LEARNING MANAGEMENT SYSTEM

And

CONTENT MANAGEMENT SYSTEM

RFP09-9240-05-01RM

Attachment 1
Scenarios

Section IV – Content Management (CMS)

Section V - System Administration and Support

Section VI – FLVS Professional Development (PD)

Section VII – FLVS Global Services

Section I

Introduction

Scenario Title:	**FLVS Operation Environment**
Scenario ID:	LMS/CMS RFP-01.01
Introduction:	This scenario will provide you with a picture of the configuration of FLVS operations.
Use Cases:	FLVS business system environment configuration includes but is not limited to:

	• FLVS LMS System Users:
	    o FLVS students. We currently have 120,000+ half-credit enrollments, totaling 80,000 registered physical users. We estimate the growth rate at approximately 30% per year. At peak usage times of the day, our concurrent usage rate is 7,000 users.
	
	    o FLVS Teachers: We currently have 700 teachers. By August, 2009, we will have 1000 teachers. There are over 1000 active course classrooms in the LMS currently.
	
	    o FLVS Support Staff: Course design and development team, technical support staff, customer services staff, professional development team (to provide training to teachers), instructional leaders, instructional managers, and clients.
	
	    o FLVS system developers: Integrate FLVS products with the LMS/CMS.
	
	 • FLVS Virtual School Administrator (VSA). The system provides a solution for tracking student performance through monitoring activities in four areas: student performance and data management, student registration and enrollment management, role-based reporting, and communications.
	
	 • FLVS Franchises Program (see franchises program information). Franchises are hosted by FLVS hosting services within their sub-domain. They use the same course content and materials as FLVS. (Refer to LMS/CMS RFP 03.16 for more information)
	
	 • FLVS Global School – Hosted by FLVS hosting services. FLVS Global School is an open enrollment, tuition-based, virtual program designed to meet the educational needs of students, districts, states, and other countries. Teachers and administrators are provided for this program by Florida Virtual School. FLVS Global School operates within FLVS domain and shares FLVS LMS. (Refer to LMS/CMS RFP 07.03 FLVS Global School)

Scenario Title:	FLVS Operation Environment

	• FLVS Global Services/Clients – FLVS provides content to many other states and partners through our Global Services division. The client can either use the same LMS as FLVS or use a different LMS than FLVS. (Refer to LMS/CMS RFP 07.05)
	
	• FLVS Special Products – FLVS Global Services sells packaged special products to clients. For example: Learning Recovery program and EasyStart program. (See LMS/CMS RFP 07.02 FLVS Global Services Special Products for details)
	
	• FLVS Data Information
	   o FLVS currently has 1.5TB live data hosting
	   o FLVS currently has 6TB offsite data backup services
	   o FLVS currently has 4TB archived email/student data hosted
	
	• Bandwidth profile
	   o FLVS currently bandwidth limits are 35 Megs with a 30 Meg 5-minute average.
	
	• Semester – FLVS must report credits to the state for funding in half-credit increments. VSA must pull back grades from the LMS for semester 1 and semester 2 separately. Students in semester 2 must be able to see their work and grades from semester 1 for review and reference purposes.

Actors:	FLVS Executive Team, FLVS Leadership Team, FLVS Global Services
Stakeholders & Interest:	FLVS Executive Team, FLVS Leadership Team, FLVS Global Services
Requested Functionality:	The LMS should provide a recommendation of their system configuration/organization regarding how to handle these different aspects of FLVS business operations.
Additional Questions:	How will your system scale to handle our growth needs?

Section II
Teacher Administration Scenarios

Scenario Title:	**Performance Reporting and Analysis**
Scenario ID:	LMS/CMS RFP-02.01
Introduction:	The instructional leadership team at FLVS needs to have an efficient and easy to use means of monitoring their teachers' performance in the classroom. It is imperative that we able to discern quickly whether a teacher is within the FLVS policies of communication and grading requirements as well as the effectiveness of their feedback to students. The team needs to be able to monitor teacher communication and feedback in the teachers' individual course to determine if they are performing instructional strategies that are in the best interest of students.
Use Cases:	General Teacher and Administration Expectations
	The administrator conducts a classroom walkthrough in order to provide teacher accountability and oversight. To access the course, the administrator can search by course name, course ID, or teacher name in order to gain access. The search shows multiple courses fitting the parameters. During the walkthrough, the teacher is invited to guide the administrator through the course to highlight her work. In the single area where all student-submitted work is displayed, the user can quickly sort the work by student, assignment, or date. While in the classroom, the administrator reviews the teacher's email account. The email system is intuitive and efficiently loads the inbox or sent emails which can be sorted by date, subject, or sender. Email can be automatically archived but can be quickly retrieved by the user when needed for up to three years. This allows the IL to monitor past emails.
	The administrator can search the system to determine the number of assignments a teacher has graded in a given period of time and the assessments can easily be accessed to review the teacher's feedback to students. Other reporting features allow the administrator to assess teacher and student performance within the course. The system can also be queried for user activity log information to determine times of access and page visits during a given time frame. The administrator can access all areas of the teacher classroom in order to provide support and oversight.
	After leaving the classroom, the administrator can quickly access other teachers' courses in order to conduct a walk-through of their course.
	At the super-administrative level, the work of the administrator can be tracked to determine if the classroom walk-throughs are taking place. Super-administrative level users would have access to all areas and reports of those they supervise in addition to their permissions. Instructional Leaders and Managers should have a "footprint" to

Scenario Title:	Performance Reporting and Analysis
	determine their times of access and page visits during a given time frame.
Actors:	Directors, Instructional leaders, Instructional managers, Teachers
Stakeholders & Interest:	Directors, Instructional leaders, Instructional managers, Directors
Requested Functionality:	The LMS must provide the functionality to report the summary of teacher activity: • Total number of lessons graded in a given time, etc. • A tally of the teacher's hours worked in the LMS system. • A daily, weekly, and monthly summary of teacher activity logs. • Teacher reports, including number of 0's and excluded assignments for students issued by the teacher. • Report of assignment averages for the course. • Listing of ALL assessments to be graded by teacher with date of submission by student – organized within one location of the LMS and sortable by Date/Assessment/Student. • Listing of emails to be read by teacher with date of submission. • The ability to log in to multiple teacher classrooms as an administrator and send communication from the course as the "logged in" administrator. • Ability to look at multiple classrooms for one teacher on one page.

Scenario Title:	Survey/Evaluation Tool
Scenario ID:	LMS/CMS RFP-02.02
Introduction:	FLVS has the need for teachers and administrators to offer evaluations/surveys to students inside the LMS at the administrative level in order to reach all courses, and at the course level to reach solely the students in that course. The purpose is to gather user perspectives on the system and courses. A survey tool is needed that provides the ability to gather data from a report.
Use Cases:	The teacher and administrators should be able to design and develop a survey at the system level, the course level, and the lesson level.

We wish to collect teacher and student feedback regarding, but not limited to, the following:

• Course content - Survey located at the end of each module of content or at the end of a course that is used to assess content and assessments. Currently this resides in our HTML content, but we would like to see the possibilities for this survey if we move our content into the LMS environment. This data should be available for reporting. We would want to access aggregated results across all sections of the course with the ability to drill down to specific teacher classroom data. Teachers should be able to access course-level data. Teachers and students evaluate levels of engagement for various lessons at the individual lesson level. This would have the ability to be a randomly generated feedback form so the user would not have to do it for every lesson. This data should be available for reporting. We would want to access aggregated results across all sections of the course with the ability to drill down to specific teacher classroom data. Teachers should be able to access course-level data.

• Students and teachers assess the LMS operating system with regards to ease of use, functionality, reliability, and amenities. This data should be available for reporting. We would want to access aggregated results across all sections of the course with the ability to drill down to specific teacher classroom data. Teachers should be able to access course-level data.

• Students evaluate teacher availability and level of instruction. Teachers and administrators would have access to aggregated data with ability to drill down by course and teacher. |

Scenario Title:	Survey/Evaluation Tool
	• IT assesses level of satisfaction regarding tech support experiences specific to the LMS. Administrators and IT would have access to aggregated data with ability to drill down by teacher and course. • Administrators have the ability to survey all users or selected users at the system level. • Teachers create surveys for their course to supplement the content. Teacher can choose to send a survey to the entire course or selected students. Teachers would be able to access a survey by individual student results from within the LMS to obtain user-friendly, specific feedback in order to design students' specific lessons. Administrators, IT, and developers would access aggregated survey results via an administrative area, with ability to drill down to teacher, course, and student. Reports would provide visuals of the information in the survey results. This evaluation tool is tied to the course but is not part of the content. Any exports of the course from the LMS would not include these surveys. This is an overlay to the course.
Actors:	Teachers, Students, Technical Support, Administrators, Developers
Stakeholders & Interest:	Instructional leaders, instructional managers, teachers, developers, IT staff, administrators.
Requested Functionality:	• The LMS will provide support for surveys at system level and course level. • Surveys can be inserted into the content of the course between lessons. • Surveys can be inserted into the content of the course on lesson pages. • Surveys can be randomly sent to users to gather intermittent data. • Teachers can see data gathered from their course classroom. • Data can be gathered from an individual course and be viewed by the administrator, developer, or IT administrator. • Data can be aggregated from individual courses into one overall

Scenario Title:	Survey/Evaluation Tool
	report for administrator, developer, IT viewing. • Reports provide visuals of the information in the survey results. • Any exports of the course from the LMS would not include these surveys.

Scenario Title:	System Announcements
Scenario ID:	LMS/CMS RFP-02.03
Introduction:	FLVS Administrators have a need to send system announcements inside the LMS to students, parents, and teachers.
Use Cases:	FLVS instructional or technical administrators often need to reach all students and/or all teachers in courses. Administrators create an announcement that is system wide and control the roles that announcement goes to in order to target students, teachers, all users, or other combinations. The announcement is targeted to one teacher's course, a specific course (algebra 1) or groups of courses such as Algebra or Math.
	The announcement contains formatting to make it interesting to users or to brand it for FLVS needs. A WYSIWYG interface makes announcement creation easy.
	Upon login to the LMS, the system announcement appears to the targeted end user. The end user can acknowledge receipt of the announcement and cancel future viewing of the announcement and the administrators can see who has not dismissed the announcement.
Actors:	Instructional Leader, Technical Administrator, Instructional Manger, End Users
Stakeholders & Interest:	All FLVS and Franchise staff including teachers, Instructional Leaders, Instructional Managers.
Requested Functionality:	- An FLVS instructional or technical administrator can create an announcement. - The announcement can be targeted to any or all user roles in the system. - The announcement can be targeted to a specific teacher's course, a set of similar courses (algebra 1), and groups of courses (math) which can be defined by FLVS. - On login to the LMS, the system announcement appears to the targeted end user. - FLVS instructional or technical administrators can track those who have not dismissed the announcement. - The end user can acknowledge receipt of the announcement and

Scenario Title:	System Announcements
	cancel future viewing of the announcement.
Additional Questions:	Please describe any additional functionality of your announcement system, including any functionalities around SMS notifications, Phone notifications, etc.

Scenario Title:	Research and Evaluation
Scenario ID:	LMS/CMS RFP 02.04
Use Cases:	Report data on correct/incorrect answers to assessment questions per course, per line item and per student.
Introduction:	In an effort to support validity, reliability and prescriptive learning in our assessment questions we would like to be able to pull correct and incorrect answers per course, per assessment item and per student. We need to be able to evaluate our multiple-choice questions and their answer choices beyond the usual measures of difficulty and the effectiveness of distractors. We need to be able to pull data on correct/incorrect answers by user, and need to be able to compare with their scores on the assessment or other assessments. The LMS should allow us to align assessment content with appropriate state and national standards to allow for measurement of standards mastery. Assessment reports should be 'chunked' by standard. The report should provide information per student and per course as it relates to mastery per state and national standard. We would like to have reported data on the amount of time students are spending inside our courses. This report t should be broken down per student and per course, with the subsection areas divided by course areas, such as threaded discussion time, assessment time, lesson time, page time, etc. We would also like to pull correlations with other reporting features, such as assessment data.
Actors:	Research & Evaluation Specialist, Instructional Leaders, Instructional Managers, Curriculum Specialists
Stakeholders & Interest:	Instructional Leaders, Instructional Managers, Curriculum Specialists, Teachers
Requested Functionality:	• The LMS should provide report data on correct/incorrect answers to assessment questions per course. • If the LMS is capable of linking the assessments to course standards, reports should be generated that will measure mastery for each standard. This may be shown per course and per student. • Provide data on the amount of time a student is logged into the

Scenario Title:	Research and Evaluation
	course; per lesson, per module and assessment. • Provide data on the time students spend on areas of the course – discussions, assessment time, lesson time, page time, etc. Correlate this data with other reporting features, such as assessment data.

Section III
Learning and Teaching

Scenario Title:	Teachers Announcement Page
Scenario ID:	LMS/CMS RFP-03.01
Introduction:	The teacher's course announcement page for the online classroom is much like a traditional classroom's bulletin board or blackboard. Teachers use the page to deliver important information and to orient the student to the classroom. Teachers also use the announcement page to personalize their course and engage the learner as soon as they enter the course. A teacher can use a text tool or WYSIWYG editor to create the announcement page. They can also upload a file, such as an image, audio, or html file, which is rendered as part of the announcement page. The announcement page also displays course action information such as the number of new emails, assignments, or discussion postings since the last log on. When students enter the course, a display shows the number of new emails, assessment to be submitted for the week, assessments recently graded, etc. They can easily access any of these items by clicking on the appropriate item in the display.
Actors:	Students, Teachers
Stakeholders & Interest:	Students, Teachers, Instructional Leaders, Instructional Managers
Requested Functionality:	• Ability to upload, store and play music. • Ability to upload, store and use jpegs, gifs and various animations. • Ability to display HTML pages. • Ability to post links to outside websites. • Ability to have more than one page. • Ability to expand with content. • Ability to have corkboard type area for postings that can be added by students.

Scenario Title:	Collaboration
Scenario ID:	LMS/CMS RFP-03.02
Introduction:	To push our teaching methods into the 21st century, we must provide a collaborative work environment for our students. Since students start FLVS courses any week of the year, and work at an individualized pace, this collaboration environment should allow for synchronous and asynchronous work among students.
	For our synchronous needs, we are currently using Elluminate. We would like to have a seamless environment for our users, and this tool would be separate from our learning environment. We are looking for options through the LMS company.
Use Cases:	**Asynchronous Collaboration:**
	Students are presented a project-based authentic assessment requiring collaboration. The assignment allows students to work on the assignment at different times and on different days, but an effort at group work is required. The first step for the student is to identify other students needing to work on the assignment around the time the student will work on it. Project management skills are a crucial part of the FLVS 21st century skill set, and technology needs to support this learning opportunity because our students are virtual. Students use an asynchronous collaboration tool to find and organize collaborative groups, find group members, schedule meetings, and set deadlines for group work with other students in the course.
	The creation of work begins. Students use an asynchronous collaboration tool in the LMS to upload written work, media, and other work to present a project. Other students are assigned by the teacher or chosen by the students to asynchronously review and comment on the student's work. In some projects, students are chosen or assigned to contribute directly to the project by receiving editing rights. Students can see which of their partners contributed pieces to the project so they can monitor the group work. Copies of the students work are saved as versions, and if something goes wrong, the work can be rolled back to any previous version.
	The teacher, not students, will have the ability to have guest users in the collaboration tools. We invite people from around the world into our collaboration environment and they work asynchronously with our students.
	Teachers have the ability to monitor all student collaboration work. They can see what each student has done and can assign individual grades to contributors. Rubrics can be set up to assist in grading individuals on group

Scenario Title:	Collaboration
	work (Please see 03.07 Grading). Students can peer grade their partners as part of the group work grade.
	In addition to producing work for assignments, the need for collaboration exists around individual student writing. Students have a place to journal personal or course information. They can have multiple threads for journal information to allow journaling for specific course projects or for personal needs. Teachers can review these writings. The writings can be made visible to groups and students within the course. The writings can be graded.
	FLVS would like our students to work cross-curricular on projects. Students would be matched up on projects that span different courses such as math, science, and English. They would meet and share documents in an online area that allows students to work with students from other courses. The asynchronous collaboration abilities available inside their courses are also available in this cross-curricular setting. Teachers can assign grades to these projects.
	Synchronous Collaboration:
	Students are presented a course project that requires students to work together synchronously. An online environment exists in the LMS or tightly integrated with the LMS that provides the ability to meet online to work on projects.
	Students will work on a course project with other students and/or teachers synchronously by inputting and reviewing each student's contributions in a live environment which allows students to view, edit, upload, share documents, presentations, or media for editing, and save products. Students will verbally speak with other students in the group via the online environment and upload information for peer editing while using this tool and allow for others to add to information. Users can text chat with other users in the environment. If the users have video cameras, they can use video to connect with the other users.
	Students and parents use the web conferencing tools to communicate with their instructor, other students, parents, and the school community.
	Teachers and students use the environment for one-on-one tutoring sessions. Students and teachers collaborate on a common drawing/typing space. During the tutoring session, students and teachers use audio to communicate live. Teachers and students write and type on a common work board visible to everyone in the session. Teachers can quiz students with a survey tool. Math teachers who use the tool to tutor students use

Scenario Title:	Collaboration
	math symbols and graphing tools to write out problems that students can solve with the same tools. The users can each save the product so they can review the session later. Teachers bring in guest users to speak with students and/or give presentations. Students from around the world are invited in to work with our students. External users can easily be given access into the synchronous environment by the teacher, not by students. FLVS desires for students to work cross-curricular on projects. Students would be matched up on projects that span different courses such as math, science, and English. They would meet and share documents in an online forum that allows students to work with students from other courses. The synchronous collaboration abilities available inside their courses are also available in this cross-curricular setting.
Actors:	Students, Teachers, Parents, Guests
Stakeholders & Interest:	Students, Teachers, Course Developers
Requested Functionality:	Asynchronous: • Students will utilize an asynchronous collaboration tool to organize collaborative groups, find group members, schedule meetings, and set deadlines for group work with other students in the course. • An asynchronous collaboration tool allows students and teachers to upload and download project items (presentations, images, documents, and audio). • Students can present this work to selected students in the course, the whole course, the school, or outside the school. • Teachers can control the students working on collaborative projects together. • Students can present this work outside their course. • Students can review the work of other students by commenting on the work. • Students can contribute to other students' work by being assigned editing rights. Previous versions of the student's work are saved and can be rolled back to at any time.

