KMx Version 7

Developer & Administrator Guide

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1   Introduction

KMx is an advanced distributed learning platform that is globally scalable and provides an integrated environment for developing, managing, and delivering training, performance support and documentation. KMx enables rapid content creation and delivery by a wide range of content creators including instructional designers and subject matter experts.

KMx is a Tiered Enterprise Class Web-Application built using MS .Net and MS SQL Server. The architecture is based on the Shareable Content Object Reference Model (SCORM). KMx is accessible using standard desk-top applications and browser technologies and supports popular learning, content and document management technologies.

Course developers can use the KMx development environment to create new programs that can include assessments, collaborations, and support documentation. Developers can also upload and deploy third-party, standards-based courses. KMx includes student registration, embedded development tools, industry-standard course imports/exports, exams, collaboration tools and progress reports.

KMx provides a systematic approach to the knowledge capture and classification process focused on a learning and performance support paradigm. By creation and management of highly granular objects KMx maximizes reutilization of content. The system provides automated routines to recommend outlines and objectives for organization of content during development of training materials and documentation.

The KMx system enables the creation of numerous output formats, including:

- eLearning Lessons
- XML Data
- Microsoft Word tm Documents
- Online Documents (eBook)
- SCORM Content Aggregation Packages

KMx was designed to enable client organizations to reduce costs attributable to development, delivery and maintenance of training and documentation. The performance based architecture provides employees/users targeted training, documentation and performance support. KMx will create an Enterprise Knowledge Repository within your Organization designed using a learning and performance support paradigm to maximize potential uses of the content while minimizing the development effort. KMx can significantly reduce the number of applications required to provide an Enterprise Learning, Performance and Talent Management solution.

1.1 Site Hierarchy

The highest level in the KMx hierarchy is a site. A site is an installation of the KMx application and associated utilities in either the customer data center or in a KMSI provided data center. A site has at least 1 "Organization" that is designated for receipt of system updates as the baseline configuration for all other "Organizations" on the site. Refer to the figure below for an illustration of the KMx Site Hierarchy.

Organization
- Domain Level Security
- Primary Branding

Company Type
- Groups Companies (Employees, Agents, Customers, Dealers, etc.)
- Catalog Access

Company
- User Level Security
- Catalog Access
- Secondary Branding
- Content Access
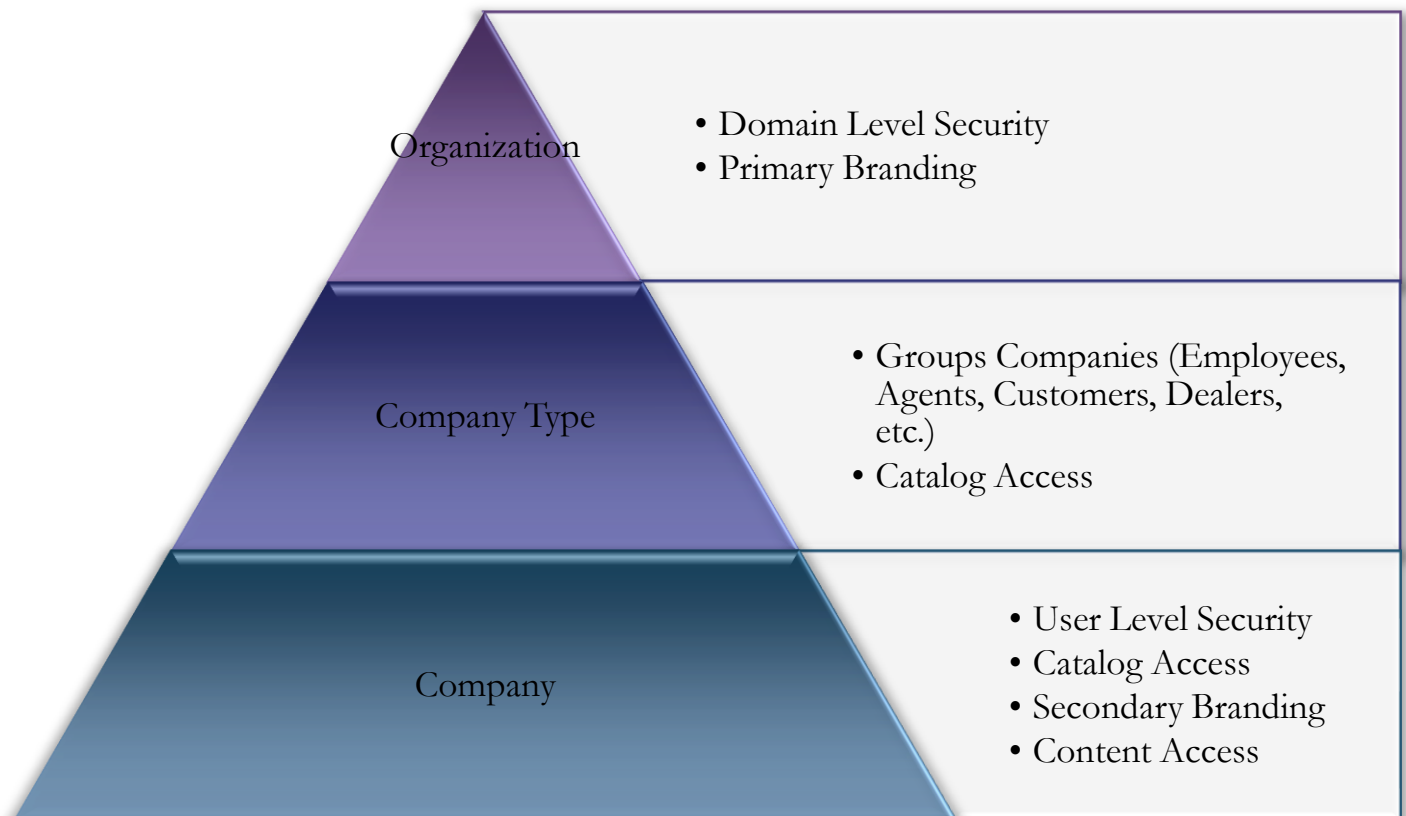
1.2 Organizations

Organizations are the highest operational entities within a KMx site installation. Most KMx clients operate with a single KMx Organization. Some KMx Enterprise clients have multiple Organizations to provide complete segregation of users, content and record keeping. The decision to launch multiple Organizations is normally based on legal and regulatory agency requirements. All KMxASP clients operate within a single Organization. Primary security and the default branding of a KMx Site installation is controlled at the Organization level.

1.3 Companies and Company Types

Companies are a logical subdivision of an Organization. Companies are normally used to segregate user populations (stores, affiliates, subsidiaries, etc.). Each company can have unique branding, style sheets, catalogs, class schedules and other elements. Personnel are assigned to companies and their company affiliation determines their ability to access Organization offerings. A Member (person) can only be associated with one company at a time. Company types are used to group Companies (All Dealers, All Franchises, All Stores, etc.). Catalog, class and other elements that can be restricted to a Company can also be restricted to a Company Type for ease of administration.

1.3.1 Company Administrative Options

KMx provides the ability for the entire Developer/Administrative interface to be "regulated" by company. The ability to restrict access for all administrative levels is available on the Review Organization Information setup form, under System Administration. A word of caution; once this option is enabled administrators will only have the ability to change elements that are not assigned to any company or are assigned to the same company as the administrator/developer. Each course, class, content element, K/S Table, Exam and Survey has the ability to be "restricted" to a company. If an element is restricted to a company, only students in that company will be able to access the element from the student interface. If the "Enable Company Administrative Restrictions" feature is set to "Yes" then these same restrictions are enabled on the Developer/Administrator Interface.

1.4 Language Types and Email Templates

KMx incorporates a unique technology known as "Language Packs" to enable clients to provide user interfaces in multiple languages and multiple variants of a single language within an Organization. There are currently 12 base language packs as follows:

1. English
2. French
3. Spanish
4. Portuguese
5. Italian
6. German
7. Korean
8. Chinese
9. Japanese
10. Russian
11. Dutch
12. Polish

At the request of customers, KMSI has commissioned new language packs for localized variants of the above languages and also for languages not maintained in our base selection. A language pack consists of roughly 500 phrases and icons that are

displayed on the user interfaces. Each of the phrases and icons can be changed by the client by submission of a language pack revision to KMSI support. The packs are provided to clients in an Excel spreadsheet format for easy editing and maintenance. Language packs also include a series of client customizable Email Templates that are used for user notifications, confirmations, reminders and other site email correspondence. Email template modification and maintenance is more thoroughly covered in the System Administration chapter.

2 KMx Developer/Administrator Interface

The KMx application architecture is divided into two distinct applications:

- •   The Developer/Administrator Interface
- •   The Student/Instructor/Supervisor Interface

This division enables developers and administrators with easy access to the KMx data system using a highly dynamic, form driven user interface. Students and instructors are presented with a much simpler user interface that enables interaction with the data in the KMx data system to accomplish registration, conduct and recording of training functions.

The tabs on the left organize menu options into general functions

The KMx developer/administrator interface is arranged into 5 tabs and 18 icons, organized by function and task area. The five tabs are grouped along the left side of the KMx developer/administrator interface in an area called the sidebar.

These tabs organize primary KMx functions as follows:

- •   Training Materials Development

- Documentation Development
- Learning Management
- Personnel Management
- System Administration

In addition to the 5 tabs, the KMx sidebar also provides the following options:

