutorials+Introduction+to+Fedora+Commons+in+Fedora+Drupal+paired+together</a>	YES	Yes, through setup	Very limited	YES, but limited in hierarchies and crosslinking	YES as established	YES - very semantic web oriented	NO	YES	NOT ACCEPTABLE: it would need a front end built	YES	Very limited	Very limited	Assigned and created; granular permissions can be limited to specific web spaces and collections	Set according to admin and user rights	Yes per user roles	NO - although private spaces could be created for sharing content	NO	Very limited	No scorm support	Needs a front end of some sort which could resolve some of the lacking functionality.	
Omeka	Very nice repository, but really no collaborative spaces; no gradebook or built in class space omeka.net demo / test space	Linux, Apache, MySQL, PHP, ImageMagick (free) <a href="http://omeka.org/index.php/prepare_to_install">http://omeka.org/index.php/prepare_to_install</a>	YES	Yes, through setup etc	Numerous although mostly focused on display - timeliness	YES	YES as established	Supports metadata and Dublin core	Not native; no plugins found	YES	YES - easily customized	YES	YES	YES - easy	Assigned and created; granular permissions can be limited to specific web spaces and collections	Set according to admin and user rights	Yes per user roles	NO	Yes, social bookmarking tool	Yes, to some extent	No scorm support	Strong community and fairly flexible; a very nice repository but not much in the way of a LMS - could be paired with moodle via a Google customized search but no plugins/modules to bridge to a LMS	
Moodle Shared Resource	Needs to be paired with Moodle, but provides LOR functionality with moodle. <a href="https://moodle.org/plugins/pluginversion.php?id=313">https://moodle.org/plugins/pluginversion.php?id=313</a>	Moodle	Moodle	Moodle	Moodle	Moodle	Moodle	Moodle	Moodle	Moodle	Moodle	Moodle	Moodle	Moodle	Moodle	Moodle	Moodle	Moodle	Moodle	Moodle	Moodle	Worth testing for functionality.	
<b>LMS</b>																							
Moodle	Traditional LMS with assignments, grading, dropbox, discussion forum, user roles, resources, tests and quizzes; demo at <a href="https://moodle.org/demo/">https://moodle.org/demo/</a> Shared Resource adds LOR functionality to moodle <a href="https://moodle.org/plugins/pluginversion.php?id=313">https://moodle.org/plugins/pluginversion.php?id=313</a>	Apache, MySQL, PHP	YES	YES	YES - some integration with repositories such as Dspace, Drupal, Fedora	Depends upon how it is set up and what is public/private - most likely would need to be paired with a LOR from above	YES as established	To some extent - using the Shared Resource module provides handling of a variety of metadata	YES	YES	Very plain - would need a better interface for public usage	YES, especially through the Shared Resource module	Yes	YES - albeit design wise	Assigned and created; granular permissions can be limited to specific web spaces and collections	YES	Yes per user roles	Yes, per user roles	Not much - could add in some scripting for Shared Resource	YES, HTML5	Supports scorm	Definitely a strong contender; strong community	
Sakai	Traditional LMS with assignments, grading, dropbox, discussion forum, user roles, resources, tests and quizzes; demo at <a href="https://sakaiproject.org/">https://sakaiproject.org/</a> installation seems to be slightly complicated	Linux, Java, Apache, Oracle or MySQL	YES	YES	YES - some integration with repositories such as Dspace, Drupal, Fedora	Depends upon how it is set up and what is public/private - most likely would need to be paired with a LOR from above	YES as established	Can import from other Sakai sites; Sakai Import tool	YES	YES	Very plain - would need a better interface for public usage	YES, Sakai Import Tool	YES	YES - albeit design wise	Assigned and created; granular permissions can be limited to specific web spaces and collections	YES	Yes per user roles	Yes per user roles	Can create a profile page - add in content using RSS; not as much push out	YES	Support scorm	Worth exploring although the community is not as large as moodle	