Scenario Title:	Collaboration
	• Teachers will have the ability to monitor all student collaboration.
	• Teachers can easily remove inappropriate content.
	• Teachers can monitor items contributed by each student collaborating on an assignment. They can assign individual grades for each student's work.
	• Rubrics can be set up to assist grading student collaborative work.
	• Students can peer grade their partners.
	• A tool or set of tools is available to find student collaborators and organize their groups, schedule meetings, and set deadlines for group work.
	• A place for students to keep journals is available. Multiple threads can be created to allow students to have separate journals for different reasons. Teachers can review the writings. Writings can be selectively made visible to other students, the classroom, the school, or the public.
	• Guest users can be added into the asynchronous tools. They can be tracked and monitored like students.
	• Teachers and students should have the option to be notified by email, SMS and/or RSS when changes have been made to a shared document. The email should include new content and a way for teachers to approve the content.
	Synchronous
	• An online web conference tool or similar product is available. This could be resident in the LMS or be seamlessly integrated with a third party provider.
	• The tool provides functionality to allow students to upload and download project items (presentations, documents, graphics, video, music) for synchronous collaboration.
	• The tool allows users to draw and type in a common area visible to other users. There are multiple drawing screens available, and anything drawn on them persists when the screen is changed.

Scenario Title:	Collaboration
	• Math symbols and graphing tools are available on the drawing area. • The product should optionally provide a survey / quiz tool to allow simple "in session" quiz activities to be undertaken. • Both moderators & participants can broadcast webcam video. • The tool allows application sharing to collaborate on assignments. • Users can type in order to chat with each other. • Users can use audio to talk with each other live at no cost to the end user. • The teachers can grant guest and parent access to the collaboration environment. • Tools should be able to be used with limited technical expertise in html or other programming. • Teachers can monitor synchronous collaboration and can easily tell which students and guests are in the tool. They can remove users from the session. • Sessions in the synchronous tool have ability to be recorded and played back later. • Teachers and students can save work done in the tool to their local computer. Miscellaneous • The LMS should provide students seamless access to the tools within the LMS environment within 2 clicks. • FLVS course developers should have the ability to customize directions on how to use collaboration tools and the required computer requirements. • The LMS provides options for cross curriculum area/project section that allows students to collaborate across the curriculum and earn credit in the courses they are working in. • Tools are cross platform and cross-browser compatible.

Scenario Title:	Collaboration
Additional Questions:	- We would like to see how your LMS keeps up with emerging collaboration technologies that are developing for the Web. For example, how did you provide blogging and wiki tools to your users after these became normal tools on the Internet? What is planned for the future? - Are these tools part of your base LMS product or are they integrated tools? - Are there additional costs for their use that we need to be aware of?

Scenario Title:	Communication
Scenario ID:	LMS/CMS RFP-03.03
Introduction:	The LMS should provide good basic communication abilities so teachers and students can reach each other, and also provide for 21st century communication methods. Synchronous and asynchronous communication methods are required for a successful online experience and are reflected in our expectations. We also have mandated storage requirements for our communications with students.
Use Cases:	**Teacher/Student** Teachers should be able to communicate with students. Several methods of communication are used to facilitate a variety of needs. To provide for individual, private communication with students, an asynchronous messaging system or email system internal to the LMS allows teachers to contact a single student, a selection of students in a course, and/or a selection of students in the teacher's prevue. A WYSIWYG interface allows the teacher to create engaging messages for the students with graphics and color. The student can also message their teacher through this asynchronous means. To make it quick to find messages from the student, the teacher can quickly search, sort and/or filter the messages to find students, dates, and subjects. Students and teachers can exchange files through this tool, providing a means of assessment support outside the assignment system. Teachers and students can organize their emails. To provide for instant contact with students, a synchronous chat area is available. This shows the teacher and students others who are online from their classroom(s), and they can quickly reach each other for online text conversations. This helps to bond teacher and student, and makes the teacher feel more present to the student... To provide for tutoring and presentation needs, an asynchronous web conferencing tool is provided (See 03.02 Collaboration). To provide for adequate communication in the assessment grading process (see 03.06 Assessments and 03.07 Grading); assignment feedback should be able to be given on student work via written and audio means. Using mobile technologies, which are very common in our students' lives, is a focus for FLVS. Teachers would incorporate communication methods for mobile devices into their daily teaching methods, such as using text messages sent from the LMS for communicating quick messages and automatic notices of graded work or work that needs to be redone. We often have students drop courses then ask to be reinstated. FLVS will reinstate students and have communications re-inserted into the LMS.

Scenario Title:	Communication
	Student/Student
	Students should be able to communicate with other students in their course.
	To provide for individual, private communication between students, an asynchronous messaging system or email system internal to the LMS allows students to contact a single student or a small selection of students in a course. Students should not be able to automatically email all students in the course at once as this produces opportunities for students to spam classmates. A WYSIWYG interface allows the student to create engaging messages with graphics and color.
	Group discussions or forums are used to let students conduct threaded discussions. These discussions may be conducted to help students form bonds, or they may enhance the course content. Discussions do not stand alone from the content; we can link to discussions from the content to continue the content experience. Discussion threads can be created by teachers on many different topics. These posts and the student responses can use color and graphics to make them more engaging. Audio abilities in the posts and subsequent responses provide foreign language courses necessary support, and can often be used by other courses. Groups of students can be set up to view specific discussions that remain private to the group.
	Students often feel isolated in the online environment. They need a way to feel that they are a part of the class, networked with a large array of asynchronous students. This would help them form bonds for doing group assignments. Tools assist students in finding other students, organizing projects; coordinating schedules and performing other social project management tasks (see Scenario 03.02 Collaboration and 03.04 Social Network and Student Profiles).
	We get many requests for students to be able to see who is online with them. Along with that need, students need to be able to type chat synchronously to a single student or teacher, or set up a group collaboration opportunity among several students to work on group projects with teacher permission. This could work together with collaboration tools to provide a tight collaborative environment for the students (see scenario 03.02 Collaboration). Teachers can turn off this chat function on a student basis or classroom basis. All communications should be logged.
	Teacher/Parent(s)
	Teachers have communication needs with parents. At FLVS, working with parents is an expectation, and should be supported in all of our systems.

Scenario Title:	Communication
	To provide for individual, private communication with parents, an asynchronous messaging system or email system internal to the LMS allows teachers to contact parents on outside email systems and allows parents to be copied on student messages. Files can be sent in and out of this system.
	We often find that parents need training on how to help their child and how to use the LMS. A parent area would hold trainings such as "tips for helping your child succeed", or "how to understand the gradebook."
	Peer to Peer Teacher
	FLVS teachers receive coaching when they begin teaching and throughout their teaching career with FLVS. This provides the guidance needed to be successful in this fast-paced, student centered teaching environment. The peer accesses the teacher's course and helps to guide them in grading and giving feedback, chunking their time, and communicating with students.
	Since our teachers are not in the same location, having ability to do this coaching asynchronously, such as leaving comments for the new teacher within their classroom, (perhaps through a posted note), would enable the coach to provide a higher level of assistance. Sharing files with the teacher and having a place to send them to for teacher tutorial information is vital.
Actors:	Students, Teachers, Parents, Teacher Mentors
Stakeholders & Interest:	Students, Teachers, Instructional Leaders, Instructional Managers
Requested Functionality:	The LMS should provide functionality for both synchronous and asynchronous communication methods such as class mail, discussion boards, whiteboards, voice boards, etc.
	The LMS should provide an asynchronous messaging system or email system internal to the LMS
	• The system should allow teachers to contact single students, the whole class, or a section of students. Students can contact teachers and other students.
	• The system should save email/messaging communications for a minimum of 3 years, the legal requirement.
	• A WYSIWYG interface that supports graphics and color.
	• Messages/emails should be able to be filed, filtered or sorted by

Scenario Title:	Communication
	student name, date, and subject. • Parents should be able to be copied on messages/emails at outside email addresses. • Files should be able to be exchanged. • The LMS should provide a spam filter. • FLVS should be able to drop, then reinstate, students and have email/messages re-inserted into the LMS. The LMS should provide instructor/student and student/student threaded discussion forums. • Discussions can be started by teachers and responded to by students and teachers. • The posts allow use of graphics and colors. • Discussions can be set up for the whole class or specific groups of students. • The LMS should provide options for instructor to view all discussions by students, including private discussions between students. • The LMS should provide options for instructor to archive old discussion topics. • The LMS should provide options for moving comments. • The LMS should provide options for removing, archiving or hiding comments. • Discussion postings should show read/unread status. • The discussion area should provide options for teachers and students to upload files. • Discussions can be linked to from the course content. • Audio recording and playback is available in the discussion and responses.

Scenario Title:	Communication
	Interactive synchronous chat area to allow for group collaboration
	- Teachers and students can see who is online. - Online users can be contacted to engage in real-time text communication one-on-one or with several users. - Teachers can turn off this chat function on a student basis or classroom basis. Peer to Peer support - Ability to post comments almost like a sticky note, to provide assistance. - Ability to share graphics/announcement pages through a shared folders area. - Ability to house tutorial materials vital to new teachers (such as how to use Opera or HTML). Teacher to Parent(s) - A parent area for FLVS or a teacher to store some helps items. Mobile technologies - Support for text messaging mobile devices from within the LMS. All communications should be logged. All communications should also be searchable. Communication needs are also detailed in 03.02 Collaboration, 03.04 Social Network and Student Profiles, 03.06 Assessments, and 03.07 Grading. We will be looking at the responses to those scenarios for some of the use case needs in this area.
Additional Questions:	How do you keep your LMS current with emerging communications technologies? Describe any third-party relationships you have created in order to meet the needs in this scenario and any additional costs to FLVS for those products.

Scenario Title:	Social Network and Student Profiles
Scenario ID:	LMS/CMS RFP-03.04
Introduction:	With the remote nature of our school, allowing students to form bonds with one-another is becoming a great need. Collaboration in the academic environment cannot be easily achieved if pre-existing bonds between students cannot be formed. For this reason, FLVS feels that a social network aspect to the LMS is important, and student profiles play a large part in our social needs.
Use Cases:	Students and teachers would come in to a school-wide, user-friendly, visually appealing social networking system that allows users to communicate and share personal information and photos. Students and teachers use this network to build community, collaborate, motivate and exchange information. The system resembles and functions similarly to other social networking systems familiar to the users so there is little ramp-up time. User profiles allow for differentiation between teacher and student roles. Students customize their profiles using pre-set fields to prevent inappropriate or private information from being shared. They choose from pre-approved, k-12 oriented "themes" to reflect their individuality and interests. Students may upload a limited number of photos of themselves. Since the system is global to the school, the student may only set up one profile page and apply it to all courses. Students choose the privacy level of their profile. Teacher profiles allow more options for sharing information, such as educational backgrounds and contact information. Teacher profiles are used as a means to increase student interest in the course and to build relationships between students and teachers. The social network provides a means for students and teachers to communicate (i.e. blog, comment posting system). Teachers may start teacher directed discussions on lesson content, provide course resources and links, or start subject interest chats related to course or book clubs. Teachers will create "groups" within the social network that students can join to facilitate collaboration, help manage class projects, promote literacy skills and/or build community in the online classroom. Instructors have freedom to set up as many groups as desired, keeping in mind the necessity to monitor on a regular basis. A potential issue arises around posting of inappropriate content by students and the time required by teachers to monitor this issue. All users can flag content as being inappropriate. FLVS is alerted to these

Scenario Title:	Social Network and Student Profiles
	flags. Teacher monitoring features are proactive and efficient. Instructors can choose to be automatically notified via email, RSS, or internal messaging system when changes to profile or blogs have been made. This notification should include the newly added content and a simple process to approve or deny said content.
Actors:	Students, Teachers
Stakeholders & Interest:	Students, Teachers
Requested Functionality:	- The LMS should provide or integrate with a social networking system that allows students and teachers to build community, collaboration, and exchange information. - The system is global to FLVS. Students create one profile for use in all course areas. - The LMS provides K-12 oriented template student profiles for student to set up a customized profile page. The profile fields can be chosen/limited by FLVS. Photos are allowed, but can be limited in number. - Multiple communication methods are available from within the network that is common to social networks. - Teachers can post linked resources. - Instructors have the ability to set up "groups" or discussion areas. - Efficient means are provided for teacher monitoring/removing student posted content. Instructors can choose to be automatically notified via email, RSS, or internal messaging system when changes to profile or blogs have been made. This notification should include the newly added content and a simple process to approve or deny said content.
Additional Questions:	- Is this feature internal to your LMS or is it a third party product? - If it is a third-party, please describe how it is integrated with

Scenario Title:	Social Network and Student Profiles
	your LMS. Are communication features the same or similar to those within classrooms? • Are there any additional costs to FLVS that we need to be aware of for this system?

Scenario Title:	Dynamic Pace Chart
Scenario ID:	LMS/CMS RFP-03.05
Introduction:	This scenario covers the need for a pace chart to help us manage asynchronous students in our virtual environment. The pace chart is a guide for the teacher and student; it is not a set of due dates. We have hundreds of students starting courses every week of the year, and each student works at a pace that is individualized to that student. Teachers and students currently track this information manually with some help from VSA. It is highly desirable for FLVS to have a system-created pace chart.
Use Cases	This is a picture of how we would like the pace chart system to work. Other options are certainly possible.
	During welcome to class call, the student, teacher and parent discuss when the child would like to complete the course. Typically, a full credit course is 36 weeks long (32 weeks of work and 4 weeks of vacation) and a half-credit course is 18 weeks long (16 weeks of work and 2 weeks of vacation). Using these timeframes as a guide, the student selects today's date and a completion date or a weekly effort. Any known vacations can be entered. They press submit. Once this is submitted, the student cannot change the pace chart, although the teacher can edit it.
	The system calculates the number of assignments due each week by evenly dividing the total number of course assignments by the number of weeks the student has decided to be in the course. While assignments are not equal in length, this is just a guide to the student as to what should be completed and they are not held to the due dates. A teacher change in end-date would redistribute the pace chart.
	e.g. 80 assignments/32 weeks = 2.5 assignments per week. Round up to place 3 assignments on the schedule for the week, starting Monday.
	Honors students have more assignments than regular students. Honors students are identified from VSA. The additional honors assignments would be included in the honors students' pace chart.
	There is a dynamic connection with the gradebook/assignment system in the LMS. If the teacher exempts assignments based on pre-test data, the pace chart re-distributes the assignments per week for that child. The end date remains the same, the number of assignments per week changes. The end date can be changed by the teacher to redistribute the assignments turned in each week.
	The gradebook would indicate if the student was on pace with their pace chart, perhaps with colors (red, yellow, green).

Scenario Title:	Dynamic Pace Chart
Actors	Students, Teachers, Parents
Stakeholders & Interest:	Students, Teachers, Parents, Instructional Managers, Instructional Leaders
Requested functionality	• The LMS should be able to generate a pace chart for each student as part of the student course profile. • The LMS should provide the capability to calculate the pace based on a provided starting date, completion date, and vacation date(s). • Only the teacher be able to modify the end date on the submitted pace chart. • The LMS should provide the capability to re-calculate the pace (re-distribute the assignments per week for the student) based on the changes in the assessments and the Gradebook area. • The LMS gradebook should have the capability to indicate if the student is on pace with their pace chart.

Scenario Title:	Assessments
Scenario ID:	LMS/CMS RFP-03.06
Introduction:	Assessments let us know that our students have mastered the content. Traditionally, FLVS uses online assessments, offline assessments, and discussion/forum based assessments. • Online Assessments – These are computer graded and teacher essay graded exams and quizzes. • Pre-test Assessments - These are computer graded and teacher essay graded exams and quizzes that students take upon entry to a course or module. • Offline Assessments (FLVS Term) – These are project based/performance based assessments normally completed outside the LMS and uploaded into the LMS for grading but can also be typed into the assessment text box in the LMS. • Self-assessment assignments – These are scored assessments tracked by the system but not counted in the gradebook (Algebra Readiness, and New Student Orientation are current examples of this). • Forum based assessments - The LMS must support gradable discussions. A variety of assessment options opens our students' worlds to new 21st century skills. We are constantly trying to expand our assessments in order to engage students in authentic environments.
Use Cases:	Students enter the content of a course. As they enter a lesson, they are given an introduction, and then they learn about the lesson content. A note taking ability within class for each lesson creates a virtual notebook with lesson/content titles provided. The student can add pictures, graphs, and media to the notebook. The student can print their notebook at the close of the class for use on other assessments. The teacher can access this notebook to formatively assess students. A practice opportunity is given to the students, and the student can self-test on course content with an LMS tool or within the content with tracked documentation of completion and score. These assessments provide feedback to the student such as 'try again', 'hint', 'don't forget', and 'remember this'. The student is then asked to show their mastery of the concept. This can take several forms, but is always tied back to showing mastery of the

Scenario Title:	Assessments
	state performance standards required in our courses. Assessments and assessment questions will be tagged with the standards they cover, and mastery of the assessment questions will show mastery of those standards.
	An online examination can be given, and is required at the end of each semester of the course. The online assessment can be presented in a number of different formats including but not limited to, multiple choice, multiple choice with multiple-select, multiple choice with question follow-up (Stanford method), T/F, matching, and fill-in-the-blank, as well as essay/long answer. This examination can be taken multiple times, so integrity is critical. The ability to randomize questions, answers, and pull questions from a tagged questions repository is essential. We must be able to pull questions by tags such as state learning standards or question type.
	The ability to provide integrity in math questions is important, possibly through calculated variable terms for question prompts. Integrity can also be gained by restricting access to the assessment through password protection. Essay questions can allow for upload of a file, and has the ability for students to provide an audio response to the question prompt, which also may have an audio prompt. In world language courses, this audio capability is crucial.
	An optional grading method to mimic the AP® testing procedures is available by assessment where wrong answers have a negative impact on the overall grade.
	Students can also be asked to complete an "offline" assessment around projects. The more the student can work within the LMS to create products, the easier it is for teachers to support and grade that work. For example, a WYSIWYG editor can greatly assist students in submitting work when they don't have a common word processor with their teacher. Students must also be able to attach files in a variety of mime types to submit their work.
	The following is a list of file types the LMS need to support :
	.doc, .docx, .rtf, .xls, .xlsx, .ppt, .pptx, .pdf, .htm, .html, .ipg, jpeg, .gif, .bmp, .png, .zip, .py, .java, .kdw, .fv, .mp3.
	Assessment questions allow grading through an interactive rubric system so we maintain objectivity across multiple teachers teaching the same content. Teachers must be able to attach files back to the student, and mark up work done within the LMS system with colored grading marks (see 03.07 Grading for more information about grading

Scenario Title:	Assessments
	assessments)
	If mastery is achieved, the student progresses down a success path (See 03.09 Individualized Learning). If mastery is not achieved, remediation is offered and students are allowed to resubmit assignments or complete a different assignment to show mastery. Resubmission prompts are available such as 'to achieve mastery of the lesson, please review and resubmit, review these concepts....'
	The student's work can be added to an online portfolio which they can keep private or selectively share with other students with instructor approval. Other students can have comment permission to entries. The portfolio is attached to the student, not the class, but it can be organized by the user. This portfolio follows them through their time with FLVS and can be exported so they take it with them when they graduate.
Actors:	Students, Teachers, Course Developers
Stakeholders & Interest:	Students, teachers, course developers
Requested Functionality:	**Offline Assessments** The LMS must support the following functionality: • Upload/download of student generated files. Multiple files may be attached to the assessment. • Allow the teacher to upload a file back to the student. • The LMS must provide the capability for students to type in assignments into an "Offline" assignment form; needs to handle up to 5,000 characters. WYSIWYG editor available for teachers and students to assist in entry of these assignments. • Rubric-based grading on assessments is available with a rubric tool in the LMS. • Spell-check is available to both students and teachers. • Cross-course assessments • The LMS must provide video and audio capabilities • Student file attachments allow for iteration without replacement of the file to allow a teacher to track changes. Students cannot remove those iterations.