- Stop – to logoff
- Home – returns the user to the main option screen
- Search – enables the user to search the content management system
- Master Schedule – provides a Gantt chart of all organization classes, activities and scheduled utilization of resources
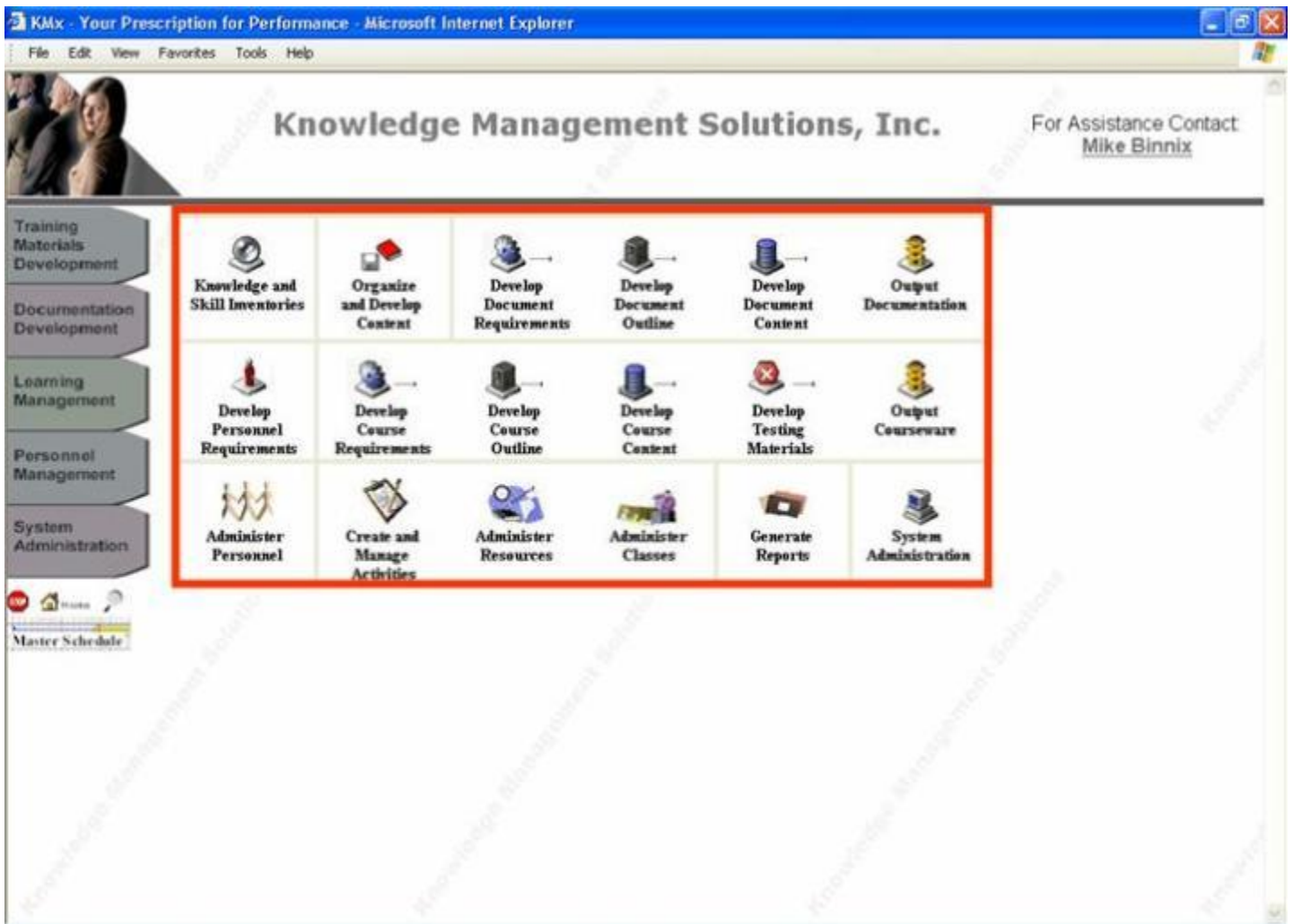
The icons organize menu options into selected tasks

The 18 process icons illustrated above, enable access to the KMx data system and are organized by task area as follows:

Main Menu Option	Process Menu Options
Knowledge and Skill Inventories	AutoGen, Create and Maintain K/S Tables and Items
Organize and Develop Content	Insert and Maintain Content Objects used in Courses and Documentation
Develop Document Requirements	AutoGen, Create and Maintain Document Requirements (Objectives)
Develop Document Outline	AutoGen, Create and Maintain Document Outlines
Develop Document Content	Insert, Organize and Maintain Content Objects used in a Document
Output Documentation	Output Documentation in an eBook or MS Word Format
Develop Personnel Requirements	Create, Maintain and Administer Personnel Labor Categories/Requirements
Develop Course Requirements	AutoGen, Create and Maintain Course Requirements (Objectives)
Develop Course Outline	AutoGen, Create and Maintain Course Outlines
Develop Course Content	Insert, Organize and Maintain Content Objects used in a Course
Develop Testing Materials	Create, Maintain and Assemble Tests and Test Items
Output Courseware	Output Courses in eLearing, SCORM or MS Word Format
Administer Personnel	Review Personnel Records, Set Authorization Levels and Permissions
Create and Manage Activities	Create and Maintain Class Activities and General Assignments
Administer Resources	Schedule Classrooms, Instructors and other Class Related Resources
Administer Classes	Create Class Records, Administer Enrollments and Student Grade Books
Generate Reports	Query the Data System to Create Predefined and Custom Reports
System Administration	Set Overall KMx Installation Configuration and Create/Modify Templates

2.1 Help information

In KMx built-in help includes help icons on each Process Options Menu (see below). These new icons and their associated messages are designed to assist clients that are learning the many process options available in KMx.
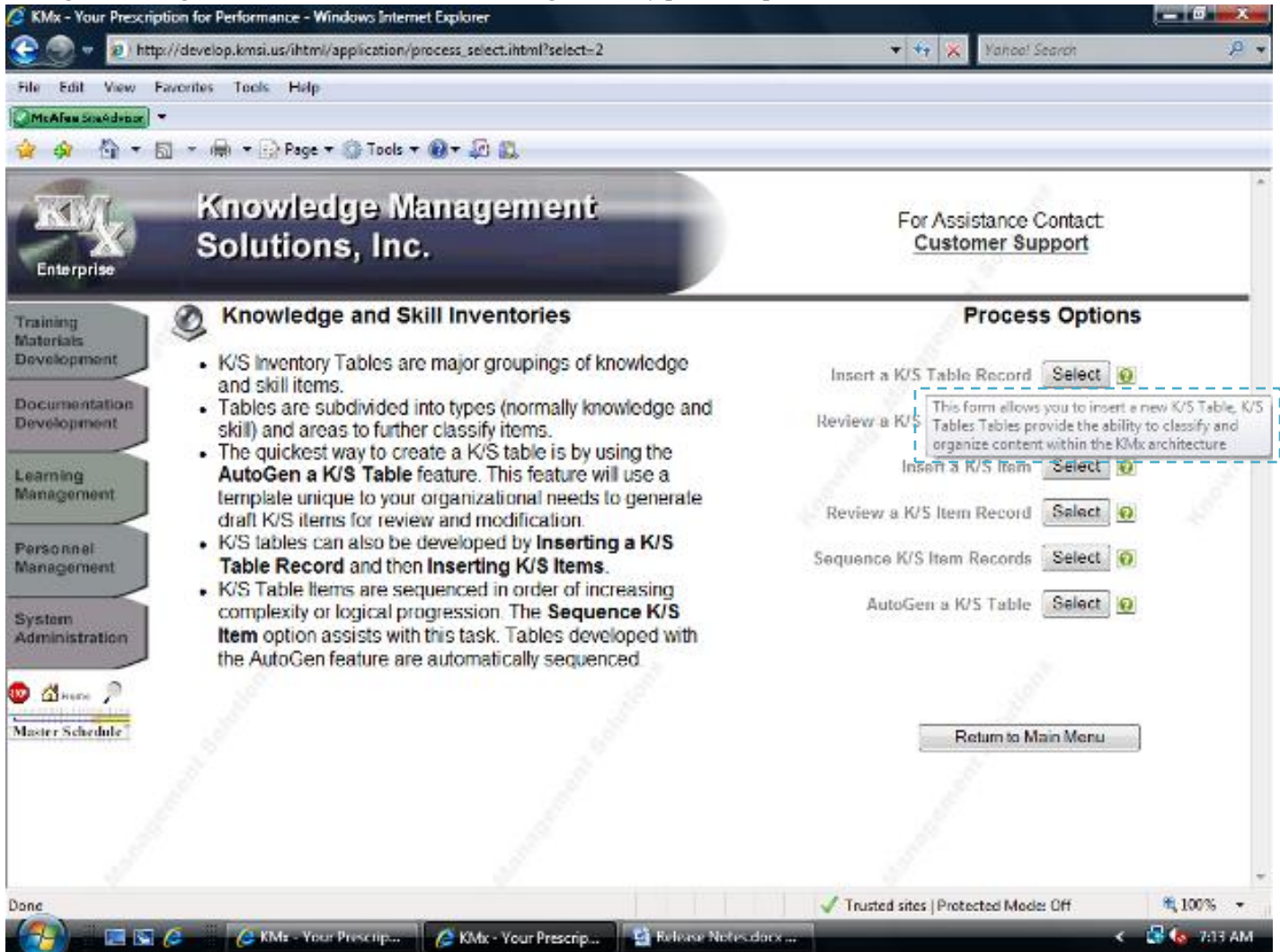
All help icons are accompanied with the Microsoft Agent Wizard that can "speak" the information when the help icons are clicked. The MS Agent settings are a personal preference available under Administer Personnel.

In addition to the help icons available on each data entry field and dropdown on the administrative interface, KMx includes help icons at the top of each form. These icons provide a description of the forms purpose and use on hover-over and provide a popup reference for all possible entries on click.

2.2 Help Hover Menus Icons

The KMx Administrator/Developer Interface Process Menus include hover-over icons that provide an in-depth description of the options available and the purpose of the selected process elements.
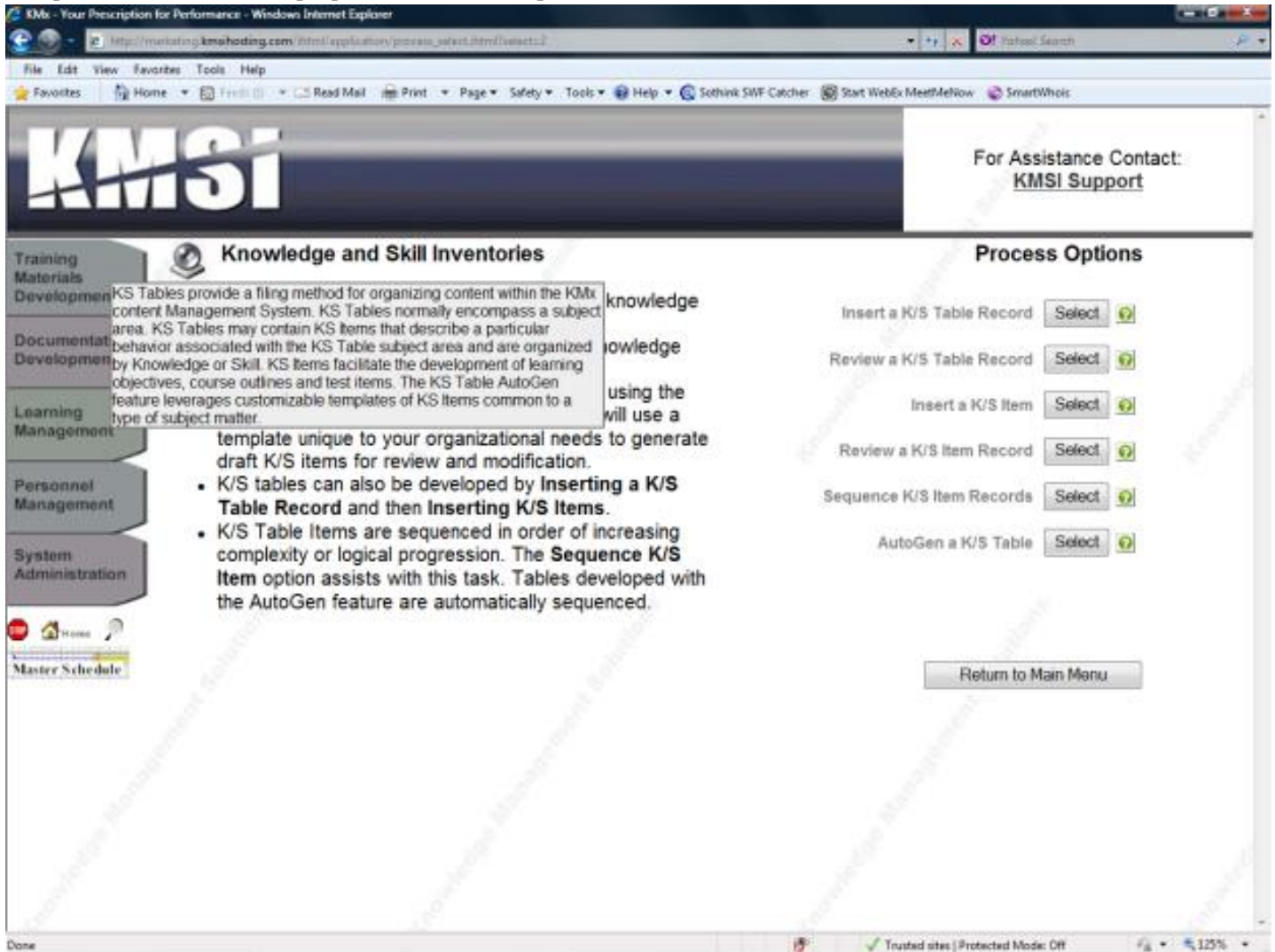
2.3 Basic/Advanced Features Toggle