Canvas	Traditional LMS with assignments, grading, dropbox, discussion forum, user roles, resources, tests and quizzes; however very strong focus on sharing with support for notifications via social media, analytics & reports <a href="http://www.instructure.com/">http://www.instructure.com/</a>	Ruby, Ubuntu, Ruby Gems, Bundler, PHP, MySQL & more list is here <a href="https://github.com/instructure/canvas-lms/wiki/Quick-Start">https://github.com/instructure/canvas-lms/wiki/Quick-Start</a>	YES	YES	Some but in support for modules and plugins	Depends upon how it is set up and what is public/private - most likely would need to be paired with a LOR from above	YES as established	Yes	YES	YES	YES - not sure about customization possibilities	Can import using APIs <a href="https://canvas.instructure.com/doc/api/_l_imports.html">https://canvas.instructure.com/doc/api/_l_imports.html</a>	YES	YES - albeit design wise	Assigned and created; granular permissions can be limited to specific web spaces and collections	YES	Yes per user roles	Yes per user roles	Many push notifications; push content	YES		Questionable - many comments about SCORM functionality lacking, however, supports many devices	Really strong social media support; Ruby is a bit of a learning curve
Dorocto	Seems to have splintered between enterprise and open source - worth exploring but would be cautious about use <a href="http://sourceforge.net/projects/dorocto/">http://sourceforge.net/projects/dorocto/</a> and <a href="http://www.elearningcommunity.net/forum/index.php">http://www.elearningcommunity.net/forum/index.php</a>																						
Drupal LMS - several <a href="https://www.drupal.org/en/Drupal">https://www.drupal.org/en/Drupal</a> seems strongest	Strong Drupal LMS but early development; built on Drupal but includes class space and SCORM 2014 - Full features - support is available <a href="http://www.drupal.org/en/Drupal">http://www.drupal.org/en/Drupal</a> but support for badges through modules	Full list: minimum installation requires 15 Megabytes; 60 MB; Apache; MySQL 5.0.15; PHP 5.4 or higher (same as Drupal) <a href="https://www.drupal.org/en/Drupal">https://www.drupal.org/en/Drupal</a>	Yes, through modules	Yes, through modules	Numerous	YES	YES as established	support for semantic web structure and open calls depends on version	through modules	YES	YES	To some extent through Migration and Import modules	YES	YES	Assigned and created; granular permissions can be limited to specific web spaces and collections; LMS has some predefined user roles; Default roles include student, teacher, class coach, and administrator.	YES	Yes per user roles	Yes, per user roles	Yes sharing through modules	Uncertain - but seems likely	Supports scorm	Strong community and flexibility of software; would need to evaluate whether Drupal out of the box (default) has more sustainability although this project likes very likely	
Open Edx <a href="http://code.edx.org/">http://code.edx.org/</a>	Very early development includes LMS and authoring tool Studio. An awesome project to be part of but would require significant human resources.	Virtual Box, Vagrant, DevStack	Uncertain	Yes, through modules	Uncertain, but seems flexible	Uncertain, but seems flexible	Uncertain, but seems flexible	Uncertain, but seems flexible	Uncertain, but seems flexible	Uncertain, but seems flexible	Uncertain, but seems flexible	Uncertain, but seems flexible	Uncertain, but seems flexible	Does not seem easy to modify design	Yes, at the web admin level	Uncertain	Yes per user roles	To some degree, but seems limited	No	Uncertain, but seems flexible	Uncertain, but seems flexible	Very early development and would need a lot of support and building	
<b>Thoughts for consideration:</b>																							
What is used by other organizations in the state? USG + DePaul + UConn + Blackboard - Existing technology in place advantage user familiarity? Support? Portal interface - Support for creative commons, downloads, requesting, accessibility, file formats supported, class space: privacy, metadata standards semantics web friendly (future)																							
All of these projects have some sort of analytics or reports but Google analytics and webserver stats would be useful. WWO might be a tool to consider regardless what is used																							