Scenario Title:	Assessments
	• Students can submit assignments multiple times. Last submission is the default grade but teacher can override. • If a student drops and re-enters a course, the student's offline work repopulates the course. • Performance based assessments are needed, in which the student can use music, song, art, video and other mediums to showcase a product that demonstrates mastery of a concept. • Student online portfolio with open access among students (upon instructor approval) and instructor. • Forum based assessments. • Students participate in discussions of class. Student posts can have a gradebook grade attached to them. • Attach documents in discussion board to support student posts. **Online Assessments:** • Support multiple question types including but not limited to, Multiple choice, Multiple choice with multiple-select, T/F (a specific Multiple choice format), Matching, and Fill-in-the Blank. • Randomly calculated math questions are available to provide academic integrity in math tests. • An optional grading method to mimic the AP® testing procedures is available by assessment where wrong answers have a negative impact on the overall grade. • Ability to include graphics in questions. • Ability to include graphics in answers. • Ability to include a file in a question and answer. • Questions must be able to be tagged with state standard information.

Scenario Title:	Assessments

	• Assessments must allow for pulling questions from a larger set of questions to promote academic integrity. When pulling from the larger set, criteria must be able to be set so we can pull in a variety of fashions such as Essays vs. multiple choice questions
	    ○ Questions covering a specific state standard
	    ○ Higher order vs. lower order thinking questions
	
	• Questions on assessments or questions pulled from a larger set can be randomized.
	
	• The LMS should provide support for the randomization of tests.
	
	• Teacher has the option to control individual student access to a test so the student cannot get to the test until approved by the teacher, facilitator, or parent. This may take the form of assessment password protection.
	
	• The option to time tests is available.
	
	• The option to limit the number of times an assessment is taken is available.
	
	• Students can submit assignments multiple times. Last submission is the default grade but teacher can override. The LMS must support feedback at the question level and full assessment level. Automated feedback and teacher generated feedback is available.
	
	• The LMS should allow instructors to track student's time and responses in all assessments.
	
	• The assessment settings provides several return options such as grade only, grade with correct answer, grade with incorrect answer. If a student drops and re-enters a course, the student's online work and grades automatically repopulates in the course.
	
	Advanced Assessment Desires
	Online Assessments
	
	• Rubric-based grading on essay questions is available with a rubric tool in the LMS.
	
	• Ability to stop students from printing or copying tests.

Scenario Title:	Assessments

	Offline assessments
	
	• Math editor for students is provided in the tool
	
	• Ability to link an offline assessment to state learning standards to track mastery.
	
	• Identify content as an "Exemplar" and have it available as an example to other members of the class.
	
	• Scrapbooking Capability that includes uploading text and pictures. A student could upload images and text easily to make a "scrapbook" to showcase mastery using a tool in the LMS.
	
	• Showcase multiple views – thumbnail, full page, percentage of page.
	
	• Offer tools to build graphs (graphic organizers and statistical maps – line, bar, free form, etc) with a choice of presentation templates such as graph paper, blank slide, grids.
	
	• Ability for students to "correct" traditional exams. We would need a way to track changes and comments by student on the actual document rather than uploading a separate document.
	
	• Automatic notification sent to student (perhaps each time the student signs into the course) which assessments can be revised for full points.
	
	• Show the rubric for each assessment in the submission box so students can verify that they have met the assignment criteria.
	
	• Track changes in feedback from instructor to student.
	
	• Use of peer tags to showcase peer feedback and collaboration
	    o Cause and effect scenarios—lessons designed as case studies. If the student selects a particular action the possible outcomes are provided, student continues to make decisions throughout lesson
	
	    o Bonus collaboration—optional lessons with other students
	
	• Pre- and Post Tests tagged to state learning benchmarks

Scenario Title:	Assessments

	o Pre- and Post-Tests are given at course module level and/or at semester intervals
	
	  o Benchmark tagging is available at the offline assessment level, exam level, and question level
	
	  o Reporting on benchmark attainment on exams for teacher and school administrator use
	
	• Content release control based on benchmark mastery demonstrated on exams and offline assessments.
	
	• Ability to modify lesson content as needed for individual learners/groups of learners.
	
	• Ability to adapt total gradebook points as needed for individual learners/groups of learners (examples: honors, remediation, enhancement)
	  o Ability to easily exempt/remove gradebook items from individual learners and/or groups of learners
	
	  o Ability to easily add gradebook items for individual learners and/or groups of learners
	
	  o Ability to replace individual gradebook items with alternate assessments of equal value for individual learners and/or groups of learners
	
	  o Provide stakeholders with progress tracking reporting for individual learners

Scenario Title:	Grading
Scenario ID:	LMS/CMS RFP-03.07
Introduction:	This scenario is to describe how grading works in the LMS. Our ability to teach the number of students per teacher that we are currently serving, and our potential to teach more students through gained efficiencies lies heavily in how teachers find and grade student submissions. We consider grading a critical function in the LMS and will look carefully at the workflow associated with grading.
Use Cases:	A typical teacher has approximately 150 active students who submit an average of three new assignments per week through the LMS in addition to assignments resubmitted for a higher grade. The teachers need an efficient and effective way to manage assessments and provide feedback within the LMS. The grading process should be intuitive, accomplished with the fewest clicks possible, and support the teacher's efforts to provide effective feedback to their students. There is also a need to insure the academic integrity of student work. We need a grading component that allows teachers to grade assessments that are completed in a variety of applications and formats. This must include both online and offline assessments.
	All assessments display information regarding the student's submission, including but not limited to the time of entry into and submission of the assessment, the number of the attempt, the number of remaining attempts, and the assessment items/essays that need to be graded by the instructor. The assessments also show the student's name and the total points possible within the assessment while grading.
	Integrity software is integrated in a way that allows specific assessments to be selected at the master course level for all courses (see 03.10 Academic Integrity Software). The assessments are then automatically uploaded upon student submission and checked. The results are sent back to the LMS. When the teacher opens the assessment to grade, the results are displayed within the grading area. The teacher can click a link to display the integrity results.
	A teacher enters the LMS and is presented with an area on the course entrance page that displays the number of new assignments, emails, and discussion posts awaiting the teacher's attention. By clicking on either the number or a tab or button, the teacher can enter ONE location to see all assessments that need to be graded. Once in the assessments area, the assessments can be sorted in a variety of ways so that the instructor can quickly grade them.
	Once an assessment is open, an area of the grading window allows the teacher to display stored feedback for the assessments that can be used

Scenario Title:	Grading
	in the comment window. The 'comment' automatically populates the window as stored feedback to the student which can be elaborated on by the teacher. Teachers within the same course can share their comments with other teachers. Teachers can enter a 'Comment' area for their course and select the comments they want to add to their individual class. For assessments submitted as essays in the student text window, teachers can use a mark-up tool in the teacher comment window to provide feedback to the student. Teachers can also attach files to the student or use the audio tool to create and send back an audio file as feedback.
	The teacher opens an online assessment from the central grading area and adds feedback to some of the individual questions as well as the assessment as a whole. The assignment was sent to the grading area so that the teacher could look over the student's work, even though the assignment is auto-graded by the system. All auto-graded assessments have the option of returning feedback on each question with the correct answer, correct answer with comments, or no feedback at all.
	Online assessments in the system have the option to be sent to the grading area for teacher review and possible manual feedback. After reviewing the student's work, the assessment can be given a final score on the manually graded portion which is automatically totaled with the auto-graded portion upon submission to the gradebook. The teacher also has the option to override the final grade in a single window and submit a final score.
	In addition to adding text as feedback, the teacher can attach a file, use an image in their feedback, or create and add audio comments as feedback. The teacher uses the spell check feature before sending the feedback to the student. There is also an option to send the feedback to the student via course email and to the parent's external email account. The teacher can see the number of remaining submissions the student has on the assessment and has the option to reset the assessment so that it can be retaken.
	When the teacher is finished and submits the assignment as graded, the screen refreshes back to the assessments area so that the teacher can move to the next assignment for grading. The graded assignment is no longer indexed in the list of assessments to be graded. The student can choose to receive notifications when an assignment is graded.
	The teacher proceeds to the next assignment which is an offline assessment.
	Students may resubmit the same assignment multiple times. Each prior submission and any associated files are saved for teacher comparison on subsequent submissions.

Scenario Title:	Grading
Actors:	Students, Teachers
Stakeholders & Interest:	Students, Teachers
Requested Functionality:	- Gradebook is tied to all assessments so it populates automatically when grading student work. - Online and offline assessments that require teacher grading are all located in one area for teachers to pick up to grade. - Assessment grading area allows ungraded work to be sorted by date, student, and assessment name. - Area is available for teachers to provide feedback when grading offline assignments. Needs to include a spell check feature. - Teachers can attach a file when grading offline assessments. - A central location exists for students to view all returned work and instructor comments. - Quick way to locate a particular student's work and grades (search, filter). - Student is provided with the number of attempts remaining for each assessment before picking up the assessment. - Teacher is provided with attempt number and remaining attempts while in the grading window. - Notification available when students turn in an assignment. - The assessments have a time stamp for submission and resubmission. - The assessments have a time stamp for grading completed and returned to student. (Also for multiple submissions). - Upon completion of grading, the student assessment screen refreshes back to assessment grading area. - The student can choose to receive notifications when an assignment is graded.

Scenario Title:	Grading
	• Student's name is visible during grading. • Students may resubmit the same assignment multiple times. Each prior submission and any associated files are saved for teacher comparison on subsequent submissions.
Additional Questions:	Please show us the workflow used in grading offline and online assessments.

Scenario Title:	Gradebook
Scenario ID:	LMS /CMS RFP-03.08
Introduction:	The gradebook is a critical part of any school. In our online environment, it becomes an organizational component for teachers and students. It acts to maintain legal records for our transactions with students, and gives a picture of student performance.
Use Cases:	A teacher enters the gradebook and quickly pulls up a view of students and their grades. It is easy to navigate and allows them to filter in order to make the view easier to manage. Teachers can easily see which assignments have and have not been completed.
	When they grade any work, grades are automatically loaded into the gradebook. If a teacher wants to view the student's work, a simple set of clicks offers them a view of that assignment. If they want to make a note about an assignment, (perhaps to explain an exemption), they can write a comment and attach it to a grade.
	The gradebook shows a grade for each student, and it shows the percentage of work that a student has completed. There is an indication of assignments turned in but not yet graded by the teacher in both the class and individual gradebook view. Teachers can drill down to a view of individual students' grades. Each assignment has a date and time stamp to help the teacher monitor whether a student is on pace. Teachers can change grades as necessary and exempt grades in the gradebook for individual student needs. Students can have different total points in the class, which will provide for extra honors assessments or for students exempting work from the class.
	Our teachers have monitoring needs that are sometimes not met by the LMS. They like to have the option to export the gradebook to excel, and would like to import any changed scores back into the LMS. When exporting using the whole class gradebook feature, the gradebook would show the assignments turned in, but not yet graded. Contact information would show up when exporting the gradebook, in order to facilitate student contact.
	Efficiency is important, and one set of things our teachers must monitor is the last contact date with the teacher, the number of weeks a student has been active, and whether they are on their chosen pace. While this information is in VSA, having it visible in the gradebook in the LMS would afford efficiencies.
	Teachers would like to be able to set up notifications for items

Scenario Title:	Gradebook
	submitted for grading, or resubmitted for grading. These notifications could be sent to their email or mobile device, or possibly to an RSS feeder. As a public school, FLVS must maintain legal records of our students' grades. We have chosen a guideline to maintain gradebook for a minimum of 5 years. Maintenance for 3 years is legally required, but FLVS has a need to maintain and access these records for up to5 years in order to allow a freshman's records to be retrieved for a college transcript review. If FLVS changes an assessment in the course, the system must track the version of the assessment that the student completed. That is, the system should not change records on students who completed a prior version of an assessment. Students often drop courses and then re-enter them. If they do this, we let them pick up where they left off and their grades must be able to be restored. Students have gradebook needs also. They need to know what their current grade is, as well as the amount of the course that has been completed. They need to know if they are on track with their chosen pace, and if they are behind, they need to know where they should be for their weeks active. They should see this easily. They also need to know what the last contact date was with their teacher, and if they are overdue, they should be shown that status. Students should also have options to set up notifications when items are graded, and to have these notifications sent to their email or mobile devices. Student efficiency is gained if they are able to resubmit their work directly from the gradebook rather than hunting for the assignment in the original assignment list. Parents have similar needs to their students. They need to know what their student's current grade is, and how much of the course has been completed. They need to know if their student is on track, and if the student is behind where he/she should be for their weeks active, the parent should be able to see that easily. They also need to know what the last contact date was between their student and the teacher, and if that contact is overdue, they should be shown that status.
Actors:	Students, Teachers, Parents, Instructional Leaders, Instructional

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Scenario Title:	Gradebook
	Managers
Stakeholders & Interest:	Students, Teachers, Parents, Instructional Leaders, Instructional Managers
Requested Functionality:	**Navigation and Display:** • Provide a well-organized a way for instructors to keep track of student grades/scores on assignments and for students to have access to their grades and graded work, instructor comments and average. • Gradebook is tied to online and offline assignments so it should populate automatically when grading student work. • Allow teachers to manually edit or enter grades directly in the gradebook. • For gradebook that must be scrolled to see grades, student names should be visible as gradebook is scrolled through assignments; assignment titles should be visible as gradebook is scrolled through students. • The gradebook must provide the user the ability to define a sort order for items in their view. • Teachers must be able to filter, sort, or narrow down grades and students in order to condense the view. Filter/sort should hold until changed by the teacher. • The ability must be given to drill down to an individual student and see grades pertaining only to one student. • Student contact information should be able to be quickly accessed from the student gradebook. • The teacher gradebook should provide a quick link to the student assessment. • Teachers should be able to annotate a grade in the gradebook with a private teacher note. **Grade Calculations:** • Should allow for weighted categories AND allow for use of a single non-weighted (100%) category containing all grades.

Scenario Title:	Gradebook
	• Should display current student average grade as calculated by student points out of total attempted points. • Should display current student grade percentage as calculated by student points out of attempted total points. • The LMS will provide the ability to customize each of the students' gradebook based upon individual needs. It should also allow teachers to exclude grades from being calculated into individual student's current and final grade in order to provide an individualized student grade. • The gradebook must show that students can have different total points in the class which will provide for extra honors assessments or students exempting work from the class. • The gradebook must display the percentage of work complete as a calculation of student points divided by total points attempted by the student. Excluded grades are not to be calculated in this percentage. • The gradebook must allow for extra credit on assignments • There must be an indication of assignments turned in but not yet graded by the teacher in the class as well as the individual gradebook view. **Student Needs:** • Students must be able to see the last teacher contact date; Imported from VSA. • Students would be able to see which week they are on in the gradebook page; Imported from VSA. • The gradebook should automatically email assessment score and teacher comments to student and his/her parent(s) when the student score is below passing. • The gradebook should allow for resubmission of work via the gradebook. **Parent Needs:** • Parents should be able to see the last teacher contact date;

Scenario Title:	Gradebook
	Imported from VSA.
	• Parents should be able to see which week their child is on in the gradebook; Imported from VSA.
	• The gradebook should show whether the student is on pace or not.
	Other Needs:
	• The gradebook should allow export of entire gradebook to excel spreadsheet.
	• The gradebook should allow importing of entire gradebook from excel spreadsheet with changed grades populating the LMS gradebook.
	• The LMS must provide a date and time stamp on all submitted and graded work.
	• The LMS must save student gradebook for a minimum of 5 years, the legal requirement.
	• Gradebook must be able to be restored if students are re-instated into the course.
	• Gradebook must be able to be viewed any time within the 5 year retention policy.
	• If FLVS changes an assessment in the course, the system must track the version of the assessment that the student completed. That is, the system should not change records on students who completed a prior version of an assessment.
	Performance:
	• The gradebook should load individual or whole group gradebook in less than 5 seconds for a class of 135 with 100 assignment grades each.
	• Filters should return desired results within 5 seconds for a class of 135 with 100 assignment grades each.