KMx includes a Basic/Advanced Features toggle that enables the administrator to "hide/display" advanced form settings. The small orange "A" icon at the top of each form can be clicked to put the entire administrative interface into either Basic (orange) or Advanced (green) mode. Once a mode is selected, the interface will continue in that mode unless the icon is clicked to toggle the mode. In the Basic mode, all advanced options will appear as grey (see below) options that cannot be changed unless the mode is toggled. This toggle is designed to assist new developers and administrators focus on the important or "basic" elements of a form before experimenting with more advanced features.

2.4 Required and Maximum Form Entries

All KMx Administrative Forms ensure that "Required" data entry fields are clearly indicated with a green background when the form is displayed. Green fields must be completed in order for the record to be saved. Required field backgrounds will turn white once data entry in the field has commenced.

Should a required entry not be completed, the user will receive a warning if the user attempts to save the record in an incomplete state. This warning will also return the background color of the required entries to green to make it easy to identify which field(s) still requires an entry.

Field background colors will change to yellow if the current entry exceeds 85% of the field's length and red when the entry is at the maximum field length.

2.5 Function Tabs

The Function Tabs provide an alternate navigation method for access to administrative options. All options that are available by selection of the Process Icons have been grouped into role-based tabs.

2.5.1 Training Materials Development

This tab provides access to the processes required for development of training materials, including access to the content management system, course development processes and the testing and exam options.

2.5.2 Documentation Development

This tab provides access to the processes required for development of procedural documentation, including access to the content management system, document development processes and the documentation output options.

2.5.3 Learning Management

This tab provides access to the learning management processes associated with eLearning and class related enrollments, including access to the resource administration and activity scheduling processes.

2.5.4 Personnel Management

This tab provides access to the personnel administrative processes and personnel classification management process options.

2.5.5 System Administration

This tab provides access to the site configuration, catalog setup, eCommerce, System Access and Security and other global process options.

2.6 Logoff, Home and Search Icons

Directly beneath the Function Tabs, there are three icons. These icons are selectable from any screen on the KMx Developer/Administrator interface.

2.6.1 Logoff

This stop sign icon enables the developer/administrator to terminate the security session with the KMx servers. It should be used to logoff (vice closing the browser). Selection of this icon clears all security tokens and ensures that a complete login cycle will need to be completed to access the Developer/Administrator interface.

2.6.2 Home

This house icon enables the developer/administrator to return to the main menu from any process option or form and terminates any AutoGen wizard in process. If selected from a form, all data entry since the last record save or refresh cycle will be abandoned.

2.6.3 The Search Icon and Search Content Form

All content items with the exception of exams can be retrieved using the search content form.

Provide the criteria for your search:

Search Term:	Subject Area
	All
Content Type:	All
Submit	

Search results are depicted below:

Selecting Review will open the content record selected up for preview. This feature is useful when developing a course or a document and the need to determine the availability of a content item is required.

2.7 Master Class, Resource and Activity Schedule

The master schedule provides an illustrated view of all Classes and Activities. It is designed to provide a project management tool that allows direct access to the Class and Activities record system.
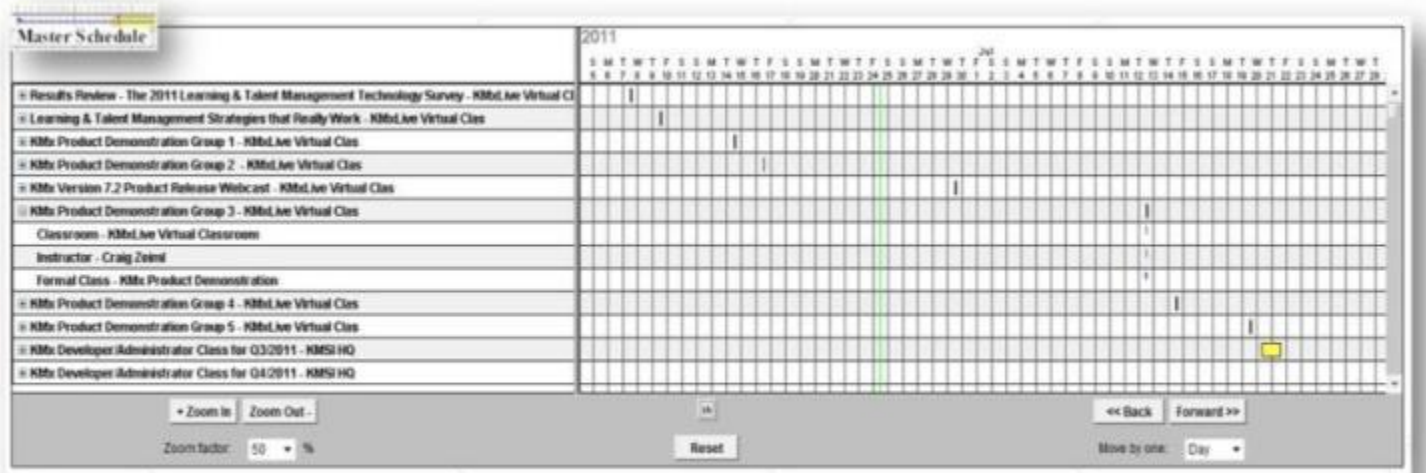
As depicted above, the Organization Master Schedule provides a tool for review of all scheduled classes and associated activities. This tool provides advanced scrolling and zoom features to enable the administrator to view various time periods and open or close class objects. The reset button will center the graph on the current day in the default time period view. The Master Class/Activity/Resource Schedule will load with a collapsed tree of displayed classes and dependant items (resources and activities). This approach makes it easier for clients with hundreds or even thousands of upcoming scheduled classes to view and find information about a particular class. This approach also provides a view more suitable for printing.

2.8 Forms

KMx data entry forms are generated by the KMx data system. This approach simplifies maintenance and modification of forms and form items. The button selections at the bottom of each form perform the following:

Form Button	Button Function
Done	Saves the record and returns the user to the Main Menu
Return	Saves the record and returns the user to the previous Form
Copy	Creates a duplicate of the record for immediate editing
Delete	Deletes the record and returns to the previous menu option
Refresh	Saves the record and updates any relationships to other records in the data system
Sequence	Enables sequencing of the selected information

2.9 Basic Form Items

There are several types of basic form items, each with a special function as described in the following table:

Form Item Types	Form Item Function
Display	Displays text information, but does not permit changes
Text	Displays text information and allows changes
Text Box	Displays lengthy text information and allows changes
Select	Display drop-down lists for element selection
Anchor	Displays "Click Here" button to launch editorial popup windows
Date	Display date information for editing

The ? icon to the right of each form item provides additional information regarding by hovering the curser over it. If MS Agent is enabled (see Review Member Information) the ? icon will launch the MS Agent help genie.
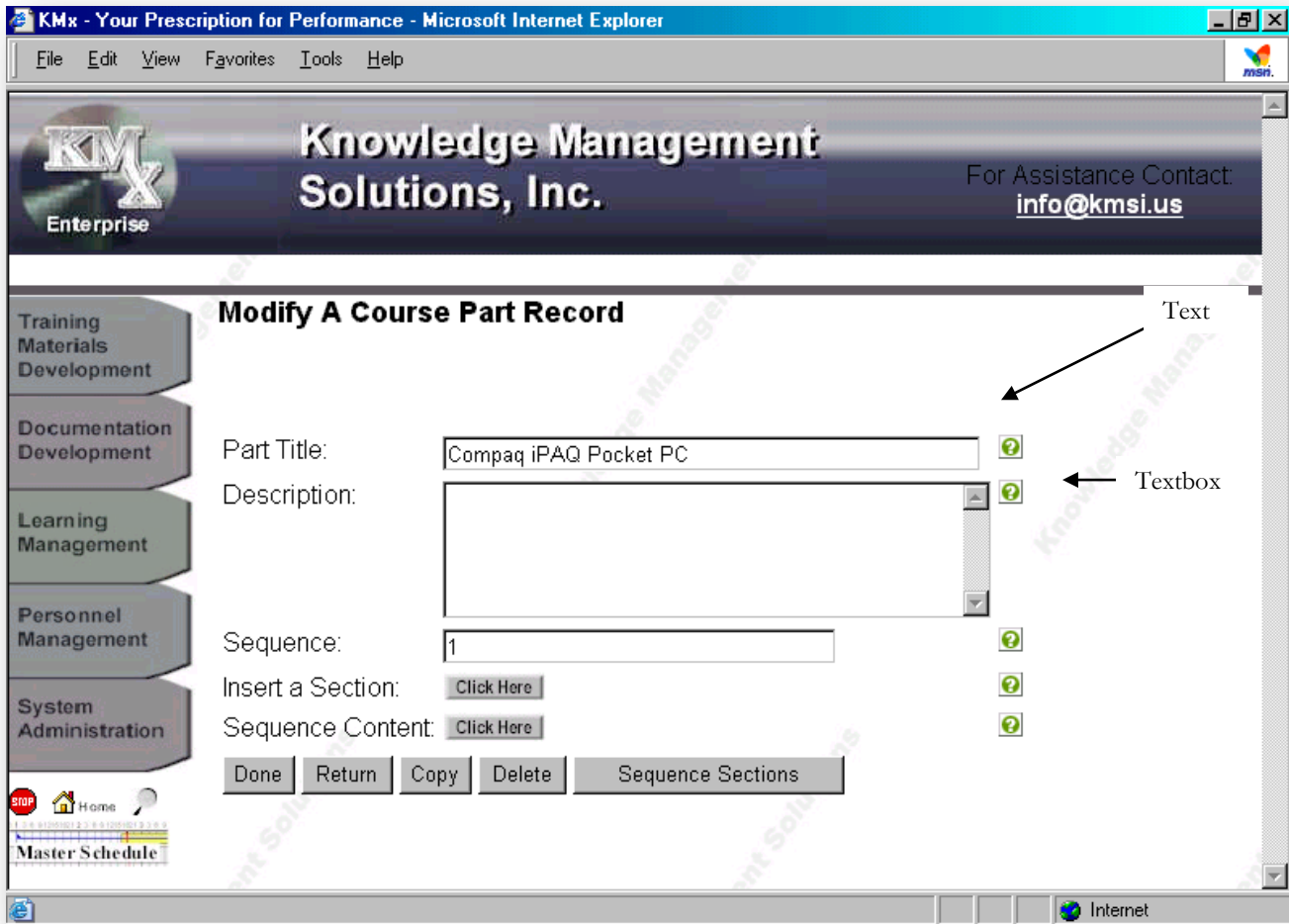
2.10 Advanced Form Items

In addition to the standard form item controls, KMx includes a number of advanced form item elements that are used for specialized data entry and display of information on a form.
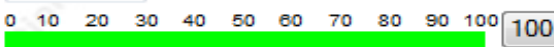
2.10.1 Slide Control

The Form Slide Control was created to enable easier entry of fixed range numeric values. To change a value on a form using the slide control, simply drag the blue slide element to the desired value. If the value button is highlighted (not grey), then further information is available about the element by clicking on the value button. The following is an example of a Slide Control Form Item:

Pass/Fail Score threshold: ⊙_____ 0

2.10.2 Indicator Control

The Form Indicator Control was created to provide a graphical display of progress or completion percentage information on a Form. The control does not allow the value displayed to be changed. If the value button is highlighted (not grey), then further information is available about the element by clicking on the value button. The following is an example of an Indicator Control Form Item:

Percent Complete: 0 10   20   30   40   50   60   70   80   90 100   100

2.10.3 Filter Control 👬

The need for Forms to filter items to enable ease of selection has been an element of KMx Forms since our initial release. Most form filters are K/S Table dropdown lists that enable other form elements to be selected based on the K/S Table selected. Another example of the use of a Filter Control is the use of personnel classifications to limit the number of users on a dropdown list to only those users in the selected classification. The addition of the Filter Control icon to the Form elements that are performing filter functions was designed to make it easier for developers and administrator to know which Form elements were performing filter functions.

2.10.4 Auto Refresh Control 🔄

Numerous forms contain options that are so extensive that they require the ability to refresh based on selections within the form. If a form item is designated as a key form element that controls other selection and/or options on the form, the Auto Refresh Control indicator will be displayed to indicate these items. An example of this element is the ecommerce options on the Course record. If ecommerce is disabled for the course, then there is no need to display the various pricing, coupon, and payment options. This approach simplifies the administrative data entry on the form and ensures that interlocked elements cannot be selected to create a conflict. Changes to a form item with this indicator will cause the form to reload with revised selections based on the change(s) to the Auto Refresh Control Element.

2.11 Multi-Selection with Sorting Control ↓ᵃz

Numerous forms contain drop-down selection lists that enable more than one selection. For a long list of items this can make the selection process difficult because the administrator may have to scroll to select all of the elements required and not be able to see on one screen all of the elements that have been selected. An example is the list of courses that are prerequisite requirements for another course. In order to simplify this process, we have added the Multi-Select with Sorting Control. To use this control, simply select the items from the dropdown and then press the ↓ᵃz icon to sort the list to indicate the selected

items and unselected items. You can use the CTRL Key to select additional items without resetting the items already selected. You can use the SHIFT key to select a range of items.

2.12 Drop-Down Control Key Seeking

Many users familiar with standard browser drop-down controls and used to being able to press a key on their keyboard to automatically seek the first item in the drop–down that begins with the keyed character. In KMx, all drop-down items are numbered to make identification of elements easier. This numbering approach makes the use of the keyboard to seek the first element impractical (since the first character in a KMx administrative drop-down is always a number). In order to enable both the identification numbering and the ability to use the keyboard to seek to the first keyed item in a dropdown, KMx V7 incorporates a revision that allows both approaches to co-exist in a dropdown. This capability does not extend to Auto-Refresh Controls or to Filter Controls, both of which would refresh the form based on a change in selection by the administrator.

3 KMx Student, Instructor, Supervisor Interface

The KMx user interface was designed for easy customization and branding and is available with language packs to provide for localization and multilingual distribution. The interfaces are also supported by a complete web-services kit for Intranet or a custom portal integration.
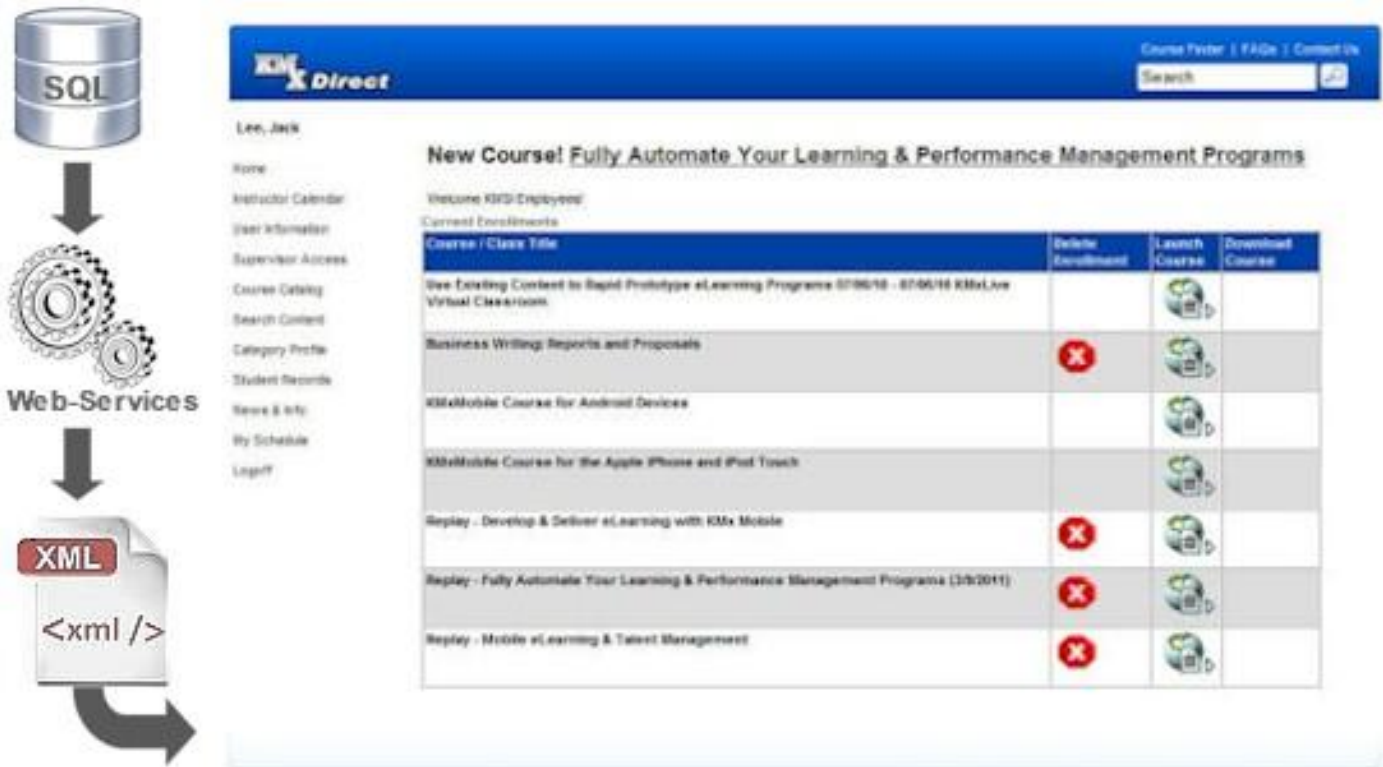
KMx provides a default Student/Instructor/Supervisor interface kit that is based on the Web 2.0 methodology. This approach presents a clean and user friendly interface for end-users and is easily branded with client custom graphics and style sheets. For an example of the default interface kit, please visit www.KMxDirect.com.

3.1 Course/Class Search

Most clients include a simple search box (usually in the site header) that provides access to the Advanced Course/Class Search features if the desired course/class is not found using a simple search or to restrict the search output to more relevant courses/classes.

3.2 Catalogs

KMx provides numerous catalog options, including the ability to restrict catalogs to a user's company, personnel category, and company type. Catalog can be nested to any number of indentured levels. Courses can be resident in one or many catalogs depending on the site configuration. See System Administration, Catalog Setup for additional information.

Course Catalog

Catalog Title	Catalog Description	Browse
KMx Courses and Tutorials	This catalog provides courses on KMx - The Advanced Distributed Learning Platform.	View
KMxDirect Live Training Events	This catalog provides registration for KMxDirect Live Training Events.	View
Recorded Seminars and Events	This catalog provides recorded versions of KMx Live seminars and marketing events.	View

Courses that have scheduled class convening's will display the following information to assist the user with selection of an appropriate class:

The Course Selected has Classes Available for Enrollment:

KMx Developer/Administrator Course
Class Schedules and Seat Availability

Description	Schedule	Max Students	Current Enrolled	Location	Enroll
KMx Developer/Administrator Class for Q1/2010	01/19/10 10:00 AM 01/20/10 04:00 PM	8	0	KMSI HQ Time Zone: Eastern	Enroll
KMx Developer/Administrator Class for Q2/2010	04/20/10 10:00 AM 04/21/10 04:00 PM	8	0	KMSI HQ Time Zone: Eastern	Enroll
KMx Developer/Administrator Class for Q3/2010	07/20/10 10:00 AM 07/21/10 04:00 PM	8	1	KMSI HQ Time Zone: Eastern	Enroll
KMx Developer/Administrator Class for Q4/2010	10/19/10 10:00 AM 10/20/10 04:00 PM	8	1	KMSI HQ Time Zone: Eastern	Enroll

All enrollment selections can require supervisor approval based on course setup (see Course Record Options). Classes can be further restricted to companies or company types (see Site Hierarchy description above).

3.3 Event Calendar

The Event Calendar provides a calendar of upcoming training events and seminars restricted using the catalog assignment logic (see Catalogs, under System Administration). Use the month-to-month navigation links at the bottom of the calendar to review and enroll in upcoming events.