Scenario Title:	Individualized Learning
Scenario ID:	LMS/CMS RFP-03.09
Introduction:	FLVS is committed to providing individualized instruction to our students. This scenario explains this need and the functionality that we need from our LMS.
Use Cases:	A student enters a course. There are key content items and benchmarks that his/her instructor needs to assess (i.e., what does the student already know about the content)? For example, before the student begins Module 5 on Classification, he or she will take a pre-test to assess prior knowledge of key parts of all cell types (knowledge that is a crucial foundation for Classification). Before the student begins Module 6 on Viruses, he/she will be assessed on prior knowledge in Genetics. Assessment questions should be able to be tagged to state benchmarks so that mastery on the student assessments can be reported and used to release content to individual students.
	Beyond pre-tests alone, assessing prior knowledge may take the form of an oral component between instructor and student, an alternate assessment, or an adapted progress plan. Rubrics supporting concepts and state learning standards are available to help the teacher measure mastery.
	There are various ways to input information about a student that will tailor a curriculum for each student. For example, a student profile, interests, previous coursework, and learning style assessment would automatically prescribe a pathway through the content for each student.
	The teacher and student meet to review this personalized plan, and they have a place to establish student learning goals. The teacher and student can make adjustments to the auto-prescribed path through the content. The dynamic pace chart reflects their final plan (see 03.05 Dynamic Pace Chart). Visuals help students and teachers monitor their goals and pace. Robust notifications are available to students to help them monitor items that they need to complete.
	Customized gradebook for each individual student allows for different assessments to be taken by each student. The total points in the gradebook are individualized. The assignments are tied to the student, not to the course. If a student changes teachers or classrooms, their gradebook follows them. The gradebook also allows for cross-curricular grades, so projects that cover standards from multiple courses can receive one grade for multiple courses.
Actors:	Students, Teachers, School Administrators

Scenario Title:	Individualized Learning
Stakeholders & Interest:	Students, Teachers, Curriculum Specialists, Instructional Leaders (principals), Instructional Managers, Literacy coaches

Requested Functionality:	• Pre- and Post Tests tagged to state learning benchmarks
	   o Pre- and Post-Tests are given at course module level and/or at semester intervals.
	   o Benchmark tagging is available for offline assessments, exams, and exam questions.
	   o Reporting on benchmark attainment on exams for teacher and school administrator use is available.
	
	• Content release control based on benchmark mastery demonstrated on exams and offline assessments.
	
	• Ability to modify lesson content as needed for individual learners/groups of learners.
	
	• Ability to adapt total gradebook points as needed for individual learners/groups of learners (examples: honors, remediation, enhancement)
	   o Ability to easily exempt/remove gradebook items from individual learners and/or groups of learners
	
	   o Ability to easily add gradebook items for individual learners and/or groups of learners
	
	   o Ability to replace individual gradebook items with alternate assessments of equal value for individual learners and/or groups of learners
	
	• Provide stakeholders with progress tracking reporting, such as benchmark completion for individual learners.
	
	• Ability to modify assessment and content as needed for individual learners/groups of learners.

Additional Questions:	• Please describe how your testing/assessment system interacts with the LMS to personalize instruction. Specifically, we would like to know how your system allows a student who fails an assessment be directed to learning objects/content that addresses specific knowledge areas. • Please describe any capabilities your system has for tracking student progress through content and then changing the content based on

Scenario Title:	Individualized Learning
	student choices. For example, a student is taking a self-test and is unable to complete a section. How can your system provide automated access to new learning objects/content to a student in this situation?

Scenario Title:	Academic Integrity (AI) Software
Scenario ID:	LMS/CMS RFP-03.10
Introduction:	FLVS uses academic integrity software to check for plagiarism.
Use Cases:	A fully integrated academic integrity (AI) system allows the student to seamlessly submit work without entering the AI system. Full integration also means the teacher can see results of the integrity report without leaving the LMS and can drill down into the integrity report via a pass-through to the system. A student enters an offline assessment and completes it by either uploading a file or composing an essay in the LMS assessment text window. In the learning management system, the student submission triggers the process of checking the assessment for academic integrity. Because the particular assessment was tagged at the master course level for submission to the AI system, the document is automatically sent to the integrity checking system for processing. Due to high user demand, a queue has formed and every few minutes, hundreds of documents are sent for processing. For the assessment submitted as text in the student comment window, the text is automatically copied and inserted into a .txt file and submitted to the system. When the teacher enters the LMS and opens the student's assessment for grading or review, the status of the document is shown. If the document is processed, the results of the AI check are available in the teacher grading area. An active link is also available if the teacher needs to further inspect the results within the academic integrity system. An administrator can easily log into the AI system and run reports on the number of assessments submitted to for processing for a given amount of time, the number of failed assessments in the submission process (with a reason for failure), as well as statistical reports on individual courses and assessments.
Actors:	Students, Teachers, Administrators
Stakeholders & Interest:	Students, Teachers, Administrators
Requested Functionality:	• Fully integrated academic integrity system. • Option to select assignments to be automatically uploaded to the AI system. • Files (.txt, .doc, .docx, .html) or text entry are sent to the AI system without any involvement from the teacher or student. • Percent match and originality report is housed both in AI system and the teacher grading interface of the LMS.

Scenario Title:	Academic Integrity (AI) Software
	• Originality report needs to be active for teacher to use to log into the AI system. • Reports of integration activities are provided showing uploads and failure information. • Statistical reports on usage available.
Additional Questions:	If this functionality does not exist in your system, please provide a statement of work with approximate costs for integrating as described above with the TurnItIn.com system, our current system.

Scenario Title:	Accessibility, Section 508 Compliance
Scenario ID:	LMS/CMS RFP-03.11
Introduction:	In 1998, Congress amended the Rehabilitation Act to require Federal agencies to make their electronic and information technology accessible to people with disabilities. Inaccessible technology interferes with an individual's ability to obtain and use information quickly and easily. Section 508 was enacted to eliminate barriers in information technology, to make available new opportunities for people with disabilities, and to encourage development of technologies that will help achieve these goals. Section 508 of the Rehabilitation Act as amended, 29 U.S.C. Section 794d, requires that Federal agencies' electronic and information technology is accessible to people with disabilities. While FLVS is not directly a federal agency, we are continually striving toward 100% compliancy so that we can meet the needs of students of all abilities. **Relevant Web Page References** • Federal IT Access Initiative: www.section508.gov • Access Board Section 508: www.access-board.gov/508.htm • Web Accessibility Initiative of the World Wide Web Consortium: www.w3.org/WAI/ • Web Content Accessibility Guidelines 1.0: www.w3.org/TR/WAI-WEBCONTENT • Resources on Accessibility on Deque Systems Website: www.section508ok.com
Use Cases:	The four main categories of disability that must be accommodated are visual, motor, auditory, and cognitive. Visual disability encompasses blindness, low-vision, and color-blindness. Low-vision users often increase the font sizes within the browser or use some sort of screen magnification software. About 5 percent of men in the United States possess one of the three forms of red-green color-blindness. There are other forms of color-blindness, but the red-green types are the most prevalent. For color-blind users, it is essential that checks be run to make sure foreground-background contrast is adequate and that meaning within iconography and text is not conveyed solely by color. Blind learners typically access a LMS via a screen reading program that voices the textual content of Web pages (or, for the deaf-blind, produces refreshable Braille output). Motor disability encompasses users who have undergone traumatic injuries or possess congenital diseases or other disorders that affect gross or fine motor control. Interaction with a Web-based LMS for these learners typically cannot involve the mouse. Keyboard navigation of all

Scenario Title:	Accessibility, Section 508 Compliance
	functionality is necessary.
	Auditory disability encompasses full and partial hearing loss. To accommodate deaf learners, audio content must have synchronized captioning. Interfaces cannot rely on audible cues for interactivity.
	The largest group of learners with disabilities includes learners who possess some form of cognitive disability. This constituency includes people with various attention disorders, reading impairments, linguistic and verbal comprehension deficits, problem-solving deficits, and graphic and math comprehension deficits.
	It should be noted that many of the so-called accommodations that have to be made to make the LMS accessible enhance learning for all users. For example, keyboard navigability speeds input generally. Captioning of content provides access in noisy environments (or places where quiet is enforced). Captioned content is also beneficial for people trying to learn a language or those who learn best when presented content through more than one mode of delivery. And the text transcripts used in captioning can be indexed by LMS search features, facilitating accurate and comprehensive lookup.
	A typical scenario:
	A student with a severe visual disability (legal blindness) is taking an online course via the LMS and is logging in for the first time. Although the student is legally blind, he/she still has some very limited visual acuity. The LMS allows the student to adjust the interface (or apply global system settings that affect the LMS interface) so that font sizes can be enlarged, the screen resolution kept low, and high-contrast screen color settings can be applied. Ideally, the LMS allows the student to save these accessibility adjustments to a personal profile that loads these settings upon login in the future, until otherwise changed.
	Now despite the student's limited visual acuity, reading is still an enormous challenge, as is use of the mouse, which the student finds of little use. So in order to fully access the onscreen content, the student also uses a screen reader called JAWS. JAWS (www.freedomscientific.com) is a widely used piece of assistive technology software that uses Text-to-Speech (TTS) technology to generate a synthesized human voice that reads aloud all of the content on web pages. But the usefulness of this tool is entirely dependent upon the degree to which the Web pages are designed to be accessible. Accessibility in this regard means that all information can be accessed alternatively using only the keyboard (not mouse reliant), and that all

Scenario Title:	Accessibility, Section 508 Compliance
	onscreen text as well as alternative text attributes for images, links, navigation elements, are designed to be "visible" to JAWS. In cases where this is not feasible, alternative text-only versions of the interface screens are available.
	Also of critical importance, the general LMS interface is designed with a "skip navigation" link at the top left of the page. Since JAWs reads left to right, top to bottom, it will read, by default, everything readable on the page, regardless of relevance. Since the LMS sports a vertical bar of navigation elements on the left, and a horizontal bar along the top with other links, without this "skip navigation" (or "jump to content") link at the upper-left, the visually impaired student would be forced to listen to all of the navigation links read aloud each time a new page is encountered, before hearing the actual page content.
Actors:	Students, Teachers, Course Developers
Stakeholders & Interest:	Students, Teachers, Course Developers
Requested Functionality:	• Compliance with requirements of the US Rehabilitation Act Section 508 and WAI-WCAG (Web Content Accessibility Guidelines) Priority 1 or higher checkpoints. • The LMS should provide a means for each user to make adjustments to the interface to meet their individual accessibility needs, and to have those adjustments saved so that they are engaged whenever the user logs in to the LMS.

Scenario Title:	Mobile Content
Scenario ID:	LMS/CMS RFP-03.12
Introduction:	In 2008, a survey reported that 66% of teenagers want cell phones in order to provide the freedom to get an education from any location on earth. . (http://files.ctia.org/pdf/HI_TeenMobileStudy_ResearchReport.pdf). Pre-teens are also becoming avid users of mobile devices. FLVS needs to tap into this world and provide content on-the-go for our students. While high-tech portability is crucial to online learning in the upcoming years, we will always have students who need a low-tech method of carrying along content. This scenario covers both situations.
Use Cases:	Lesson content input into the LMS system or structured properly for mobile devices could be viewed easily on common mobile devices. Assessments in the LMS could be set up to go mobile so that students could take along practice tests. The LMS would provide tools for teachers and students to create media in common formats for mobile learning. Produced content would enrich and reinforce lessons. Content could take the form of tutorials, games, flashcards, podcast and videos. These activities would be available to not only FLVS students, but could be released to clients after authentication. Portable content should be downloadable in formats compatible with iPods, Zunes and other video players, cell phones and computers. Students who need low-tech means of creating portable content would be able to download and print a version of the course content housed in the LMS in text format, with or without graphics. Key information could be marked in the content and quickly assembled into a downloadable format for carrying along.
Actors:	FLVS Students, Teachers, Parents, Developers. Student, Parents and Teachers outside FLVS
Stakeholders & Interest:	FLVS students, teachers, parents, developers, FLVS Administrators.
Requested Functionality:	High Tech Portability: • Ability to create mobile content with LMS tools. • Server space to house downloadable material. • Ability to tag created content and search for it later.

Scenario Title:	Mobile Content
	• Ability to share content across courses and outside FLVS with authentication. • Lesson content inside the LMS is easily viewed on common mobile devices • Assessments in the LMS can be viewed on common mobile devices. Low Tech Portability: • Downloadable and printable version of course without graphics. • Key information distilled into a download vocabulary card system that will aid student with key concepts, formulas, etc.

Scenario Title:	Multimedia Support
Scenario ID:	LMS/CMS RFP-03.13
Introduction:	FLVS developers, teachers, and students use a variety of media during the teaching and learning process. To ensure the many scenarios of use are covered by the abilities of the LMS/CMS, we have captured use cases below.
Use Cases:	Florida Virtual School teachers and courses make use of many types of media. The most important are audio, video, and Flash-based media. Various media is packaged with our lesson content and stored in the content folders. They embed the multimedia so it runs through course pages and link to the multimedia in an LMS/CMS-stored location from the course pages. Some media is accessed from third-party providers such as Discovery Streaming®, Adaptive Curriculum®, and SAS® Curriculum Pathways through a pass-through account. Students download the media for local viewing or play embedded media right from their browser with controls for fast-forward, rewind, and pause. Teachers and students use a web cam or microphone to record content. Once finished with the recording, it is uploaded to the LMS/CMS server so that it can be accessed at a later date and shared with others. It should be able to be tagged for future access. For example, we tag some recordings with *date, name, and geographical location of student.* Student created video and audio can be shared with others, after being moderated by teachers. Students and teachers can playback audio and video from inside the LMS/CMS. FLVS controls the file size limitations for these files. For easy production of audio, students and teachers use an audio recording and playback tool within the LMS/CMS system. Foreign language teachers use the audio tool extensively to communicate with their students and check pronunciation. To facilitate the learning process, this audio record/playback tool is available in offline and online assessments for students and teachers and in the discussion forums. Inappropriate content can be flagged by any user with notifications to FLVS. Teachers and students create and play video within the LMS/CMS with an LMS/CMS tool. This tool is also available in offline and online assessments for students and teachers and in the discussion forums. In the LMS/CMS synchronous communication, tools (such as webcams) can be used for visuals. RSS feed aggregation is available to capture media from the Internet

Scenario Title:	Multimedia Support
	such as news and blogs. FLVS teachers can define the feeds available for students. The help files of the LMS/CMS should provide context sensitive help for all multimedia tools.
Actors:	Students, Teachers, Course Developers
Stakeholders & Interest:	Students, Teachers, Course Developers
Requested Functionality:	• Support for storing and playing embedded or linked audio, video, and flash content from FLVS courses. • Support for pass-through to third-party media content. o Critical third-party media is provided from Discovery Streaming®, Adaptive Curriculum®, and SAS® Curriculum Pathways. • Users can download media from the LMS/CMS. • Users can play media within the LMS/CMS. • Teachers and students upload media content and use within the teaching process with FLVS set limits on file-size. • Teachers and students use an LMS/CMS tool to record and playback audio content. • Teachers and students use an LMS/CMS tool to record and playback video content. • LMS/CMS created content is stored on the LMS/CMS servers with FLVS control of file sizes as detailed in the contract for services negotiated with chosen companies. • Created content can be tagged for future searching. At a minimum, tags should include a file title, filename, date, creator name, and geographical location of student. • Student created audio and video can be uploaded to offline and online assignments. • Student created audio and video can be recorded right into the assignment with an LMS/CMS tool. • Student created media can be shared with other students after being moderated by the teacher. • Teachers can upload audio and video to assignments as feedback.

Scenario Title:	Multimedia Support
	- Teachers can record audio and video to assignments as feedback with an LMS/CMS tool. - LMS/CMS Audio and video tools are available in the discussion forum prompts and responses. - Discussion forum prompts and responses can have audio and video files uploaded into them. - Users can use a webcam within the synchronous communication tools of the LMS. - RSS feed aggregation is available to capture media from the Internet such as news and blogs. FLVS teachers can define the feeds available for students.

Scenario Title:	**Juvenile Online Environment**
Scenario ID:	LMS/CMS RFP-03.14
Use Cases:	FLVS often receives requests to provide courses to students in a juvenile detention center. Because of their special situation, these students cannot be in a regular classroom. They need to be placed in a special classroom created for DJJ students. VSA will send the students to this classroom when they are manually identified by FLVS staff. Students are not allowed to see or communicate with other students. They are also not allowed to communicate with an external messaging server. They can only talk with their teacher within the FLVS LMS.
Actors:	Student, Teacher
Stakeholders & Interest:	Student, Teacher, Parents, DJJ Center
Requested Functionality:	• The LMS should provide a special course classroom for students in the detention environment that is identical to the regular classroom. However, students in the special classroom should not be able to communicate with each other. They should only be allowed to communicate with their teacher. As such, students in the special classroom cannot "see" each other. All students should show as "invisible" to each other. • Students in the special classroom cannot communicate with an external messaging system. • The LMS should provide the capability to alert the teacher if a student initiates any type of communication in the course. For example, messaging, or discussion board posting.

Scenario Title:	**FLVS Student Retention Center**
Scenario ID:	LMS/CMS RFP-03.15
Introduction:	This scenario describes the operation of FLVS Student Retention Center, a program designed to increase student completions in FLVS courses. The purpose of the retention center is to collaborate with all departments to increase student success and improve the customer experience.
Use Cases:	Students will work in the retention classroom to set students up for success for their content area. Students may begin in this classroom and be transferred to their "assigned teacher" or vice versa as needed.
	The retention course classroom will have the same content as the original course. Once a student completed the registration, if he/she cannot be placed in a course immediately, the student may be placed in a retention classroom for the same content area. Once the student is ready, a transfer will be initiated by FLVS in the student management system (VSA) or other student management system inside or outside the Company's LMS that is integrated for this transfer with the Company's LMS.
	All existing grades will follow the student. The assignments and gradebook in the original classroom and the retention classroom will be identical. Students should have access to any files or work created in the original classroom.
	Future phases may involve sending at-risk students from the teacher classroom into a retention center for nurturing and coursework guidance. All grades and work will follow the student. When the students are back on track, they will be transferred back into their teacher's original share.
Actors	Students, Teachers, Enrollment Support Personnel, Retention Center Personnel
Stakeholders & Interest:	Students, Teachers, Parents, Customer Support, Retention Center Personnel
Requested functionality	• The LMS must accept a transfer command/entry from the LMS-integrated FLVS student management system and initiate an automatic student transfer between teacher course classrooms. • The student's gradebook and all their work will follow the student

Scenario Title:	FLVS Student Retention Center
	between classrooms of the course. All existing grades will follow the student. The assignments and gradebooks in the retention classroom and the normal classroom may have differences because each student will be working on their own individualized path. • Students should have access to any files or work created in the retention classroom after transfer.