Schedule of Events

January 2010

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18 Easily Convert Instructor-Led Training to eLearning! 02:00PM for 1 day	19 KMx Developer/Administrator Class for Q1/2010 10:00AM for 2 day(s)	20	21	22	23
24	25 The Sharable Content Object Reference Model (SCORM) 10:00AM for 1 day(s)	26	27	28	29	30
31						

← View December | View February →

Time Zone: Eastern

3.4 FAQs and Help Screens

Most clients develop an FAQ to provide users with answers to frequently asked questions related to the site.

3.5 Browser Test Tools

KMSI offers our hosted clients with access to BrowserHawk user diagnostics to enable customers to ensure that their user's browser is ready for use with the site.

While KMx has no browser, plug-in or user operating restrictions, many customers incorporate technologies such as Adobe Flash into their learning content. Providing the BrowserHawk test tool to ensure that users have the required plug-ins (like Adobe Flash) can significantly reduce the customer service issues experience by end-users.

3.6 User Registration

Clients that allow for user self-registration will offer a registration form (usually designed during site setup) to capture the information required to provide the user with site access and provide a mechanism for creation of the users login name (screen name) and password.

3.7 Lost Password Utility

Sites that provide for user login (instead of requiring access via a single sign-on method) normally provide the user with the ability to retrieve their password via email.

Retrieve Password

Enter your email address in the form provided below. Your account password will be forwarded to that address.

Email Address: email@address.com

Submit

If you require additional assistance or cannot remember your email address, please contact info@kmsi.us

3.8 Category Profile

Personnel classifications and certifications can provide training assignments for designated users. The category profile provides a summary of the user assignments and enables the user to enroll in courses/classes required to complete their assignments.

Lee, Jack - Category Title: Registered User
Description: This is a default category for KMxDirect registered users

Certification/Certificate Assignments	Complete
KMx Developer/Administrator	50.00 %

Certification/Certificate Assignments
KMx Developer/Administrator

Assignment Type	Assignment Title	Current Status	CEUs
Online Course	Introduction to KMx	Completed Satisfactorily	4
Formal Class	KMx Developer/Administrator Course	Not Enrolled Buy Now	12
Online Course	KMx Developer/Administrator Qualification Exam	Completed Satisfactorily	0
Formal Class	The Sharable Content Object Reference Model (SCORM)	Not Completed	6

3.8.1 Dynamic Certification Summary

KMx includes a "Dynamic Certification Summary" header at the top of the student "Category Profile" page. This header automatically hides if there is no certification information to display.

3.9 Current Enrollments

The current enrollments page (normally set as the initial student home page) provides the user with access to courses and classes where a current (not completed) enrollment has been established. The user can launch eLearning courses, download courses for offline review, review their grades and other options (see Review Organization Information under System Administration).

Current Enrollments

Course / Class Title	Delete Enrollment	Launch Course	Download Course
The Sharable Content Object Reference Model (SCORM) 01/25/10 - 01/25/10 KMxLive Virtual Classroom			
Easily Convert Instructor-Led Training to eLearning! 01/18/10 - 01/18/10 KMxLive Virtual Classroom	✖		
Market and Sell Your Offerings with Virtual Classroom Technology 02/22/10 - 02/22/10 KMxLive Virtual Classroom	✖		
Leverage your Learning Technology Platform to Provide Training for Customers and Distributors 03/22/10 - 03/22/10 KMxLive Virtual Classroom	✖		
Developing Effective Sarbanes-Oxley (SOX) Compliance Programs 07/23/07 - 07/23/07		🌐	
Replay - Develop Certification Programs for Dealers & Customers	✖	🌐	
Replay - Working with Location Records (01/30/08)	✖	🌐	

3.10 Student Records (Transcript)

The Student Records page provides the user with a complete transcript of completed courses/classes/ The page also provides the user with the ability to produce a certificate of completion, access to grade book information and the ability to review content from completed courses (not for credit).

3.10.1 Student History Page Options

KMx includes the ability for the administrator to turn off the Launch Course, Student History and Grades, and the Download Course columns on the Student History page. Configuration of these items is controlled using the Review Organization Information option under the System Administration main menu icon.

3.10.2 Certificates of Completion

During site setup, most clients design a custom certificate of completion format to be used to award certificates to users from the Student Record page. The certificate is a simple HTML page that is dynamically populated with user and enrollment information.
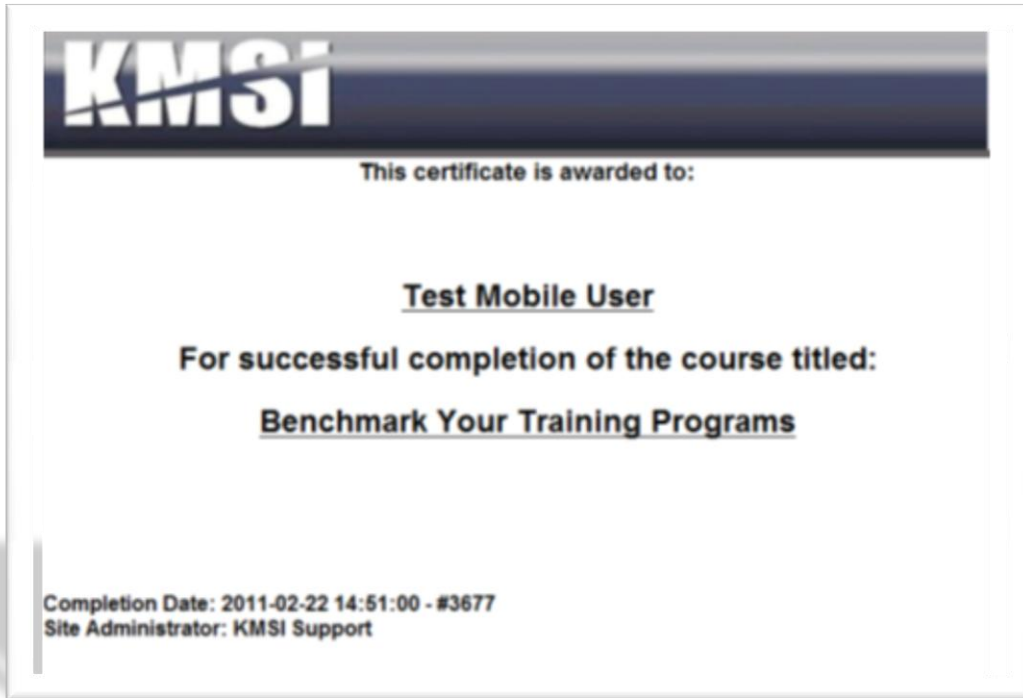
3.11 Student Activity Calendar and the My Activities Header

Client that leverage KMxLive and/or use Class Activities to schedule events associated with a class normally provide the user with either a My Schedule link that displays a personalized user activity calendar or a My Activities Header that provides a listing of current activities on the Current Enrollment page. The Student Activity Calendar and the My Activities Header provide links to access content and/or retrieves additional information regarding a scheduled activity. Configuration of these items is controlled using the Review Organization Information option under the System Administration main menu icon.

3.12 Student Content Search (Just-in-Time Training)

Many clients organize their content into libraries using the K/S Table architecture. Content items that are useful for just-in-time training or other performance support can be searched using the Student Search feature. Configuration of these items is controlled using the Review Organization Information option under the System Administration main menu icon. All content items with the exception of exams can be retrieved using the search content form.

Search results are depicted below:

Search Results for Keywords:

Content Title	Content Description	Review
Activity Management Process Options	This presentation provides an Introduction to Activity Management Process Options.	
Class Administration Process Options	This presentation provides an Introduction to Class Administration Process Options.	
Content Object Process Options	This presentation provides an Introduction to Content Object Process Options	
Course Content Process Options	This presentaiton provides an Introduction to Course Content Process Options.	
Course Development QuickStart - Part 1	Course Development QuickStart - Part 1	
Course Development QuickStart - Part 2	Course Development QuickStart - Part 2	
Course Outline Process Options	This presentation provides an Introduction to Course Outline Process Options.	
Course Requirement Process Options	This presentation provides an Introduction to Course Requirement Process Options.	
Directions to KMSI HQ Classroom 101		
Document Content Process Options	This presentation provides an Introduction to Document Content Process Options.	

Selecting Review will open the content record selected up for preview. This feature is useful when developing a course or a document and the need to determine the availability of a content item is required.

3.13 Offline Course Player

The KMx Offline Player was developed to enable clients to provide courses for individuals with limited access to the Internet or network where the KMx installation operates. Offline course player files are essentially SCORM content aggregation packages with a proprietary player that provides learner progress tracking. To create an offline player version of a course, select the Output Courseware option from the KMx Developer/Administrator Main Menu, select the SCORM output option, select the course and use the SCORM template. The ZIP file output will include the files required to enable use of the course with the Offline Player (the launch file in the ZIP is named index.htm). The Offline Player option can also be enabled on a course by course basis from the Course Record (Develop Course Content, Review a Course Outline). Offline Player Courses can also be rendered to a CD ROM for automatic playback with SCORM tracking.

When an Offline Player course is run, the player will generate a file that can be uploaded by the learner to synchronize their progress information in the learning management system. The default student interface kit includes the files needed to provide the learner with the controls to upload an offline player file.

3.14 Instructor Options

The KMx security and session management system has the ability to identify an Instructor to enable clients to delegate via the Student/Instructor/Supervisor Interface, both administrative and reporting options. Please review the following screen shot for an example:
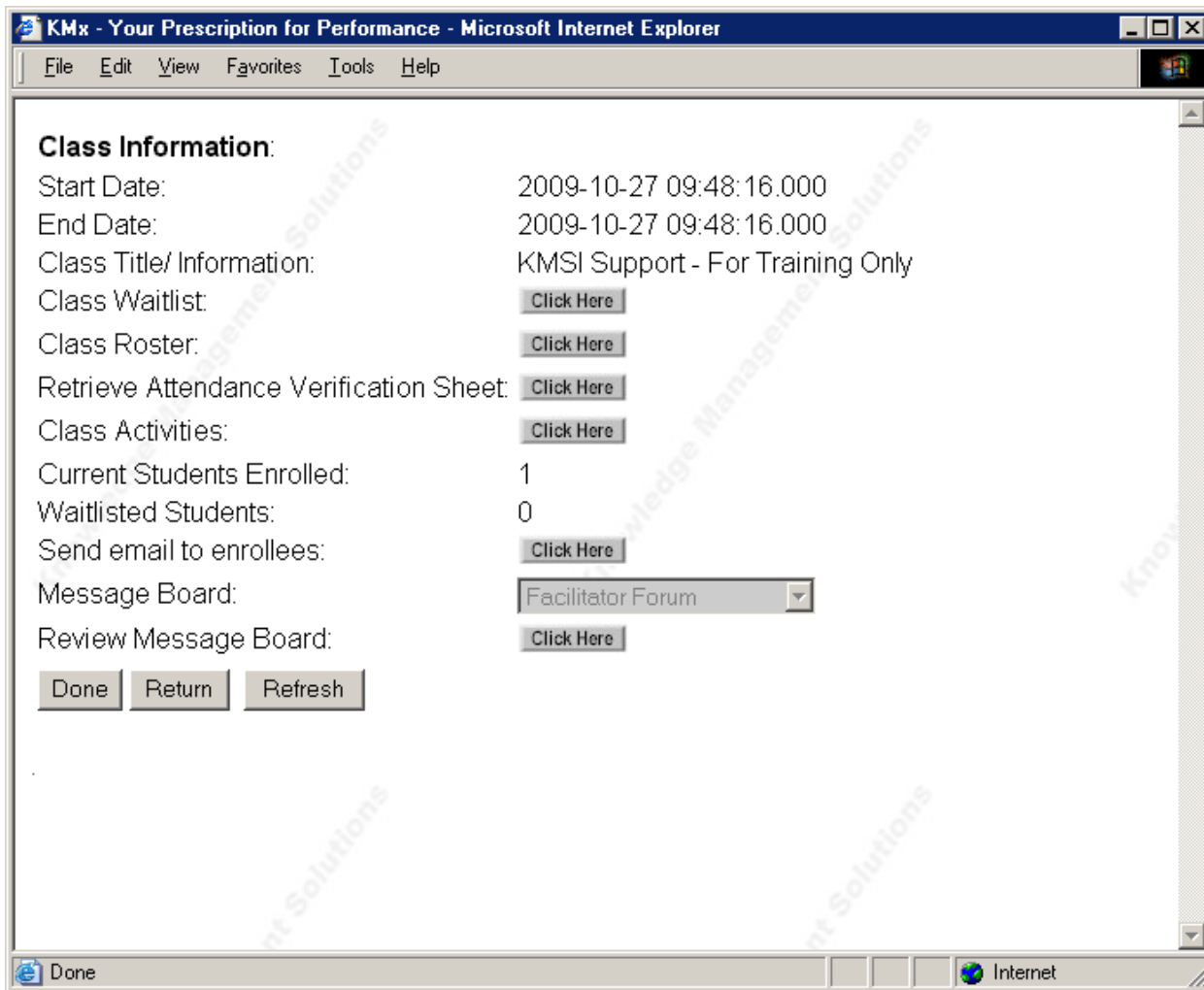
Setup of the Instructor options is normally accomplished during initial site setup; however a trained customer support representative can add or remove administrative and reporting options from the instructor access form(s).

3.15 Supervisor Options

The KMx security and session management system has the ability to identify Supervisors and enable clients to delegate via the Student/Instructor/Supervisor Interface, both administrative and reporting options. The option must be enabled under System Administration, Review Organization Information (Enable Supervisor Access from Student Interface). The "Is Supervisor" option on the Member record determines if the user is provided with the Supervisor Access link upon login. The "Is Supervisor" option is set to "Yes" when an imported or synchronized user record identifies another user record as the supervisor.

There are three methods for identifying member/supervisor relationships to enable supervisor access to subordinate information:

Member Supervisor ID – Under Administer Personnel, Review a Member Record, the KMx Member ID of the current Members Supervisor can be set manually via a dropdown menu.

Supervisor Directory Services ID - During a batch user import or synchronization with a HRIS or payroll service, the Directory Services ID of the Supervisor for each user record can be provided.

Member Company Mask – A string that represents the organizational hierarchy position for each individual is calculated during a daily batch process. This string is the KMx Member ID with a dash for each user in an organization in the supervisory chain until no additional supervisor can be identified (i.e. the CEO or president.).

Supervisor Menu

Select Employee: learner 1

Group Reports:
Personnel Evaluation Form: 2007 Annual Employee Evaluation

Employee Evaluation Summary: Click Here

Setup of the Supervisor options is normally accomplished during initial site setup; however a trained customer support representative can add or remove administrative and reporting options from the Supervisor access form(s).

3.15.1 Performance Evaluations

KMx includes capabilities to automate the process of administering a large-scale organizational review program. These features include dynamic group reporting, subordinate summary and results management, and automated assignment and tracking. The Supervisor, Personnel Administration and Generate Reports Menus have options for reporting and management of Personnel Evaluations, including Statistical and Group Average information.

Please Rate Your ability to Build Trust	Response Count
No Response	0
1. Poor	1
2. Fair	1
3. Good	0
4. Very Good	0
5. Excellent	1
6.	0

Correct Answer: 0.
Total Reponses: 3
Average All Reponses: 2.7

Completed By	Person Evaluated	Date Completed	Average
Mike Binnix (SCORM)	Brandi Lee	Jan 2 2008	4.3
Group Average:			3.7

Performance evaluations are created using the Develop Testing Matieral option from the KMx Developer/Administrator interface. A KMx Test Record includes an option labeled "Is this a Performance Evaluation". When this option is set to "Yes" the system will assume that the assignment of the evaluation to a user for supervisor completion will be accomplished via Administer Personnel (on the Member Information Record) or globally to all users via System Administration, Review Organization Information.

3.16 Company Administrator Options

The KMx security and session management system has the ability to identify Company Administrators and enable clients to delegate via the Student/Instructor/Supervisor Interface, both administrative and reporting options. Company Administrators are assigned via System Administration, Review Member Authorization Level. A Company Administrator (Member Authorization Level #10) is able to review and administer personnel within a designated Company (see Site Hierarchy topic above). Setup of the Company Administrator option is normally accomplished during initial site setup; however a trained customer support representative can add or remove administrative and reporting options from the Company Administrator access form(s).

4 Knowledge and Skill Inventory Tables (K/S Tables)

Knowledge and Skill Tables provide a convenient method for classifying information within the KMx architecture. K/S Tables/Items have the following attributes:

- K/S Tables provide a filing method for organizing content within the KMx Content Management System
- K/S Table normally encompass a subject area
- K/S Tables may contain K/S Items that describe a particular behavior associated with the K/S Table subject area and are organized by Knowledge or Skill
- K/S Items facilitate the development of learning objectives, course outlines and test items
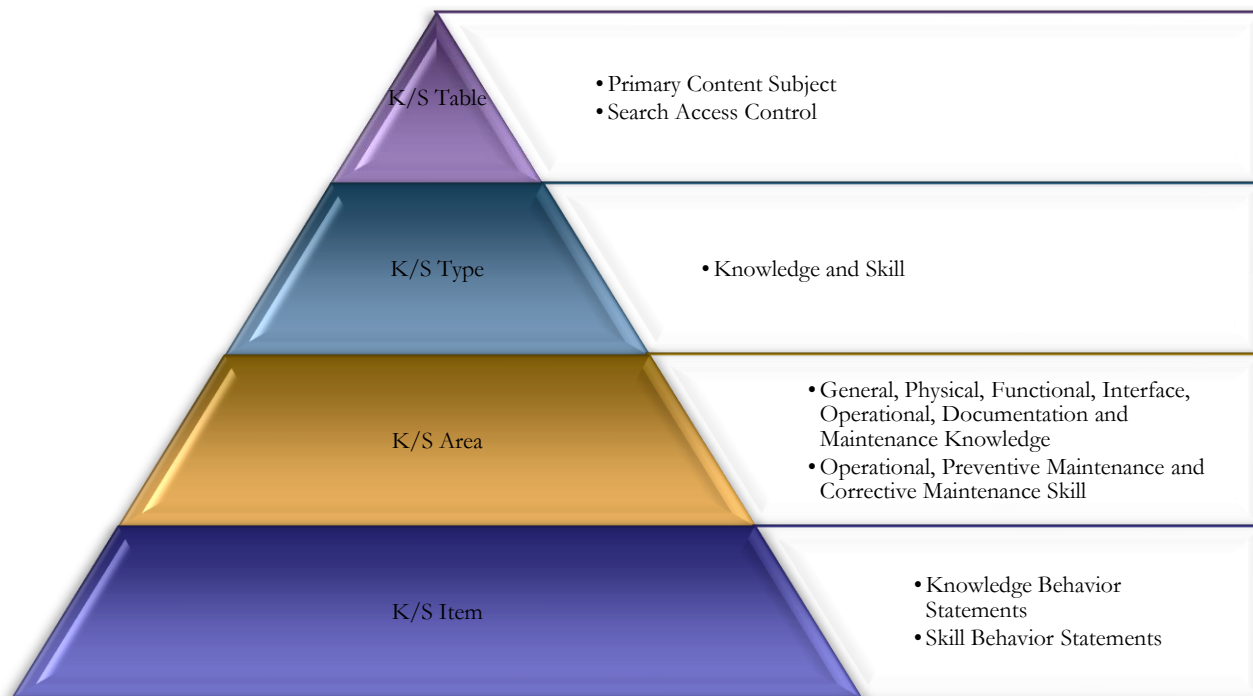
K/S Inventory Tables are major groupings of knowledge and skill items. Tables are subdivided into types (normally knowledge and skill) and areas to further classify items. The quickest way to create a K/S table is by using the AutoGen a K/S Table feature. This feature will use a template unique to your organizational needs to generate draft K/S items for review and modification. K/S tables can also be developed by Inserting a K/S Table Record and then Inserting K/S Items. K/S Table Items are sequenced in order of increasing complexity or logical progression. The Sequence K/S Item option assists with this task. Tables developed with the AutoGen feature are automatically sequenced.

4.1 K/S Templates

K/S Templates are used by the AutoGen a K/S Table option (under the KMx Main Menu Knowledge and Skill Inventories option). These templates, originally designed by the U.S. Military, provide a convenient mechanism for the development of behavioral task listings. The default K/S Templates include:

System/Subsystem/Equipment (where the subject of the training relates to hardware, software or other physical items), and;

Policy/Procedure/Administration (where the subject of the training relates to the knowledge and skills required to perform a document task).

K/S Templates can be modified using the options available under the System Administration icon on the KMx Main Menu.

4.2 Using the K/S Table AutoGen Feature to Develop Knowledge and Skill Behavior Listings

KMx provides a series of expert system technologies specifically designed to reduce the effort and improve the accuracy of the structured interview process. The first of these technologies is provided by the Knowledge/Skill (K/S) Table AutoGen feature. K/S tables provide a comprehensive listing of candidate behaviors associated with a particular subject matter. Behaviors form the basis for further development of performance-based objectives and serve as the primary content cataloging schema in the KMx architecture.

The K/S Table AutoGen feature leverages customizable templates of Knowledge and Skill Items (behaviors) common to a type of subject matter. These templates also provide sub-classifications and relationship mapping elements to facilitate the courseware development process. An example of a K/S Template would include our equipment template, which provides a listing of Knowledge and Skill Items (behaviors) common to equipment training. This listing is further supported by a relationship map that correlates the supporting relationship of knowledge items to skill items and provides a sequencing method to facilitate the development of instructional objectives and course outlines.

The K/S Table AutoGen process requires the identification of the training subject area and the selection of a K/S Template for generation of candidate K/S Items (behaviors). The process requires a few seconds to generate the subject area K/S Item candidates for review and modification by a subject matter expert. The subject matter expert review can be conducted online or be provided to the subject matter expert in a printed or word processing format to facilitate the process.