Scenario Title:	**FLVS Franchises**
Scenario ID:	LMS/CMS RFP-03.16
Introduction	Florida Virtual School expands its reach into the state of Florida through a franchising program. Our franchise program started in 2001 with Broward County as our first franchise. A franchise uses its own teachers, the FLVS learning management system, FLVS content, and FLVS processes to teach their own county's students. Franchises open for several reasons including the ability to keep FTE in their county and to provide special focus programs such as credit recovery and alternative education. Franchises use the FLVS learning management system and student tracking system (VSA). They are currently required to use the same LMS as FLVS. Franchises brand their version of VSA and LMS. Franchises also use the most recent version of FLVS courses. Franchises share FLVS content which they are not allowed to alter. They also receive a piece of content in which they may change policies and procedures (course information) to meet their local needs and differences.
Use Cases:	We have outlined the differences that Franchises have from FLVS below. • Domain – Each franchise is set up to have its own domain. The LMS/FLVS provides the URL desired by the franchise client and VSID (Virtual School ID) required by VSA. • Course Content – Franchises use the same course content and materials as FLVS students. The course content is identified through VSA and deployed to the franchise domain automatically. • Course Set Up – Franchises course set up is implemented by VSA from the franchise version of VSA, uploading teachers/students/status in the same manner as FLVS. • We have the need to transfer students from franchises courses to FLVS courses and vice versa. Student gradebook and content should follow them. • The LMS contract will cover franchise costs at the same rate as FLVS.
Actors:	FLVS Franchise Manager, District Franchise Managers, Franchise

Scenario Title:	FLVS Franchises
	Teachers, franchise students,
Stakeholders & Interest:	Students and parents, FLVS leadership, Franchise Leadership, Franchise Teachers
Requested Functionality:	• The LMS must provide support to provide URL desired by the franchise. • The LMS must provide support for student transfer gradebook and student work between course shells, schools, or district. • The LMS contract will cover franchise costs at the same cost as FLVS.

Scenario Title:	Florida Virtual Elementary School
Scenario ID:	LMS/CMS RFP-03.17
Introduction:	In 2008, FLVS announced a new alliance with the Florida Connections Academy called FLVSCA, which enables Florida students in elementary and middle school to enroll in FLVS online classes. Florida passed a new state law stating that all school districts have to provide full-time, online learning to public school students, and FLVSCA was formed to ensure that FLVS meets the requirements. It is a collaborative program to serve students in grades K-5.
Use Cases:	Currently, Florida Virtual Elementary School content is offered through Florida Connections Academy. It is our goal in the near future to design and develop our own course content, and serve the K-5 students through FLVS LMS.
	Due to the nature of our Elementary Virtual program, we would like to have more specific tracking for student information, and be able to export the information easily. Each teacher should have a way to track the amount of time each student spends on the task or page so that the teacher can provide more support if necessary. This is essential to the Elementary world and might be different for Middle School and High School.
	We also would like to provide more age appropriate feedback to the student. An HTML "happy face sticker" may work better than a "good job" comment.
	Synchronous teaching is also important for Elementary Virtual. It is particular important that the student has a way to communicate "live" with the teacher and for the teacher to be able to demonstrate concepts to the students "live".
Actors:	Students, Parents, Teachers, Instructional Leaders, and Instructional Managers
Stakeholders & Interest:	Students, Teachers, Parents, Instructional Leaders, and Instructional Managers
Requested Functionality:	- Usage log per assignment and lesson. - Locking lessons until the student completes all of the previous assignments. - If they earned a 50% or below, it locks them down and then

Scenario Title:	Florida Virtual Elementary School
	gives them a message– Then it pings the teacher with an email (have the student contact teacher about the grade).

Section IV

Content Management (CMS) Scenarios

Scenario Title:	Course Development
Scenario ID:	LMS/CMS RFP-04.01
Introduction:	FLVS is in the process of developing a firm learning strategy. In this process, new pathways for development of content are being explored. We have legacy content and experimental content that are used in our courses. This content needs to run in our LMS, and we are keeping development options open to other formats of technical content production. We know this puts a burden on our LMS to support multiple formats of content, so in the scenario below, we have outlined our current processes and those we expect to be implementing in the next 3 years.
	We will provide examples of content in these formats where we have them so you can place the content into your system as proof of concepts. We need a login to the place where you put this content, so we can see it functions in your LMS. As part of your response to this scenario, please give us the website and logins to see and use that content.
Use Cases:	FLVS would like the LMS/CMS company to provide authoring tools to support both novice and production users, allowing simplicity of use and power use. Novice users might have custom templates, for example, to guide what information goes where and prompt for required information, e.g. metadata. The novice users may be teachers; we would like to see our teachers able to create content, with some direction from the Curriculum Services team. Power users will be development team members, subject matter experts, instructional designers, outside vendors and similar roles that are familiar with content development tools. Power users can create custom templates.
	FLVS needs to maintain legacy content as well as to develop new content. Most of our legacy content is .xhtml pages with text, video, audio and multimedia content contained on the page. It is currently in a hierarchical folder system with an index page. The Curriculum Services team is also exploring new pathways for developing content. We would like to adopt a content development process that allows easy repurposing/reuse, portability, and searching. To prevent synchronization issues, we also would like to adopt a development workflow that prevents change conflicts.
	FLVS would like our content to be presented in an innovative way with a "next gen" look and feel. We also would like to create content in manageable chunks, e.g. Learning Objects. Industry standards such as QTI, SCORM, Common Cartridge and others should be supported where they are robust enough to support our needs.
	Many of the teachers and students create their own content. We would

Scenario Title:	Course Development
	like the user-created content be developed based on a template and/or workflow and be easily shared by teachers and students at FLVS. FLVS course developers work in multiple environments for development, testing, and production. It is very important to have a process in place to control the content movement among environments.
Actors	Curriculum Services Team, Leadership Team
Stakeholders & Interest:	Curriculum Services Team, Leadership Team
Requested Functionality	• FLVS would like the LMS/CMS Company to provide authoring tools to support both novice and production users, allowing simplicity of use and power use. For example, to create custom templates for novice users. • The authoring tools must allow FLVS to maintain legacy content as well as to develop new content. • New content created in the Proposer's LMS should be developed in a manner that will allow easy repurposing/reuse, portability, and searching. • The LMS/CMS authoring tool should have a workflow that prevents change conflicts. • The authoring tool(s) should not sacrifice innovative presentation of content for uniformity of the tool to allow for FLVS to have flexibility of look and feel of the created pages. • The LMS/CMS authoring tool should provide capability to create content in manageable chunks, e.g. Learning Objects. • FLVS should be able to have multiple environments so that we can isolate development, testing and production at a minimum. Movement of content among environments should be controlled by workflow provided by the CMS. • FLVS teachers and students should be able to create content and access content based on pre-defined templates and workflow. • Industry standards such as QTI, SCORM, Common Cartridge and others should be supported where they are robust enough to support our needs.

Scenario Title:	Course Development
Additional Questions:	• Most content development tools have capabilities that exceed the typical standards (SCORM, Common Cartridge). Please describe what aspects of your development tools are proprietary (i.e. not conformant with standards) and how we can ensure that our content can be easily shared with other institutions. • What student/teacher-created content is supported by your system (uploaded and created in your system) and how do users perform these functions? • The definition of a learning object is hard to pinpoint. Please describe your company's definition of a learning object and how a learning object is set up and used in your system.

Scenario Title:	Course Content Delivery
Scenario ID:	LMS/CMS RFP-04.02
Introduction:	FLVS is in the process of developing a firm learning strategy. In this process, new pathways for development of content are being explored. We have legacy content and experimental content that are used in our courses. This content needs to run in our LMS, and we are keeping development options open to other formats of technical content production. We know these actions place a burden on our LMS to support multiple formats of content, so in the scenario below, we have outlined our current processes and those we expect to be implementing within the next 3 years.
	We will provide examples of content in these formats where we have them so you can place the content into your system as proof of concepts. We need a login to the area where you place this content, so that we can see it function in your LMS. As part of your response to this scenario, please give us the website and logins required to view and use that content.
	This scenario describes the process of FLVS content delivery through a CMS.
Use Cases:	The new course development process is managed by the Curriculum Services team. The work is done in the development environment. Once the development work is done, a proof shell will be created for internal and external review and proofreading.
	Once the new course is released, the content will be delivered to the production environment as well as the demo environment. In the meantime, an orientation course shell will also be generated in the professional development environment for creating training course.
	Course development and versioning are managed through the FVLS Curriculum Services team. We would like to support multiple live versions of our courses. The Curriculum Services team also performs content and assessments updates. We will not discontinue a version until all students have finished the course. Teachers may have multiple classrooms for a given course and they may teach in different release versions of the course. Teachers may also teach different courses.
	FLVS acquires content from third party vendors at times and needs to have a means for importing content, assessments and metadata into the LMS/CMS and then editing it as necessary to meet unique FL and/or FLVS standards. FLVS often will partner with a content provider to enhance our course content. In many situations, the content is not residing on the FLVS CMS and needs to be linked through remote access. If that's the case, we will need to request LMS programming

Scenario Title:	Course Content Delivery
	support for customization and integration.
	Current integrated products that we acquired and are maintaining in our LMS include:
	- AP Stats course that FLVS purchased as a Blackboard® bundle. - Jigsaw framework materials from ADL (SCORM based, flash presentation framework using an XML base). *The Algebra Readiness course has been provided as part of this RFP.* - Adaptive Curriculum® products
	Course content should be able to be quickly displayed to the users within one click of entry into the classroom. The content placed into or accessed by the LMS should allow FLVS to track user's page accesses and time on pages.
	FLVS also would also like our teachers, students, and clients to search and retrieve content from FLVS CMS. Content should be able to be pulled from the CMS into the LMS for seamless, embedded viewing by the end user, while remaining updated in all courses when changes are made. We would also like to be able to track user access information on particular learning objects.
	FLVS services clients in other states and countries who use varying LMS platforms. Content created for the FLVS LMS/CMS platform needs to be portable to these other systems. Our content includes instructional materials, metadata, discussion, and assessments. Where possible, industry standards should be supported for this. (Common cartridge, QTI, etc.) (Please see the 01.2 Client Course Delivery scenarios for technical details.)
	Clients may choose to access our repository (see Scenario 04.04 Digital Repository) from their LMS. Our clients are using a variety of LMSs (Desire2Learn, Blackboard, WebCT, ANGEL, Ucompass, eCollege, Agilix GoCourse, Moodle). Some clients will want to access through an index page accessing all of the course content. Other clients will want to access the individual learning objects directly. In either case, authentication must be enabled to allow single sign on from the client's LMS. We want to house the content in one area/repository and make those changes in that one area; updates should be propagated to systems accessing the repository. Clients may also choose to NOT receive updates from the repository.
Actors	Curriculum Services Team
Stakeholders & Interest:	ISS, LMS Support Team, FLVS Help Desk Support

Scenario Title:	Course Content Delivery
Requested Functionality:	• The LMS/CMS must support multiple course sections that pull from or link to the same centrally located content files any changes propagate to the individual course sections. • Course content should be able to be quickly displayed to the users within one click of entry into the classroom. • The content placed into or accessed by the LMS should allow FLVS to track user's page accesses and time on pages. • Pre-existing course content with self-contained navigation can be loaded into LMS and can be accessed by courses intact. • Loaded content is maintained in the formats (HTML, XML) in which they are designed. • The LMS/CMS must provide a search tool for all course content including functions for searching hidden content. • The LMS/CMS must provide support for adding mime types into the system if they are not already recognized. • The LMS/CMS must be compliant with 800x600 px for content, assessments, discussions, and work area. • The LMS/CMS must support internal and external CSS on loaded content. • The LMS/CMS must provide support to copy content and assessments from master courses and/or content repository to other organizations and schools that are using FLVS content in the Firm's LMS/CMS. • The LMS/CMS must provide support functionality to export/package FLVS content, including instructional materials, metadata, and assessments. Where possible, industry standards should be supported such as Common Cartridge, SCORM, QTI, etc) • The LMS/CMS must provide authentication capability to allow single sign on from a client's LMS should the client choose to link into FLVS repository.

Scenario Title:	Course Content Delivery
	• The LMS/CMS must provide capability to support content update through FLVS repository. • The LMS/CMS must provide support for importing content, assessments, and metadata. • The LMS/CMS must provide support for editing imported content, assessment, and metadata. • The LMS/CMS must provide functionality to allow for linked remote access of content through industry standard API formats, single sign-on, and domain authentication. • The LMS/CMS should provide functionality for content search. • Content should be able to be pulled from the CMS into the LMS for seamless, embedded viewing by the end user, while the content stays updated from a single source-content area. • Content in the CMS should be able to be linked to from the main LMS without embedding it into the LMS. • The system should track the number of users accessing particular learning objects and how long they were in a particular learning object. The system should provide details on how assessments are performing.
Additional Questions	• How does your company provide integration with third-party products and tools? • Which workflow tools do you provide in the following areas: content creation, development/test/production and content delivery? • Do you have technical standards in place to handle easy integration of external content? • Please show us how FLVS content will display in your system so student use of the content pages can be tracked.

Scenario Title:	Course Content Maintenance
Scenario ID:	LMS/CMS RFP-04.03
Introduction:	FLVS is in the process of developing a firm learning strategy. In this process, new pathways for development of content are being explored. We have legacy content and experimental content that are used in our courses. This content needs to run in our LMS, and we are keeping development options open to other formats of technical content production. We know these actions place a burden on our LMS to support multiple formats of content, so in the scenario below, we have outlined our current processes and those we expect to be implementing within the next 3 years.
	We will provide examples of content in these formats where we have them so you can place the content into your system as proof of concepts. We need a login to the area where you place this content, so that we can see it function in your LMS. As part of your response to this scenario, please give us the website and logins required to view and use that content.
	This scenario describes the FLVS course content maintenance requirements.
Use Cases:	FLVS needs to maintain legacy content as well as to develop new content in the LMS/CMS. Most legacy content is housed within .xhtml pages with text, video, audio and multimedia content contained on the page.
	We have a different level of users maintaining our course content. These include course developers, support staff, and outside contract vendors. Editing ranges from the correction of a typo to rewriting content. It is very important that the LMS/CMS authoring tools be able to support both novice and power user edits. It is also very important that the LMS/CMS provide controls for the prevention and correction of synchronization issues.
	At FLVS, we are also facing challenges in accommodating multiple versions where we are using slightly different content in two different course versions. We update one version for FLVS, but we do not update the client versions until the next major release, unless a critical fix is necessary. The changes made for the FLVS version must be manually made for the other versions, even though these changes consist of almost identical content. We want to branch a course to new versions and be able to merge changes into parent or child versions of the course.
	Client subscription to a specific version of a course will choose whether to receive updates to their version. Multiple types of updates should be supported, and a client can choose which type of update they will

Scenario Title:	Course Content Maintenance
	receive (i.e. major version only, link updates, content updates).
	We also have the need to track the changes made to content. When we inform our clients about a change, they often want to know what has been modified and would like to have the details in order to make a choice on whether they want to update their purchased FLVS content.
Actors:	Curriculum Services Team, FLVS Help Desk Support
Stakeholders & Interest:	Curriculum Services Team, FLVS Help Desk Support
Requested Functionality:	- The tools must allow FLVS to maintain legacy content as well as to develop new content in the LMS/CMS. - The LMS/CMS authoring tools should be a check-in/check-out feature or similar function to prevent synchronization issues. - The LMS/CMS should provide version control on content files to allow developers to roll back to a previous version. - The LMS/CMS system should provide reporting on changes made to content. - Client subscription to a specific version of a course will choose whether to receive updates to their version. Multiple types of updates should be supported, and a client can choose which type of update they will receive (i.e. major version only, link updates, content updates).

Scenario Title:	Digital Repository and Its Application
Scenario ID:	LMS/CMS RFP-04.04
Introduction:	FLVS is in the process of developing a firm learning strategy. In this process, new pathways for development of content are being explored. We have legacy content and experimental content that are used in our courses. This content needs to run in our LMS, and we are keeping development options open to other formats of technical content production. We know these actions place a burden on our LMS to support multiple formats of content, so in the scenario below, we have outlined our current processes and those we expect to be implementing within the next 3 years.
	We will provide examples of content in these formats where we have them so you can place the content into your system as proof of concepts. We need a login to the area where you place this content, so that we can see it function in your LMS. As part of your response to this scenario, please give us the website and logins required to view and use that content.
	This scenario describes the FLVS requirements for a content repository.
Use Cases:	FLVS is in the process evaluating and determining the best use of a digital repository. A digital repository is important for FLVS in helping to manage content, support learning and teaching, research, and administrative processes. We would like our digital repository to be integrated with our Content Management System to provide a positive learning experience for end users.
	FLVS often acquires third party, vendor-created content that may reside outside our own content server, for example, Discovery Streaming® video or SASinSchool®. These products are integrated with our course content and accessed by our students as well as clients. Third party product integration should also include any required access authentication. The student or clients should not be asking to log on to an external server while taking FLVS courses.
	FLVS would like our digital repository to support various content asset types. For example, html, xhtml, .doc(x), PDF(x), mp3, WAV, MVI, mp4, .fla, js, xls(x), CSS, , exe, dmg, text, csv, zip, and others. We would also like to XML metadata for each asset. All assets should be ratable by users.
	FLVS instructors often create additional content during their teaching, and they would like to share this created content with their peers. We would like to have templates available for teachers and students to create and manage their own content. The content creation process should be managed through workflows that can be user-defined and vary based on

Scenario Title:	Digital Repository and Its Application
	the type of content and user role.
	Teachers are able to review student work. Upon review, teachers can designate student work for permanent storage in the main repository of content so it can be used in the future. Workflow must allow for permission by the creator for copyright use. Developers and administrators are able to review teacher work, student work, and their own team's work. FLVS has the ability to turn this on or off based on the user role to customize the workflow process.
	To make items easier to locate, a tagging scheme can be set up. A simple set of tags can be given to students to fill in, teachers are asked for a little more information on their created content, and developers are asked to tag content very specifically. We have the ability for users to tag content with IEEE LOMv1.0 fields. For developers, we plan to use the SREB-SCORE scheme to allow for easier participation with that initiative in the future.
	http://www.sreb.org/programs/EdTech/SCORE/LOMdescription.asp
	Also, SCORE Sharable Content Object Repositories for Education Users' Guide to Learning Object Metadata (LOM) – at: http://www.sreb.org/programs/EdTech/SCORE/SCORE_Users_Guide.pdf page 6
	FLVS would like the repository to provide various options for content retrieval. For example, the content should be able to be embedded into a lesson page so it pulls the most recent version, or accessed through a link to the content in the repository. The content should also be searchable. Teachers and students should be able to search and access the repository through an intuitive interface, and access searchable content based on their pre-defined system role.
	FLVS also needs to make sure the retrieved content can be deployed to various devices, for example, cell phone or a computer monitor. Since we have clients purchase our content, we need to make sure our content is portable through standard industry formats such as IMS QTI, SCORM or Common Cartridge.
Actors	Curriculum Services Team, Teachers, Students, Clients, FLVS Help Desk Support,
Stakeholders & Interest:	Curriculum Services Team, Teachers, Students, Clients, FLVS Help Desk Support, Instructional Leaders, Instructional Managers

Scenario Title:	Digital Repository and Its Application
Requested Functionality:	LMS/CMS should support the following functionality: • Various content asset types. The formats include, but are not limited to, .htm, .xhtml, .doc(x), .pdf(x), .mp3, .exe, .dmg, .wav, .mvi, mp4, .swf, .fla, .js, .xls(x), .css, .txt, .csv, .zip, and others. • Linking to external content. • Seamless integration with the learning management system • Simple, user-friendly interface • Simple search field • Single sign-on tied to learning management system authentication. • Secured access to only show items to specific user roles, definable by creator of the item. • Single-sign-on to content hosted on other services. • Entering XML metadata. The metadata format should support industry standard formats such as LOM and be extensible/customizable for schemas such as are used in SCORE and DITA. • The content should be able to be embedded into a lesson page so it pulls the most recent version, or accessed through a link to the content in the repository. • The content should be searchable based on user roles. The search interface should be intuitive and offer basic and advanced search capabilities. • Different level of content access and control (read, write, edit, etc.) based on user role and versioned when edits occur. • Content creation should be managed through workflows that can be user-defined and vary based on type of content and user role. • Created content should be ratable by users and the ratings stored with the asset.