5 Content Management

KMx provides an integrated environment for developing, managing, and delivering training, performance support and documentation. KMx also provides performance support and just-in-time training from centralized content management architecture.

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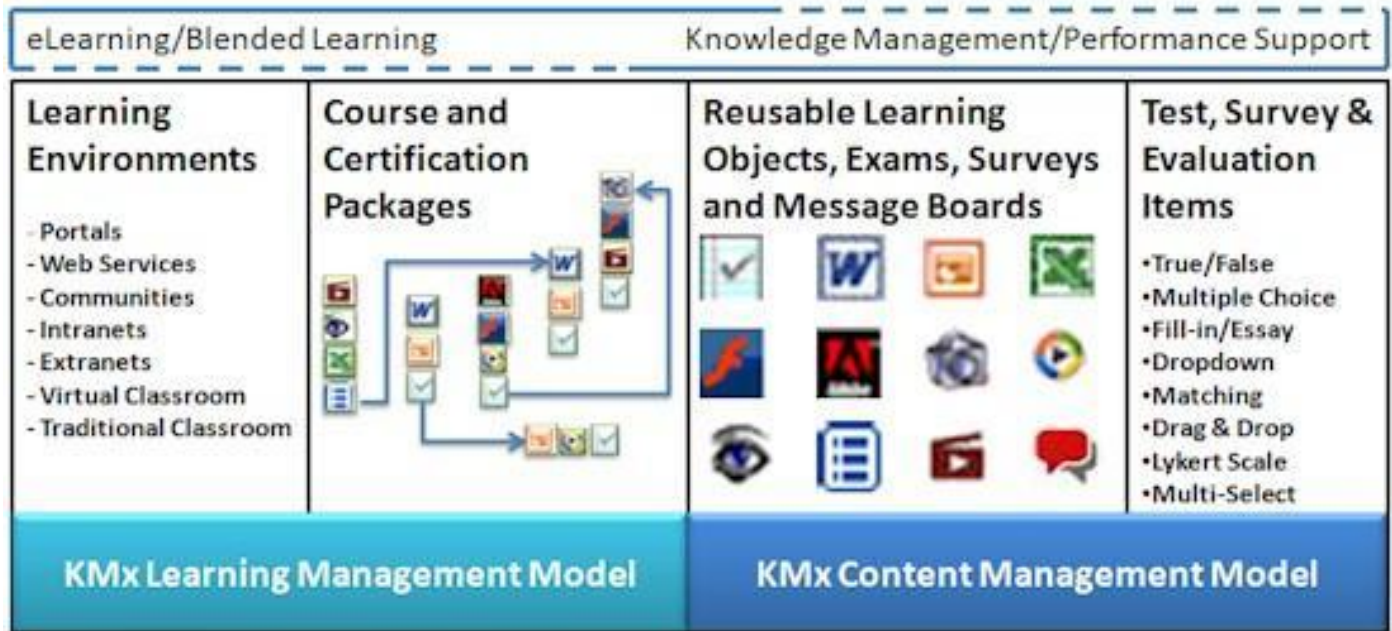
Content developers can use the KMx environment to instantly create new programs that can include presentations, video, audio, animations, images, assessments, surveys, collaborations, and documentation. KMx also supports all third-party SCORM authoring tools. KMx provides a highly granular and reusable content management architecture that implements all SCORM requirements. KMx provides fully automated processing of SCORM Content Packages.

5.1 Content Relationships

The following diagram illustrates the relationships between content and other KMx data elements. Content in the KMx architecture is reusable. This approach enables authors to include a shared element of information or a presentation in multiple courses without the need to maintain multiple copies of the content. This approach also is used by exams and their associated test items.
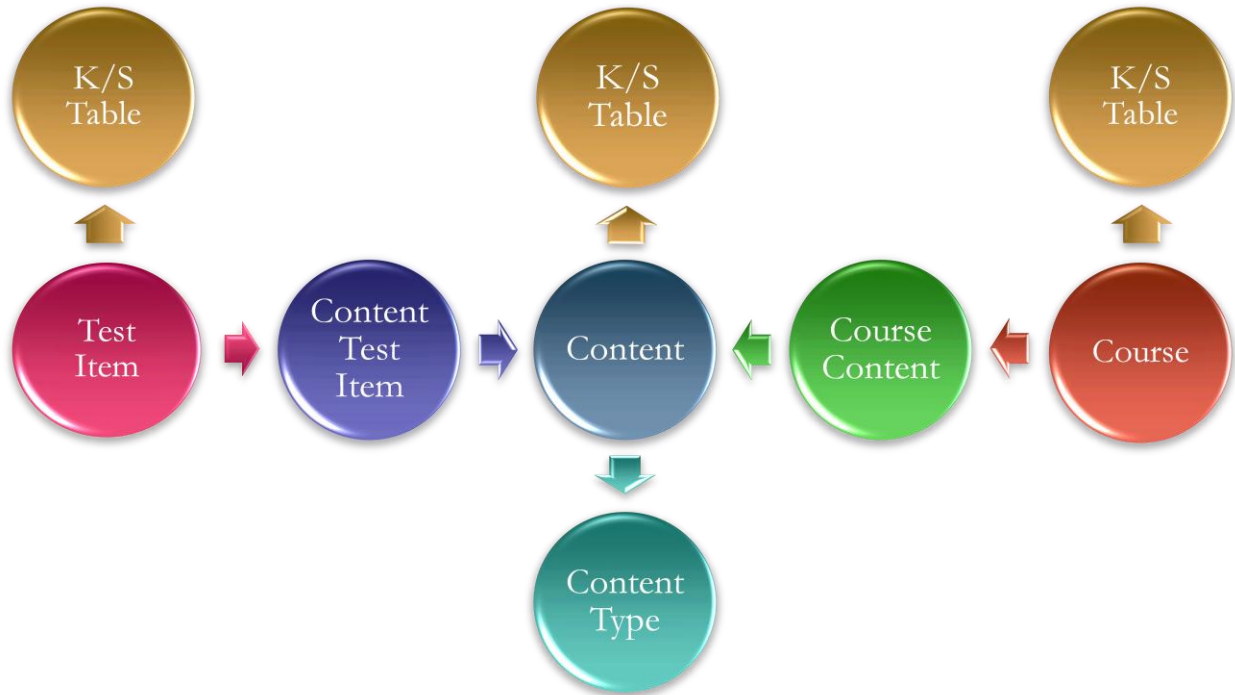
All content, course and test item data is organized by K/S Table in the KMx content management system. Relationship records, including "Course Content" and "Content Test Item" records, define the use of content or test items. This approach enables the content to have independent characteristics when used in a particular course, for example in one course the content may be elective and not impact a learner's score while in another course the same content may be essential and have a "Weight" that does affect the learner's score and ability to pass the course.

5.2 Content Types, Status and Versioning

Understanding the various content types, setting and reuse features is an important element for site administrators. Each content type and their associated usage settings have numerous common elements, including session and total time tracking by learner, completion status recording and user access timestamps. Some content types (see below) have special settings to enable more advanced learning tracking and use features. It is important to note, that even though KMx does convert MS Office files to HTML/VML for learner use, the original MS Office file is maintained for revision and change management. Content with a file size less than 20MB in file size will upload using the Edit Content/Browse form options. Content files and SCORM packages greater than 20MB in file size should be pre-positioned using your site FTP account and selected from the waiting area dropdown on the Edit Content popup menu.

Content Records provide the administrator with data fields to track internal version numbering, creation date, last update and other change management audit features. Content records can also be identified as requiring periodic review with email notification to a "Content Owner" if desired.

Content records include a Status field that can have one of four possible states:

Draft – The content is available for edit by any administrator of developer with the required permissions.

Final – The content is in a non-editable state as the result of administrator action.

Revised Final – The content is in a non-editable state as the result of administrator action and is a variation of another active content record.

Unavailable – The content is in a non-editable state as the result of being "checked-out" of the content management system for editing or other revision.

5.2.1 Exams, Surveys and Performance Evaluations

KMx uses Test Records to define the options, features and controls associated with an exam, survey or performance evaluation. Test Records provide the following options:

Timed Test – Used to provide a test time limit in minutes.

Proctored Test – Used to require the login by an Instructor to validate the test use for the learner prior to test launch.

Randomized Test – Used to enable the randomization of a number of test items assigned to the test.

Test Item Navigation Bar – Used to enable page-to-page test item navigation or list display (all items at once) of the test.

Type of Test – Used to determine if the test is an exam, survey or performance evaluation.

See the topic titled "Exams, Surveys and Evaluations" for more information.

5.2.2 Adobe Flash

The Adobe Flash content type is provided to enable an SWF file to be used in a course outline or document. KMx will automatically create a SCORM container for the Flash file to enable session and total time tracking by learner, completion status recording and user access timestamps.

5.2.3 Adobe PDF

The Adobe PDF content type is provided to enable a PDF file to be used in a course outline or document. KMx will automatically create a SCORM container for the PDF file to enable session and total time tracking by learner, completion status recording and user access timestamps.

5.2.4 Image (JPG/GIF)

The Image content type is provided to enable a JPG or GIF image file to be used in a course outline or document. KMx will automatically create a SCORM container for the JPG or GIF image file to enable session and total time tracking by learner, completion status recording and user access timestamps.

5.2.5 Microsoft Word

The MS Word content type is provided to enable a .DOC or .DOCX file to be used in a course outline or document. KMx will automatically convert the file to HTML and create a SCORM container for the converted file to enable session and total time tracking by learner, completion status recording and user access timestamps.

5.2.6 Microsoft PowerPoint

Microsoft PowerPoint Slides - May include voice-over narration, animations, interactivity, branching, indexing and media. If voice-over narrations are used, the settings described below are recommended:
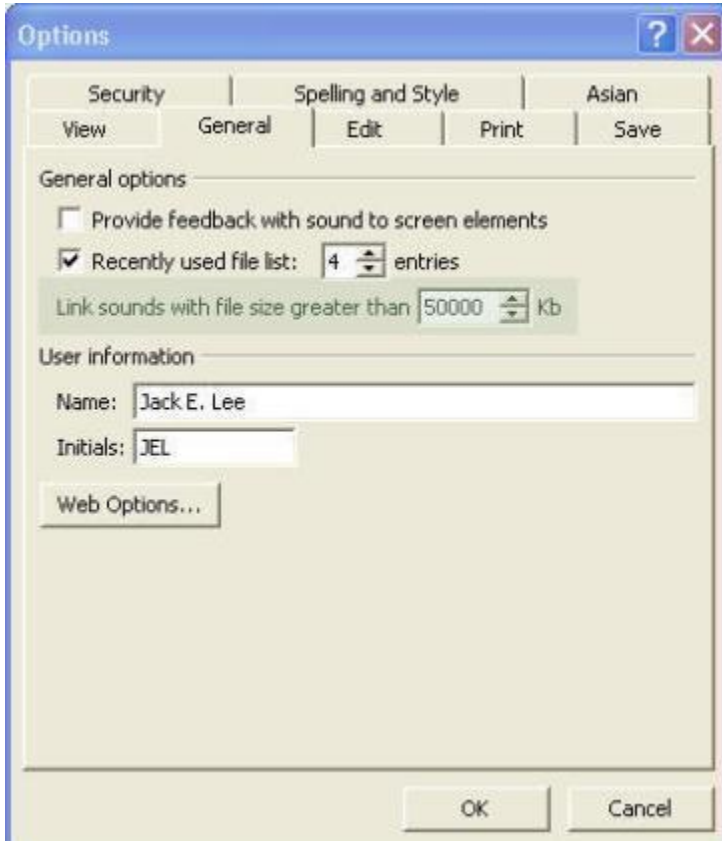
In order to ensure that your narration files are included with the PowerPoint presentation, set the "Link sounds with file size greater than" setting to 50,000 Kb (see image to the left). This option can be found in PowerPoint by selecting "Tools" and then "Options" from the main menu. Before narrating your slides, make sure that your sound quality settings are at a reasonable bandwidth for distribution over the Internet. Using the "Sound Selection" option for 16,000 KHz, 8 Bit, Mono produces excellent results. This setting panel can be found in PowerPoint by selecting "Slide Show", "Record Narration" and then "Change Quality" from the main menu.