Scenario Title:	Digital Repository and Its Application
	• Content should be deployable to various devices with the presentation dynamically mapped appropriately. • Single-click access from main navigation interface. • Ability for a review workflow for approval of items going into the repository. Ability to turn this on/off and/or base on the user role. • Ability for end user to tag content with IEEE LOMv1.0 fields. We hope to use the SREB-SCORE scheme to allow for easier participation with that initiative in the future. http://www.sreb.org/programs/EdTech/SCORE/LOMdescription.asp Also, **SCORE Sharable Content Object Repositories for Education Users' Guide to Learning Object Metadata (LOM) – at:** http://www.sreb.org/programs/EdTech/SCORE/SCORE_Users_Guide.pdf**in this document there is a schema on page 6 that is really a good one for metadata/content tagging. • Federation ability so users can search outside repositories for objects. • Content should be portable, able to be moved between systems using standard industry formats such as SCORM or Common Cartridge.
Additional Questions:	Could you please provide a list of all asset formats supported and not supported?

Scenario Title:	Course Development Environments
Scenario ID:	LMS/CMS RFP-04.05
Introduction:	FLVS is in the process of developing a firm learning strategy. In this process, new pathways for development of content are being explored. We have legacy content and experimental content that are used in our courses. This content needs to run in our LMS, and we are keeping development options open to other formats of technical content production. We know these actions place a burden on our LMS to support multiple formats of content, so in the scenario below, we have outlined our current processes and those we expect to be implementing within the next 3 years.
	We will provide examples of content in these formats where we have them so you can place the content into your system as proof of concepts. We need a login to the area where you place this content, so that we can see it function in your LMS. As part of your response to this scenario, please give us the website and logins required to view and use that content.
	This scenario describes the FLVS course development environments.
Use Cases:	FLVS Curriculum Services Team is responsible for developing our course content. We also outsource some work to external vendors. When a new course is completed, we will need to set up a proof classroom for internal and external review before the course can be released to the student. Once the course is released, we also need to maintain the course which includes making changes to the content and assessment. All the changes need to be made and tested without interrupting students' learning. So, it is important that we can isolate development, testing, and production.
	We also need to have a way of tracking changes made to the content and who made the changes to the content.
	The LMS/CMS should provide support of an assessment question database that allows questions to be tagged to standards and learning objects. This database would serve as a test bank and would have the ability to serve up a random group of questions based on the number required.
	The LMS/CMS environment should include the ability to create multiple "sandbox" areas where users can try new things without adversely impacting production.
Actors	Curriculum Services Team, FLVS Help Desk Support
Stakeholders & Interest:	Curriculum Services Team, FLVS Help Desk Support, Leadership Team

Scenario Title:	Course Development Environments
Requested functionality	• FLVS should be able to have multiple environments so that we can isolate development, testing and production. Movement of content among environments should be controlled by workflow provided by the CMS, specified by FLVS. • The LMS/CMS must provide support for the workflow to manage the movement of content among different environments. • The LMS/CMS should provide a feature to prevent content synchronization issues. • The LMS/CMS must provide support for exams/questions to be tagged to standards and learning objects. • The LMS/CMS must provide support for a test bank and randomization of questions from the test bank. Randomization should be able to be based on question tags (learning standard, type of question such as essay or multiple choice, FLVS defined tags). • The system should include a reporting feature that provides data on content created, changed, modified by, etc.

Section V
System Administration and Support Scenarios

Scenario Title:	System Administration Interface
Scenario ID:	LMS/CMS RFP-05.01
Introduction:	FLVS LMS/CMS support staff needs to have administrative access to provide internal support. This scenario details the use cases for this access.
Use Cases:	The administrative support staff should have access to all teacher and student classrooms. We often have administrative needs to monitor classrooms or enter to see a specific student's work record and gradebook.
	FLVS needs to be able to create user accounts for teachers, students, vendors, and support staff outside of the normal VSA integration.
	FLVS also needs to have an interface to upload/download course content files.
	The support staff should be able to manually create blank course classrooms.
	FLVS currently has over 1000 active course classrooms and this is growing at a rate of 30% per year. It is important that the support staff have access to 5 years of history for the courses and the students.
	FLVS also provides authorized users access to review demonstration courses. The demonstration courses should be set up so we can protect live courses and students. FLVS restricts demonstration access to a specific time period.
	Teacher training classrooms can be set up where teachers can take an orientation class for their specific course.
	Each time a new master course version is released, a practice classroom will be generated where teachers can see the course content and assessments. The demonstration courses should be set up so that we can protect live courses and students. Teachers can see the course content, assessments.
Actors:	FLVS Help Desk Support
Stakeholders & Interest:	FLVS Information System and Support Operations, Professional Development
Requested Functionality:	• Administrative and development users shall have the ability to upload and download course files using FTP, SSH, and HTTPS. • The administrative account should have the capability to add or remove user accounts.

Scenario Title:	System Administration Interface
	• FLVS should have access to 5 years of history for the courses and the students. • The support staff should be able to manually create blank course classrooms. • A super-administrative account should have the capability to manage all administrative functions in all sub-domains under the FLVS main domain. • The administration should have full access to all courses. • Teacher training classrooms can be set up. • Each time a new master course version is released, a practice classroom will be generated where teachers can see the course content and assessments. The demonstration courses should be set up so that we can protect live courses and students. Teachers can see the course content, assessments. • Provide authorized users with access to review demonstration courses. The demonstration courses should be set up so that we can protect live courses and students. Allow account restriction to a specific time period. • System administrators should be able to brand the LMS/CMS for FLVS, Franchise, and client needs. • Ability to turn LMS/CMS features on and off at an organizational level.

Scenario Title:	**Application System Maintenance and Support**
Scenario ID:	LMS/CMS RFP-05.02
Introduction:	This scenario discusses the system maintenance and support schedule that your company maintains.
Use Cases:	The LMS/CMS company needs to work closely with FLVS support staff to provide system maintenance and support. We have over 80,000 registered users and many of our students work evenings and weekends. In order to keep our users and staff informed ahead of time regarding planned maintenance and upgrade schedules, we require to be notified well in advance of these outages.
	FLVS has a LMS/CMS support team to handle technical issues reported by teachers and students. When the issue cannot be resolved by FLVS technical support staff, it will be routed to the LMS/CMS Company technical support. FLVS requests to have all reported issues addressed within 24 hours. FLVS LMS/CMS support team also monitors the application system performance on a daily basis and reports any problems back to the LMS/CMS Company. FLVS uses the Parature help ticket system to track all system related issues and support. Parature is a web-based customer service software adopted by FLVS Information System and Support department. FLVS would prefer to have all our vendor communications, (such as support tickets or customization requests), done through Parature so that we can better manage the process and status.
Actors:	FLVS Help Desk Support
Stakeholders & Interest:	FLVS Information System and Support Operations
Requested Functionality:	1. The LMS/CMS Company shall provide at a minimum, quarterly updates for the routine maintenance and/or enhancement of the system.
	2. The LMS/CMS Company shall provide updates within 30 days for the maintenance and/or enhancement of the system as required in keeping FLVS in compliance with the *new* State and Federal laws and statutes.
	3. The LMS/CMS Company shall receive all requests for updates for maintenance and/or enhancements via the problem management system in use by FLVS (Parature).
	4. The LMS/CMS Company shall *respond* to requests for maintenance and /or updates within 2 working days.

Scenario Title:	Application System Maintenance and Support
	5. The LMS/CMS Company should provide a dedicated email account to FLVS in order to set up a Parature workflow to handle customization and support requests. The LMS/CMS Company should provide a dedicated email account to FLVS in order to set up a Parature workflow to handle customization and support requests. 6. The LMS/CMS Company must provide daily technical support for FLVS technical/admin team on a 24/7, 365 day basis. 7. The LMS/CMS Company must provide second-level daily technical support for teachers and students. 8. The LMS/CMS Company must provide training for FLVS technical support personnel.
Additional Questions:	The LMS/CMS Company shall provide a service level agreement regarding the maintenance and/or enhancement of the system as required, maintaining existing functionality.

Scenario Title:	Application System Customization
Scenario ID:	LMS/CMS RFP-05.03
Introduction:	This scenario describes LMS/CMS company process and procedure regarding customization requests from FLVS.
Use Cases:	FLVS often has LMS/CMS customization needs related to new product/course material integration, new functionality, or database related requests. FLVS will provide a Statement of Work to request the customization services. Prices outside of the scope of the agreed-upon contracted amount will be negotiated on the Statement of Work. Delivery dates will be negotiated on the Statement of Work. See "18 Costs Scenario" for additional information. FLVS uses a problem management system called Parature to handle all internal and external help requests. It is preferred that the LMS/CMS company utilizes the same workflow FLVS uses to handle all system customization related requests.
Actors:	FLVS Help Desk Support
Stakeholders & Interest:	FLVS Information System and Support
Requested Functionality:	1. The LMS/CMS Company shall receive all requests for customization via the problem management system in use by FLVS (Parature). 2. The LMS/CMS Company shall *acknowledge* requests for enhancements within 2 working days. 3. The LMS/CMS Company shall *respond* to requests for enhancements with a Statement of Work within 10 working days.

Scenario Title:	Application System Storage and Backup
Scenario ID:	LMS/CMS RFP-05.04
Introduction:	This scenario describes LMS/CMS company policy and procedure regarding system storage and backup.
Use Cases:	All FLVS student related records need to be kept for 5 years due to legal mandates/requirements and records requests that FLVS receives.
	FLVS is often being asked to provide a former student's record for various reasons. One example is the NCAA (National Collegiate Athletic Association). They confirm online school transcripts of incoming freshman athletes by having us confirm that the student's transcript reflects actual work done in the LMS. We need to retrieve student work, communications, and gradebook entries, confirm all exemptions of assignments, and provide this information to the NCAA. This is only one example of the need to retrieve former student records.
	The LMS/CMS company should be able to retrieve and provide requested information within 48 hours notice.
Actors	FLVS Help Desk Support
Stakeholders & Interest:	FLVS Information System and Support Operations
Requested Functionality:	• The LMS/CMS must be able to handle FLVS data storage and retrieval needs so that data recovery can be addressed without extensive customization.
	• The LMS/CMS must provide FLVS staff controlled access to student grades, communications, and work after the student has completed the course.
	• The LMS/CMS must provide capability to view archived student work by student name.
	• The LMS/CMS Company must provide support for daily backup to backup any changes made during the day, weekly full backup, and monthly full backup.
	• The LMC/CMS Company must provide an offsite storage for backup, and keep all FLVS students related records for 5 years.
	• The LMS/CMS must provide the option for FLVS administrative support to backup/restore a course if necessary.

Scenario Title:	Disaster and Recovery Plan
Scenario ID:	LMS/CMS RFP-05.05
Introduction:	This scenario describes LMS/CMS company policy and procedure regarding System Disaster and Recovery Plan.
Actors:	FLVS Help Desk Support
Stakeholders & Interest:	FLVS Help Desk Support, Leadership Team, FLVS Franchises
Requested Functionality:	- The LMS/CMS must provide a copy of the firm's standard practice relating to application system disaster and recovery plan. - The LMS/CMS must have disaster recovery/business continuity/roll-over/redundancy functionality built into the system.

Scenario Title:	Application System Roles
Scenario ID:	LMS/CMS RFP-05.06
Introduction:	FLVS requires that the LMS/CMS company provide different levels of access based on FLVS support staff job function.
Use Cases:	The base level FLVS roles that need to have system access are: • Teachers • Teachers accessing as a student • Students • Teacher intern • Parents should be able to review all of their children's grades and work. • Instructional leaders and instructional managers need to have full access to supervised teachers and their students' accounts. • System administrators should have full access to all areas of the system. • LMS support (first level and second level) need to have access to all teacher and student accounts. • Course developers • Client access is determined on an as-need basis. Clients often need demo access to courses. • Vendor access is determined on an as-need basis. Vendors will often have course development roles. • The Leadership Team and Executive Team need to have access to all course content, teachers and their students' information. • Guest roles
Actors:	FLVS Help Desk Support
Stakeholders & Interest:	FLVS Information System and Support Operations, Teachers, Students, Course Developer, FLVS Help Desk Support
Requested Functionality:	1. The LMS/CMS should have the ability to define a minimum of 10 roles of varying nature from complete administrative control to the ability to view a single course only. 2. The LMS/CMS should provide access control at the administrator level to determine roles for users. 3. The LMS/CMS should provide capability for administrator to view activity logging and analysis of user activities by role such as interactions between teachers and students.

Scenario Title:	Application System Roles
	4. The LMS/CMS should provide the capability to track individual roles system usage. (I.e., sign in/sign off, time spent grading, etc.) 5. The LMS/CMS should allow FLVS to customize access for roles.

Scenario Title:	Industry Standards Support
Scenario ID:	LMS/CMS RFP-05.07
Use Cases:	FLVS may occasionally purchase content packages from publishers and other institutions. The purchased or developed content needs to be able to import to the FLVS LMS/CMS environment or be able to be incorporated with existing FLVS course content. FLVS needs a LMS/CMS system which can support industry standard content - for example, SCORM, Common Cartridge, and QTI. FLVS also provides content to many other states and partners through our Global Services division. Most of our clients use a different LMS than FLVS; therefore, we need to be able to export the course content, assessments, and discussions from FLVS LMS and import into the client's LMS. (Please see LMS/CMS RFP 07.05 – Client Course Delivery for detailed process.)
Actors:	Course Developers, Leadership Team, FLVS Global Services, FLVS Client Support
Stakeholders & Interest:	Course Developer, Leadership Team, FLVS Global Services
Requested Functionality:	- The LMS/CMS Company must have open APIs available for potential integration with third-party products. - Please see LMS/CMS RFP 07.05 for more requirements relating to client content delivery.
Additional Questions:	- Is your system compliant with SCORM? - If your system is compliant with SCORM, please describe which version of SCORM you possess and whether your system is listed as compliant on the ADL.gov website. - Does your system support valid Common Cartridge v1.0 content? - All e-learning standards continue to evolve. Please describe your road map for remaining current with evolving standards.

Scenario Title:	End User System Requirements
Scenario ID:	LMS/CMS RFP-05.08
Introduction:	This scenario details the types of equipment used by FLVS staff and students to ensure LMS support of the configuration of our equipment for the web-based LMS/CMS.
Use Cases:	FLVS provides equipment to all of our instructors and support staff. All equipment is setup by our technical support department with approved hardware and software. Many teachers use Opera to assist in grading functions as it has a feature to allow saving teacher notes that can be dropped into the LMS while grading. FLVS does not provide equipment to our students. We work with our LMS provider to publish basic system hardware and software requirements for our students. The current requirements for our students are detailed below. **Browser Plug-ins** • Sun Java 1.4.2 JRE or higher • Sun Java 3D 1.3 or higher - Required in some courses • Flash 9.0 or higher • Shockwave (Operating System Dependant) • Acrobat Reader 7.0.9 or higher **PC Requirements** • Pentium III (500 MHz minimum, higher recommended) • Minimum of 10 gigabytes free HDD space • 128k internet connection. A broadband connection is strongly recommended. • Windows 2000, XP, or Vista • Microsoft Office, Open Office or Google Docs (Some Business courses require Microsoft Office which will be notated within course registration) • 512 MB Ram • 12x CD-ROM (CD/DVD Recommended – Some courses require CD/DVD which will be notated within course registration) • Display setting 1024x768 resolution • Printer required • Internet Explorer version 6.0 or higher or Firefox version 2.0 or higher • Students need a method to save work to a portable medium (Floppy, Zip, CD, USB)

Scenario Title:	End User System Requirements
	• Audio: Sound card with speakers, microphone or headset **Macintosh Requirements** • Power Mac G3 (350 MHz) • OSX • Microsoft Office, Open Office or Google Docs (Some Business courses require Microsoft Office which will be notated within course registration) • Students need a method to save work to a portable medium (Floppy, Zip, CD, USB) • 256 MB Ram • Minimum of 10 gigabytes free HDD space • 12x CD ROM (CD/DVD Recommended) • 128k internet connection. A broadband connection is strongly recommended. • Display setting 1024x768 resolution • Printer required • Safari browser or Firefox version 2.0 or higher • Audio: Speakers and microphone or headset
Actors:	Students, Teachers
Stakeholders & Interest:	Students, Parents/Guardians, Teachers, FLVS Help Desk Support
Requested Functionality:	• The LMS/CMS must support access for students from any computer with internet connectivity and FLVS basic user system requirements as above. • The LMS/CMS must support standard web browsers consistent with FLVS technical support guidance: should be able to use LMS/CMS from any web browser (Internet Explorer, Fire Fox, Opera, Safari, and Chrome). • Users should be able to run LMS/CMS on a computer running Windows or Mac OS or Linux operating system.
Additional Questions:	• Please provide your basic end user software requirements. • Please provide a complete list of the supported browsers including the versions supported.

Scenario Title:	Service Level Agreement (SLA)
Scenario ID	LMS/CMS 05.09
Introduction:	This scenario requires the LMS/CMS Company to describe the policies and procedures regarding the Service Level Agreement (SLA).
	The scenario is an SLA for vendor hosting. If you have a self-hosted option, please also answer this scenario for those items pertaining to that environment.
Actors	FLVS Information System and Support Operations
Stakeholders & Interest	FLVS Information System and Support Operations, FLVS Leadership Team
Specific Questions:	**Please describe how your company addresses each of the following:** • Administration interface – Secure access to admin interface • Quarterly Security Scans, Analysis & Remediation • Industry requirement: Five nines of uptime • Incident/outage reports • Clear support escalation paths • Facility Security – safe from theft, exploitation, environmental hazard, etc. • Industry requirement: Benchmark Testing • Hardware and Software Patch Management • End-of-Life-Cycle hardware management planning • Capacity planning • Onsite Hardware replacements/spare-parts • Premium Support Package – 2 hour on-site technician/vendor support response • Warranty Guarantee

Scenario Title:	Service Level Agreement (SLA)
	- Intrusion Detection Device Management - Virus and Malware protection - Chain of custody practices – with hardware, software, data, etc. - End-User Acceptable Use Policy - Industry Best Practice Authentication - User auditing - Firewall & Unified Threat Management - Backup retention and storage
Additional Questions	- Will systems Management (daily maintenance) be onsite or remote? How quickly can personnel respond to a Denial of Service attack? - Will monitoring tools alert support staff via text, email, phone calls, etc?

Scenario Title:	Database Management
Scenario ID:	LMS/CMS RFP 05.10
Introduction:	This scenario describes LMS/CMS database management system requirements for both vendor hosting and self hosting.
Use Cases:	FLVS Information Systems and Support team provides reports to the FLVS leadership team on a regular basis. We need to have access to the information stored in the LMS/CMS database. LMS/CMS must provide a method of programmatically querying data for integration into FLVS core systems on demand. • Examples of methods include: API, ODBC, web services (SOAP), SQL Server Replication, etc. • Should be secure, reliable and scalable
Actors:	System Administrator, Database Administrators, Web Database Specialists, Developers, Technical Support Representatives
Stakeholders & Interest:	System Administrator , Database Administrators, Web Database Specialists, Developers, Technical Support Representatives
Requested Functionality:	• LMS/CMS must provide a method of programmatically querying data for integration into FLVS core systems on demand. Examples of methods include: API, ODBC, web services (SOAP), SQL Server Replication, etc. • The LMS/CMS database should be secure, reliable, and scalable. • The LMS/CMS must allow replication of the database.
Additional Questions:	Could you provide a list of all support database platforms (including version numbers)?

Scenario Title:	VSA Integration
Scenario ID:	LMS/CMS RFP-05.11
Introduction:	Virtual Student Administrator (VSA) is a student and teacher management system that allows administration to track and gauge performance of students and teachers. It interfaces with the LMS, controls course management, registration and admissions and is the system of record official documents.
Actors	Students, Parents, Instructors
Stakeholders & Interest:	Students, Parents, Instructors, Support Staff, Leadership Team
Requested functionality	The LMS must provide support for integration with VSA. Please see attached document for the required real time integration activities between VSA and the LMS

VSA/LMS Integration

The Integration process between VSA and the LMS will need to perform the tasks outlined below in real time. The LMS must expose a SOAP API that includes a WSDL (Web Services Description Language) contract file for these tasks. For all of these tasks, the API must support the ability to utilize VSA generated IDs to make API calls after the ID has been assigned to the entity. For example, one a teacher account is created in the LMS via the API and includes the VSA ID during creation, the API should allow a teacher to be assigned to a classroom while referencing the VSA ID as a parameter and not have to reference an LMS generated ID. Furthermore, when information is exposed or pushed to VSA, that information must reference the VSA ID.

System Level Account Creation
- **Create and Update Teacher Manager Admin Accounts**
  - Parameters:
    - *VSA User ID*
    - *First Name*
    - *Last Name*
    - *Username*
    - *Email*
    - *Password*
    - *VSA Teacher User ID(s) (Optional)* |

Scenario Title:	VSA Integration

	• **Create and Update Teacher Accounts**
	    o Parameters:
	        ▪ *VSA User ID*
	        ▪ *First Name*
	        ▪ *Last Name*
	        ▪ *Username*
	        ▪ *Email*
	        ▪ *Password*
	
	• **Create and Update Teacher Assistant Accounts**
	    o Parameters:
	        ▪ *VSA User ID*
	        ▪ *First Name*
	        ▪ *Last Name*
	        ▪ *Username*
	        ▪ *Email*
	        ▪ *Password*
	
	• **Create and Update Student Accounts**
	    o Parameters:
	        ▪ *VSA User ID*
	        ▪ *First Name*
	        ▪ *Last Name*
	        ▪ *Username*
	        ▪ *Email*
	        ▪ *Password*
	        ▪ *Grade level (Optional)*
	        ▪ *Parental Email (Optional)*
	
	• **Create and Update Guardian Accounts**
	    o Parameters:
	        ▪ *VSA User ID*
	        ▪ *First Name*
	        ▪ *Last Name*
	        ▪ *Username*
	        ▪ *Email*
	        ▪ *Password*
	        ▪ *Student VSA UserID(s)*
	
	Course and Classroom Management
	• *Create a Classroom*
	    o When a Classroom is created, the content and

Scenario Title:	VSA Integration

assessments for that classroom must automatically be generated and populated from the master course repository. If the content or assessments change in the master course repository they will be updated automatically in their respective classrooms.

- o Parameters:
  - *VSA Course Version Segment ID (Master Course Content ID)*
  - *VSA Course Name (Master Course Name)*
  - *VSA Classroom ID*
  - *Virtual School ID (Instance ID)*

- *Create Teacher Classroom Association*
  - o Parameters:
    - *VSA Classroom ID*
    - *VSA Teacher ID*

- *Create Teacher Assistant Classroom Association*
  - o Parameters:
    - *VSA Classroom ID*
    - *VSA Teacher Assistant ID*

- *Remove Teacher Classroom Association*
  - o Parameters:
    - *VSA Classroom ID*
    - *VSA Teacher ID*

- *Remove Teacher Assistant Classroom Association*
  - o Parameters:
    - *VSA Classroom ID*
    - *VSA Teacher Assistant ID*

Enrollment Management
- Create and Update Enrollments (intersection of student / course / version / segment / classroom)
  - o Parameters:
    - *VSA Enrollment ID*
    - *VSA Student ID*
    - *Segment*
    - *VSA Classroom ID*
    - *VSA Status ID*

Scenario Title:	VSA Integration

	▪ *Honors Flag*
	      ▪ *Weeks Active*
	      ▪ *Total Credits (Optional)*
	
	      ▪ NOTE: The ability to control the assessments required or availability based on attributes of an enrollment is a requirement (i.e. Honors Students are required to complete additional assessments whereas non honors students are exempt.) The LMS must be able to handle this requirement and provide data based on this flag sent from VSA (i.e. Percent Complete with a course must be calculated based correctly in both scenarios)
	
	  • Transfer Enrollments
	    o Manage Transferring of Enrollments from one classroom to another without losing enrollment data (e.g. progress through course, assessments and work completed)
	    o Parameters:
	      ▪ *VSA Old Enrollment ID*
	      ▪ *VSA New Enrollment ID (Optional)*
	      ▪ *VSA Old Classroom ID*
	      ▪ *VSA New Classroom ID*
	      ▪ *VSA Status ID*
	      ▪ *Honors Flag*
	      ▪ *Weeks Active*
	      ▪ *Total Credits (Optional)*
	
	  • In addition, the LMS must be able to handle the different enrollment status change scenarios including: Withdrawal Enrollments, Complete Enrollments, Suspend/Un-Suspend Enrollments (Deny Access), and reactivation of Withdrawn or Complete Enrollments
	
	Single Sign On Pass through
	  ▪ Ability to "pass" a user from VSA into the LMS without the user having to log into the LMS separately.
	
	  ▪ Ability to "pass" the user directly into the course content for the specific classroom course link they have clicked on from VSA

Scenario Title:	VSA Integration

	(This includes users that are not directly associated with a classroom, such as Teacher Managers.)
	
	<u>Gradebook</u>
	• The LMS will push full gradebook information for an enrollment to VSA as the information is changed with the VSA Enrollment ID as the key including:
	   o VSA Enrollment ID
	   o Assessment Name
	   o Unique Assessment ID
	   o Assessment Version (Optional)
	   o Points Earned
	   o Points Possible
	   o Assessment Weight
	   o Submission Attempt Number (Number of Resubmissions)
	   o Honors Assessment Flag
	   o Submission Status
	      ▪ Not Submitted
	      ▪ Submitted
	      ▪ Graded
	      ▪ Excused
	      ▪ Reset
	      ▪ Date Submitted
	      ▪ Date Graded

Section VI

Professional Development (PD)

Scenarios

Scenario Title:	PD Content Development
Scenario ID:	LMS/CMS RFP-06.01
Introduction:	The FLVS Professional Learning Team is responsible for developing professional learning courses. At times, course development is outsourced to external vendors. This scenario describes the professional development content and development scenarios.
Use Cases:	FLVS would like the LMS/CMS to provide authoring tools that support the novice and production user. Novice users may be Learning Specialists or subject matter experts. Power users would be instructional designers or other individuals with knowledge of development tools.
	Frequently, multiple individuals work together to develop professional learning courses. We would like the LMS/CMS to have collaboration tools to enhance the development process. For example, the ability to set up workflow for course development and features in a place that would allow multiple users to work simultaneously on content without overwriting work.
	The professional learning team serves many different audiences such as internal staff, franchise instructors and clients. We must tailor courses to meet the needs of these audiences. The ability to reuse or recreate content easily is needed.
Actors:	Instructional Design Specialists, Learning Specialists, Subject Matter Experts
Stakeholders & Interest:	Professional Learning Department, Subject Matter Experts, Leadership Team
Requested Functionality:	• The LMS/CMS should provide authoring tools to support both novice and production users.
	• The LMS/CMS should provide collaboration tools for content development.
	• The LMS/CMS should provide capability for reuse of content by copy of content or retrieval of content from repository for use in a new training course.
	• The LMS/CMS should have assessment and survey capabilities (see 02.02 Survey/Evaluation Tools).

Scenario Title:	PD Content Delivery
Scenario ID:	LMS/CMS RFP-06.02
Introduction:	Professional Development must deliver content to staff through an LMS/CMS. Currently, we are using a separate LMS/CMS for teacher and student content delivery. We do deliver teacher LMS/CMS training in the student LMS/CMS. Having a seamless system for student and teacher learning is desirable, but there are some differences in the needs for professional development content delivery.
Use Cases:	FLVS Professional Learning develops and utilizes a variety of content types including HTML, Flash, audio and video in the courses we deliver. At times, content is developed outside the LMS/CMS and then imported into the system. Additionally, imported content or content generated within the LMS/CMS must be exported for use in other learning management systems. The LMS/CMS should provide the ability to import/export content.
	Offering a variety of learning paths in professional learning is important. Professional Learning developers often develop courses that utilize both linear and non-linear learning paths. Linear paths present content in a consecutive manner and non-linear paths allow users to choose the order in which content is accessed. At times, content is also release based on benchmark mastery. The LMS/CMS should support a variety of learning paths.
Actors:	Instructional Design Specialists, Learning Specialists
Stakeholders & Interest:	Professional Learning Department, Clients, FLVS staff
Requested Functionality:	- The LMS must support import and export content: - The LMS should import, display, and track user access of HTML based content - The LMS should import, display, and track user access of Flash content - The LMS should import, display, and track user access of a variety of audio and video formatted content - The LMS should import, play, track and support score reporting from SCORM 1.2 and 2004 compatible content

	o The LMS should allow export of any imported content and any content created within the proprietary LMS system
	
	• The LMS should provide functionality to delivery linear and non-linear learning paths.
	    o Linear learning paths would present content in a consecutive path
	
	    o Non-linear paths would allow users to choose order in which content is accessed
	
	    o Adaptive/Prescriptive Learning - The LMS must support content release control based on benchmark mastery
	
	• The LMS can save course grades/completion data – pass/fail of the course.

Scenario Title:	PD Course Content Maintenance
Scenario ID:	LMS/CMS RFP-06.03
Introduction:	FLVS PD currently reviews training content three times a year.
Use cases:	The FLVS Professional Learning Department maintains a large catalog of courses. As noted above, we manually review content three times a year. We would like to automate the maintenance notification process. For example, provide administrator ability to create maintenance schedules and provide notification when date for content review occurs.
Actors:	Instructional Designers, Learning Specialists, Subject Matter Experts
Stakeholders & Interest:	Professional Learning Department, FLVS customers (cross-organizational teams we provide PD for)
Requested Functionality:	• The LMS/CMS should provide administrator ability to create maintenance schedules and provide notification when date for content review occurs.

Scenario Title:	PD Environments
Scenario ID:	LMS/CMS RFP-06.04
Introduction:	The delivery of learning for professional development is slightly different from the K-12 school delivery of content. Those differences are also detailed in this scenario.
Use Cases:	The FLVS Professional Learning Department provides courses to adult learners. It is important that the student learning environment is separate from the professional development environment for student security reasons.
	We also desire that the LMS/CMS provide tools and features that support the adult learner. For example, a register of upcoming activities, stored and available events, a course self-registration process, and collaboration tools.
	The Professional Learning Department has an extensive offering of PD opportunities. The ability to easily and efficiently enroll multiple users is needed. It is also important that Professional Learning Team members are able to track learning progress of PD activities.
Actors:	FLVS Staff, Franchise Teachers and Administrators, Client Teachers and Administrators
Stakeholders & Interest:	Professional Learning Department, Leadership team, FLVS staff, Franchises, Global Services, Other Florida School districts (potentially)
Requested Functionality:	• The LMS/CMS must provide support for a Professional Development (PD) portal that is separate from the student environment for security reasons.
	• The LMS/CMS must provide support for adult learner self-registration at the course level in the PD environment.
	• The LMS/CMS must provide the administrator, instructor and learner the ability to search for courses in the system.
	• The LMS/CMS should allow Professional Development personnel the ability to enroll multiple users at the same time through a single interface.

	• The LMS/CMS should provide calendar of events in the PD environment. The LMS/CMS should provide progress tracking capability to follow learners through their professional development courses and plan.

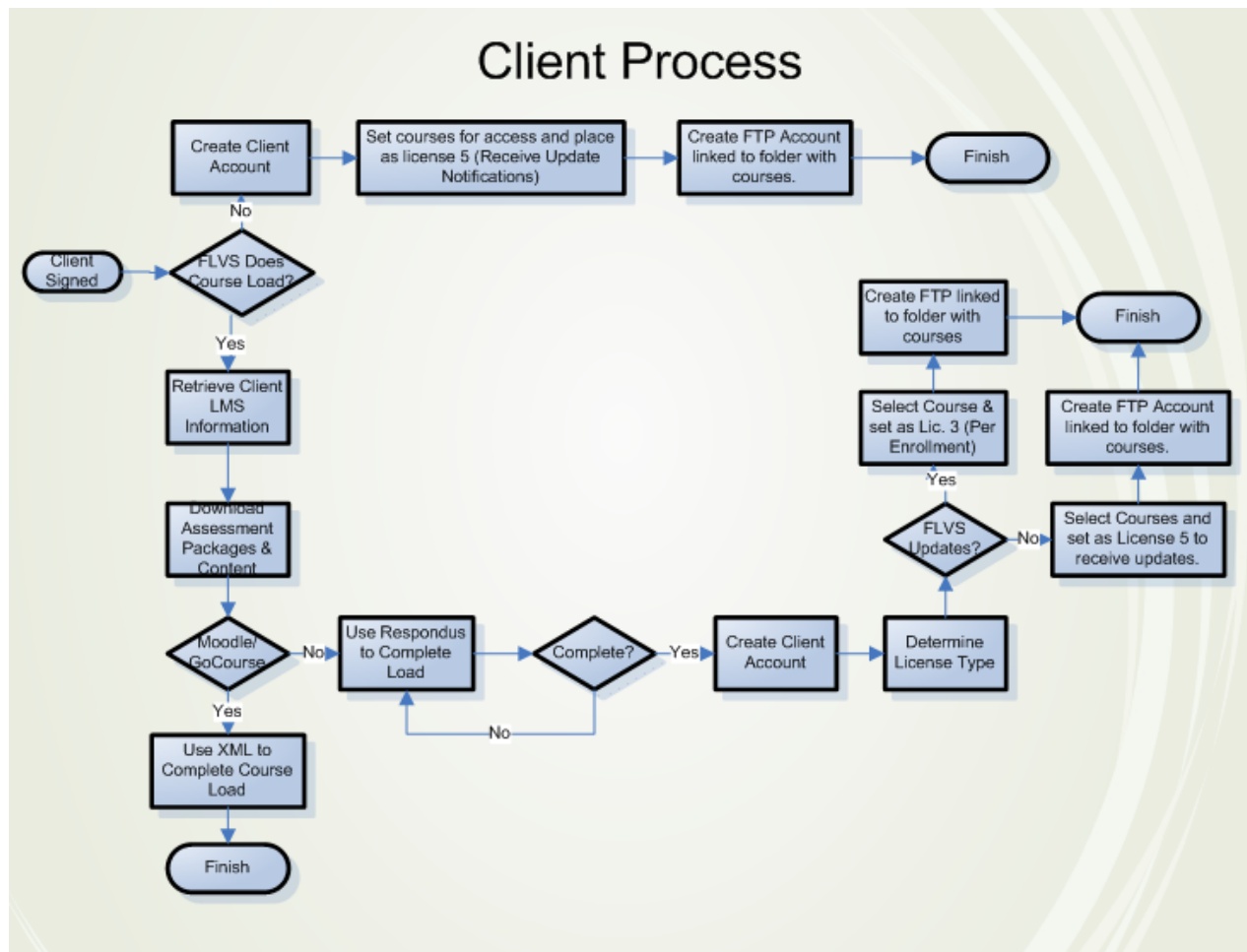| Scenario Title:	PD LMS and FLVS LMS Interfaces
Scenario ID:	LMS/CMS RFP-06.05
Introduction:	FLVS currently uses an in-service tracking system called MyLearningPlan® to manage training activities and in-service points. It is our desire that the LMS/CMS interface with this system along with other Learning Management Systems so that we may offer a comprehensive professional learning program.
Use Cases:	Users taking professional development courses are able to easily access FLVS systems that we use to complete, manage, and track professional learning activities. This is currently accomplished through MyLearningPlan®, BlackBoard®, ElementK®, Ucompass Educator®, Elluminate® and Moodle®.
Actors:	Teachers/Staff, Learning Specialists, IDS, Certification Specialist
Stakeholders & Interest:	Teachers/Staff, HR (Certification), Professional Learning Department, Leadership Team
Requested Functionality:	• The LMS/CMS should interface with the in-service tracking system, MyLearningPlan. • The LMS/CMS should interface with other learning management systems - BlackBoard®, ElementK®, Elluminate®, Ucompass Educator®, and Moodle®.

Scenario Title:	PD Content Repository
Scenario ID:	LMS/CMS RFP-06.06
Introduction:	This scenario describes the possible use of a content repository for Professional Development. The teacher has a student/learning role in this scenario.
Use Cases:	Currently, the FLVS Professional Learning Department is not utilizing a formal content repository. We would like to have a place to house pieces of content available to access, use or copy by a variety of user roles (instructional designer, learning specialist, subject matter experts, learner, etc). The use of outside PD repositories will be explored for future use.
Actors:	Instructional Designers, Learning Specialists, Subject Matter Experts
Stakeholders & Interest:	Professional Learning Department, Cross-organizational Subject Matter Experts
Requested Functionality:	- The LMS/CMS should provide capability for content to be retrieved for reuse in multiple courses. - Repository supports, at a minimum, the following file types/formats: HTML, Adobe Creative Suite Application, MS Suite Applications, MP3, SCORM1.2, SCORM2004. - The LMS/CMS repository should provide all role support for searching, retrieving, and reusing content. - The LMS/CMS repository should support interface with outside professional development content repositories. - At this time no vendor is used, but this area will be explored for future use - Content can stand alone and play directly from repository, separate from the course delivery system.

Scenario Title:	PD Users
Scenario ID:	LMS/CMS RFP 06.07
Introduction:	The users of the LMS/CMS for professional development differ slightly from those for the K-12 school side of FLVS. We detail the roles for professional development in this scenario.
Use Cases:	The FLVS Professional Learning Department offers professional development opportunities to a variety of users. These included FLVS certified and non-certified staff, FLVS franchise managers and instructors, and FLVS clients. FLVS needs to be able to offer, monitor, audit and assess professional development activities for these users. The ability to assign various roles and assign specific functions in order to successfully facilitate learning is needed.

Section VII
FLVS Global Services Scenarios

IMS/CMS RFP 07.01 – FLVS Client Workflow

Scenario Title:	FLVS Global Services Special Products
Scenario ID:	LMS/CMS RFP – 07.02
Introduction:	This scenario describes requirements for FLVS Global Services special products such as easy start program or any products required to operate within or interface with FLVS LMS: • Learning Recovery (FLVS Term**)** also runs through Global Services clients. We have offered Learning Recovery as summer school program and an ongoing year-long program. • Easy Start - provides clients with a complete and seamless start-up e-learning program. We host the courses on our LMS and provide the courses, learning and performance management systems. Clients gain access to our entire catalog with no minimal enrollments. Their teachers will provide instruction. • Course Licensing - This option provides those who already have a learning management system with a way to pay FLVS for licensing courses.
Use Cases:	Learning Recovery requires Individualized Learning and Assessment (*See 03.09 Individualized Learning*). A specific need for Global Services is to tag exam questions and content to learning standards from other states and countries. Easy Start requires the use of Sub-Domains for our client's instances of the FLVS LMS. Course Licensing – is a general product of GS and thus the ability to export courses from one LMS to another would be a desirable feature. Please see the LMS/CMS RFP 07.05 - Client Course Delivery scenario. Another general requirement of the LMS/Student Information management system would be the ability to provide customizable reporting to clients. We need to have the ability for new reports to be made, such as enrollment reports for the client on Global Services.
Actors:	Client Support Specialist, Global Service eLearning Managers
Stakeholders & Interest:	FLVS Global Services
Requested Functionality:	• If we have clients using your LMS, we must have the ability to quickly package a Learning Recovery course and transport it to the client's version of your LMS.

	- The ability to tag exam questions and content to learning standards for states and countries. - Easy Start requires the use of Sub-Domains and Bulk User uploads. An LMS should have this ability. - Course Licensing – is a general product of GS and thus the ability to export XML from one LMS to another would be a desirable feature. See 01.2 Client Course Delivery for a complete list of requirements. We will look at this scenario for an explanation. - Another general requirement of the LMS/CMS would be the ability to provide customizable reporting.

Scenario Title:	FLVS Global School
Scenario ID:	LMS/CMS RFP – 07.03
Introduction:	This scenario describes requirements for FLVS Global School. FLVS Global School is an open enrollment, tuition-based, virtual program designed to meet the educational needs of students, districts, states, and other countries. Teachers and administrators are provided for this program by Florida virtual school.
Use Cases:	FLVS Global School operates within the FLVS Internet domain. FLVS Global School shares the FLVS LMS/CMS, but with a few different needs than the FLVS requirements. For example, some FLVS Global School clients ask to customize FLVS course content for out of state students, so it is important to be able to remove assessments without impacting grades.
Actors:	Client Support Specialist, FLVS Global School Teachers, FLVS Help Desk Support
Stakeholders & Interest:	Global Services, FLVS Clients
Requested Functionality:	- Gradebook flexibility – the ability to easily remove assessments without adversely impacting grades is required as we often must customize content for out of state students. - Bulk student upload available via a spreadsheet or simple student registration system which can be used by students or FLVS administrators to register students. - Easily integrates and communicates with student management systems. The LMS/CMS should provide backend functionality to easily integrate with registration systems. - FLVS Global School may use Maestro as their student management system. The integration between Maestro and the LMS/CMS will be required if we move to Maestro. - FLVS Global School students are considered the same as FLVS students and are expected to be priced the same as Florida students in the contractual arrangements with the LMS/CMS Company.

Scenario Title:	**LMS Student Information Management**
Scenario ID:	LMS/CMS RFP-07.04
Introduction:	FLVS Global Services has some different needs from FLVS in regards to registering and tracking students. Simple student information management and registration features within the LMS can provide for basic needs of our clients using the LMS, or possibly for FLVS Global School needs.
Use Cases:	FLVS clients using the FLVS-chosen LMS have simple registration and student management needs. We need to consider these needs as we select an LMS to ensure the LMS can meet these needs for our clients. We are also looking for functionality that may serve FLVS's needs in the future.
	We also have the need to track financial information around tuition payments, and we have e-commerce needs in this area.
	FLVS sets up a district administrative account for our clients in the student information system. That administrator can create delegated users. These users register students in the student information management system for activation in the LMS.
	FLVS or clients can bulk upload student information from a csv or excel spreadsheet into the Student Information Management system and enroll them into a particular course classroom.
	In addition, the FLVS Global School has different student registration needs from FLVS because the records that are required to be kept are not as extensive. We are currently using VSA for FLVS Global School, but there is a possibility to move to Maestro. If that's the case, the LMS needs to be integrated with the Maestro system. Ideally, these functions would reside in the LMS system to make it easier for teachers and administrators to efficiently track students. If these functions are not available, integration with the Maestro system will be required (see Scenario 07.06 - Maestro Integration).
Actors:	Students, Teachers, Clients, Administrators, Physical School Counselors, Course Enrollment Managers, Instructional managers, Instructional leaders.
Stakeholders & Interest:	Students, Teachers, Clients, FLVS Global Services
Requested Functionality:	After many discussions through surveys and research, the following functionality is most desired and requested by our clients regarding

Scenario Title:	LMS Student Information Management
	student information management.

- Admissions/Registration
    - Collects Student Information

        First name, Last name, Email address, Physical address, Phone, Birth date, Gender, Grade level, District, School, State, Country, IEP/LEP yes/no (optional), Parent contact information

    - Allows course registration
    - Open and close course registration
    - Automatically generate user credentials
    - Online guardian approval

- Classroom Management
    - Automated classroom assignment
    - Assign classroom caps – the maximum number of students in a teacher's classroom

- Course Management
    - Create courses
    - Open and close courses based on classroom caps
    - Set course codes
    - Edit and display course information: descriptions, pre-requisites, etc.

- Teacher Management
    - Assign teachers to courses
    - Assign teacher caps to maintain desired teacher/student ratio

- Supervisor Dashboard
    - Provide teacher supervisor with summary view to monitor teacher performance

- Student Dashboard
    - Provides progress information on all course requirements and active courses
    - Allows student to enter course

- Guardian Account/Dashboard
    - Guardians can create accounts to monitor student progress/performance

- Teacher Dashboard
    - Provides teacher with summary view of all student

Scenario Title:	LMS Student Information Management
	information and progress to proactively track student performance. o Contact Management component to log all teacher to student/guardian contact o Tracks teacher/student contact dates against school's contact policy o Teacher issued electronic progress reports • Student Records o Report student and guardian demographic information o Displays student's physical school information o Cumulative academic transcript showing all virtual school completed and attempted courses • Official Document o Provides official transcripts of all virtual school courses taken • Physical School Management o VS can add physical schools or school districts to the system o Manages Physical School accounts for each school o Provides an account for school counselors and administrators to monitor student progress in VS courses • Messaging o Provides ability to send messages to student, guardians, and physical school users • Reports o Provides data on courses, enrollments, official documents, contact information, completion rates, achievement, wait lists, and teacher performance and management • Financial tracking o Tuition tracking o Client ledger tracking o Physical materials management and billing If FLVS Global School moves to Bocavox Maestro, the LMS will need to integrate with that management system to provide seamless registration and student management.

Scenario Title:	Client Course Delivery
Scenario ID:	LM/CMS RFP-07.05
Introduction:	FLVS loads courses to 8 different Learning Management Systems (Agilix GoCourse, ANGEL, Blackboard, eCollege, Desire2Learn, Moodle, uCompass Educator, and WebCT) to support our clients' use of our courses. It is critical that we are able to export content from our LMS for delivery into external client systems.
Use Cases:	FLVS provides content to many other states and partners through our Global Services division. From the LMS perspective, there are two types of clients - the client who uses the same LMS as FLVS, and the client who uses a different LMS than FLVS. For the client that uses the same LMS as FLVS, the following procedures are required: • FLVS will set up a domain for the client. • The courses will be hosted by the LMS. • The FLVS client support specialist will distribute courses to the client through FLVS LMS. • Clients can brand their instance of the LMS. For the client that uses a different LMS as their FLVS, the following procedures are required: • Export course (content, assessments, and discussion) from FLVS LMS in a format that we can use to import (deliver, set up) into the client's LMS.

Actors:	Client Support Specialists, I-Port Technicians, Blackboard, ANGEL, Desire2Learn, eCollege, Moodle, GoCourse, uCompass Educator.
Stakeholders & Interest:	Global Services, Curriculum Services, 75+ Clients and growing.

Requested Functionality:	The following abilities are requested when delivering courses to a client that uses a different LMS as their FLVS:
	
	1. If we have clients using your LMS, we must have the ability to quickly package a course and transport it to the client's version of your LMS.
	
	2. Ability to export/download course content (course pages/files) from the proposer's learning management system into a Zip package or individual files.
	
	3. Export course assessments and discussions from the proposer's learning management system, including all images attached to the assessments. Images should be appropriately indexed to the questions/assessments from which they came. We use all of the following methods for achieving this currently:
	    • Respondus Text Exports should include images attached to all assessments.
	
	    • IMS QTI 1.2 Compliant that meets standards to be imported into a IMS QTI compliant system correctly, especially the following areas:
	        o Question Pools
	        o Special Characters/Accents
	        o Images in Questions
	        o Answer Choices
	        o Question point values
	        o Outcomes feedback
	
	    • Take advantage of all assessment types available in QTI 1.2. If your system provides additional question types not supported in 1.2 then exporting QTI 2.1 will be needed when the spec is available.
	
	    • For every LMS-Specific import/export content package your LMS supports, you must support the latest version of the other LMS.
	
	    • State Learning Standards which are attached to exams/assessment questions are to copy down to XML metadata for transport to other learning management

	systems.
	• State learning standards which are attached to lesson content must copy down into XML metadata for transport to other learning management systems.
	4. Export discussions in XML format.
	5. Ability to notify clients of changes: When we make a change to content, discussions, and assessments on the FLVS system, an optional notification can be set up for external users that will let them know when changes have occurred and what change has been made. See 04.03 Course Delivery for additional details of a client content subscription model.
	6. We have clients who choose to do their own installation or updates of our content. We need to provide authorized external FLVS clients the ability to view and/or download content, discussions, and assessments.

Scenario Title:	Maestro Integration
Scenario ID:	LMS/CMS RFP-07.06
Introduction:	Global Service is currently using VSA as their Student Management System, but is in the process evaluating to adopt Bocavox's Maestro (http://www.bocavox.com/edu/) for all their clients.
Actors	Global Services, FLVS Global Services Clients, Maestro
Stakeholders & Interest:	Global Services
Requested functionality	The LMS must provide support for integration with Maestro, a Student Management System adopted by FLVS Global Schools to manage student Information. Please see attached system integration document.

LMS API Requirements

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Document Scope

- This document specifies the requirements that an LMS system must have to be integrated with Maestro.
- The document will be divided by functionality in Maestro that can interface with an LMS.

Interface

- The interface will be provided through a Web Service.
- This Web Service will require a method of authentication prior to allowing any sort of data exchange. This authentication will use a Login method with a Username and a Password.
- Once the Web Service has authenticated the session, it will allow to call any of the methods indicated bellow.

Notes:

- All parameter and return fields are required unless otherwise indicated.

API:

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Creating, Modifying and Deleting Students

- The LMS must provide a way to create, modify and delete students.
- This will allow Maestro to automatically create the students in the LMS once a student is created in Maestro. This will also allow Maestro to keep both systems synchronized.
- **Create Student:**
  - o Parameters:
    - User Name
    - Password
    - First Name
    - Last Name
    - Date of Birth
    - Email
  - o Return Value:
    - Student LMS ID or Error
- **Modify Student:**
  - o Parameters:
    - Student LMS ID
    - Password (optional)
    - First Name (optional)
    - Last Name (optional)
    - Date of Birth (optional)
    - Email (optional)
  - o Return Value:
    - Boolean indicating if successful
- **Delete Student (optional):**
  - o Parameters:
    - Student LMS ID
  - o Return Value:
    - Boolean indicating if successful

LMS API Requirements   3

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Creating, Updating and Deleting Enrollments

- The LMS must provide a way to create, updating and delete enrollments.
- This will allow Maestro to automatically enroll, modify and enrollment or drop the student from the LMS.
- **Create Enrollment:**
  - o Parameters:
    - Student LMS ID
    - Section LMS ID
    - Start Date
    - End Date
  - o Return Value:
    - Enrollment LMS ID or Error
- **Update Enrollment:**
  - o Parameters:
    - Enrollment LMS ID
    - Start Date (optional)
    - End Date (optional)
    - New Status (optional)
  - o Return Value:
    - Boolean indicating if successful
- **Delete Enrollment (optional):**
  - o Parameters:
    - Enrollment LMS ID
  - o Return Value:
    - Boolean indicating if successful

LMS API Requirements   4

Grades and Assignments

- The LMS may provide a way to retrieve grades and assignments.
- This will allow Maestro to show grade reports, averages and updated pacing information. The return values may vary depending on the implementation of the LMS, but should follow these guidelines.
- **Get Assignments:**
  - Parameters:
    - Section LMS ID (All sections if not provided)
  - Return Value:
    - Section LMS ID
    - Assignment LMS ID
    - Assignment Name
    - Maximum Grade
    - Assignment Due Date (optional)
- **Get Assignment Grades:**
  - Parameters:
    - Student LMS ID (All students if not provided)
    - Section LMS ID (All sections if not provided)
  - Return Value:
    - Student LMS ID
    - Section LMS ID
    - Assignment LMS ID
    - Grade
    - Letter (optional)
    - Assignment Comments (optional)
- **Get Enrollment Grades:**
  - Parameters:
    - Student LMS ID (All students if not provided)
    - Section LMS ID (All sections if not provided)
  - Return Value:

LMS API Requirements   5

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- Student LMS ID
- Section LMS ID
- Enrollment LMS ID
- Period 1 Grade
- Period 2 Grade
- Final Exam
- Grade Average

Section VIII

Operations Scenarios

And

Questions

Scenario Title:	Vendor Provided Training
Scenario ID:	LMS/CMS RFP-08.01
Introduction:	This scenario requires the LMS/CMS to describe different training resources available for Florida Virtual School.
Use Cases:	Students and teachers need appropriate training before beginning classes in the LMS/CMS. An orientation to the LMS/CMS is available for these beginning users. Parents should have an orientation available which walks them through parental functions.
	Once these users are in the system, context sensitive help allows just-in-time training as users need it. A user-guide type area allows users to look up information at any time. Video walk-through is available for common functions of the LMS/CMS.
	Administrators need training to facilitate teacher monitoring and system-level functions. FLVS technical support personnel will need training for first-level issues and escalation processes.
Actors:	Teachers, Students, Administrators, Support, Parents
Stakeholders & Interest:	Teachers, students, parents, administrators, support
Requested Functionality:	- The LMS/CMS must provide offline and online training resources for instructors. - The LMS/CMS must provide online training resources for students. - The LMS/CMS must provide online training resources for parents. - The LMS/CMS must provide training resources for administrators. - The LMS/CMS should provide training resources for technical support personnel. - The LMS/CMS should provide all users with context sensitive help.

Scenario Title:	School-Wide Portal
Scenario ID:	LMS/CMS RFP 08.02
Introduction:	FLVS seeks a portal solution with the ability to present a consolidated view of information, tools, applications and access points through a single mechanism.
Use Cases:	FLVS requires internal and external access to specific information with the ability to personalize and customize based on role, group or interest area. The solution must be able to integrate legacy applications, other portals' objects, and handle thousands of user requests. The extended capabilities of workflow management, collaboration between work groups, and policy-managed content publication would provide additional benefit to FLVS.
Actors:	FLVS Staff, Franchise Teachers and Administrators, Client Teachers and Administrators, Students, Parents
Stakeholders & Interest:	FLVS staff, Global Services, Other Florida School districts (potentially), students, Parents
Requested Functionality:	The LMS must provide: • Access to site via single sign on or user authentication. • Access to and integration with (where possible) existing FLVS business applications, tools and information. • Management of user profiles and distribution of content based on role, group or interest areas. • Management of user profiles and access based on role or group. • Ability for users to aggregate information by role, group or community. • Pre-configured, customizable templates for creation of individual, organizational portal sites.