5.2.7 Advanced MS PowerPoint Navigation Option

In KMx, the developer can enter an "A" into the Completion slide# field on the Content Record setup form. Entering an "A" into this field triggers an automatic wizard that will determine the ending slide of a linear presentation and add slide navigation controls to the interface. Unlike the slide navigation bar, these new controls present as directional arrows that automatically render based on the students current location in the presentation. This feature was added to support clients that would like embedded slide to slide navigation for a linear presentation but do not want to enable the slide navigation bar that allows the student to "Jump" to any slide in the presentation. As with all other MS PowerPoint entry options, this new feature automatically tracks student progress, bookmark and time.
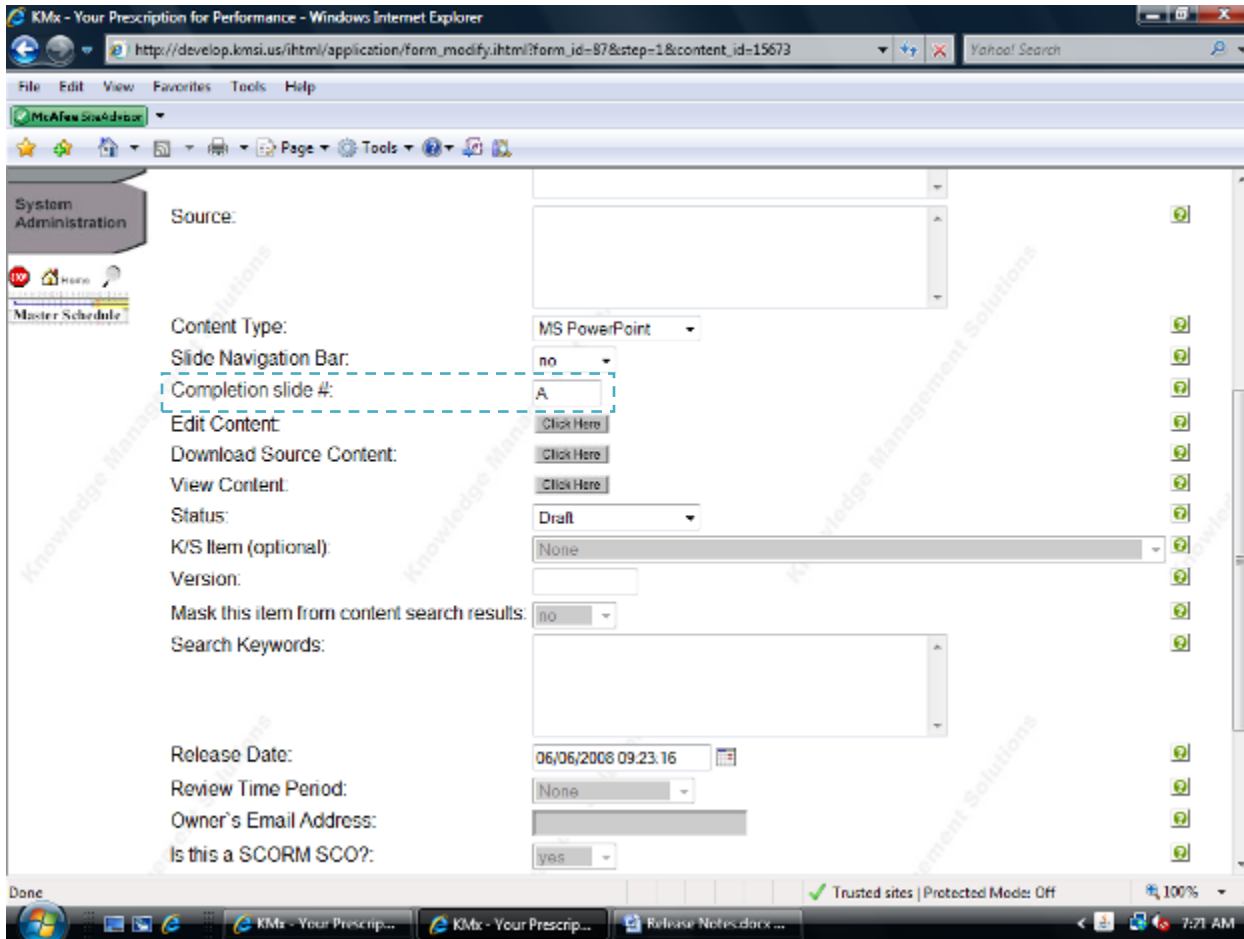
5.2.8 PowerPoint for Mobile Devices

- Support for Android, iPhone/iPad/iPod, Blackberry, Kindle, Nook and other Mobile Devices
- Fully SCORM Conformant with Bookmarking, Completion Status Recording and Session-Time Management
- Also Provides Support for Safari, Firefox, Chrome and other Browsers

KMx includes the functionality for imported PowerPoint files to be rendered as HTML5 output files. These output formats universally support all mobile devices, including the Android, iPhone/iPad/iPod, Blackberry, Kindle and Nook devices. Animations, audio and video embedded into a PowerPoint slide are not supported by these devices.

Microsoft Internet Explorer users will enjoy a complete conversion of embedded animations, audio, video, timing sequences and other PowerPoint advanced features comparable to an Adobe Flash presentation, without the need for the Adobe Flash player.

5.2.9 Microsoft Excel

The MS Excel content type is provided to enable an .XLS or .XLSX file to be used in a course outline or document. KMx will automatically convert the file to HTML and create a SCORM container for the converted file to enable session and total time tracking by learner, completion status recording and user access timestamps.

5.2.10 External URLs

The External URL content type is designed to allow an External Website or Intranet/Extranet URL to be used in a course or a document. KMx will automatically create a SCORM container for the URL to enable session and total time tracking by learner, completion status recording and user access timestamps.

5.2.11 SCORM Sharable Content Objects, Resources and Assets

When importing a SCORM package (Organize and Develop Content, Import SCORM Package) the administrator must either select an existing K/S Table to load the package into or create a new K/S Table. We recommend creating a temporary new table if you need to test your package or have any reservations about the package you are importing. SCORM packages less than 20MB in file size will upload using the Browse/Upload option. Packages over 20MB should be pre-positioned using your site FTP account and selected from the waiting area.

5.2.12 SCORM 1.3 (2004) Information

The process for importing SCORM 1.3 courseware into KMx is the same. Once imported these courses and their associated content objects will be automatically indexed into the content management system and a course outline will be generated. The SCORM specification does not allow mixing of SCORM 1.2 and 1.3x content objects in a single course. For this reason, we recommend that clients using KMx as their authoring environment continue to develop courses to the 1.2 specification. Because of the course content features of the SCORM 1.3x IMSS meta-tagging specification, modifications to your course should be accomplished in the original authoring environment.

5.2.13 Video/Audio Files

The Video/Audio content type is provided to enable WMV, WMA, MPG, MP4, MOV and other video/audio format file to be used in a course outline or document. KMx will automatically create a SCORM container for the video/audio file to enable session and total time tracking by learner, completion status recording and user access timestamps.

5.2.14 Presentation Broadcast Media (KMxLive Recordings)

The Presentation Broadcast Media content type is used to create a recorded version of a KMxLive virtual classroom session (see the topic titled "Using KMxLive") for more information). The content record includes the primary Video/Audio file created by KMxLive and requires the selection of the MS PowerPoint presentation content record used for the session. The Class Activity Record that was used to enable student access to the KMxLive session can also be selected in order to include the chat transcript of the learners during the session. KMx will automatically create a SCORM container for the Presentation Broadcast Media elements to enable session and total time tracking by learner, completion status recording and user access timestamps.

5.2.15 Message Boards

KMx message boards provide the ability to include a fully searchable threaded discussion within a course or a document. Message Boards can also be associated with a Class Record (see Classes, Resources and Activities below). Message boards can also be associated with a personnel category (See Develop Personnel Categories). Creation of a message bard requires that the content record (message board) be provided with a title. Selecting Edit Content on the Content Record will initialize the named message board. All Instructors (see Administer Personnel) are automatically designated as message board moderators and are provided with advanced options to control message board contents. Message boards allow for the attachment of numerous file types (MS Word, Excel, PowerPoint, etc) to provide a mechanism for controlled exchange of files within the message board thread hierarchy.

5.2.16 HTML/ZIP Files

The HTML/ZIP content type is provided to enable any web-server deliverable content to be loaded into the system. The input file must be a valid archive with a .ZIP extension. This content type requires the developer to specify the URL for the root file (the Launch URL) prior to content edit/upload. KMx will automatically create a SCORM container for the video/audio file to enable session and total time tracking by learner, completion status recording and user access timestamps.

5.3 Content Window Framing/Sizing

In order to allow clients to leverage Cascading Style Sheets and the KMx Language Packs effectively, KMx provides a standardized framing system that leverages Web 2.0 technology. The content types affected are:

- Microsoft Word
- Microsoft Excel
- Adobe PDF
- Adobe Flash
- Video/Audio
- Presentation Broadcasts (KMxLive Recordings)
- Message Boards
- Exams/Surveys/Performance Evaluations
- Images

The content types that are not affected (the entire screen is turned over to the content object) are:

- HTML/Zip
- SCORM Content Aggregation Packages
- External URLs (links to Intranet/Extranet/Internet sites/content)

5.4 Advanced Content Record Options

All content types have a number of Advanced Options that provide restricted access (by Company, IP Address, etc) and provide for the control of the SCORM Application Programming Interface (API). Changing the default SCORM options without a thorough understanding of the SCORM standards can result in content inoperability and other errors during content playback

5.4.1 Content That Requires Its' Own Window

Certain authoring tools (like Articulate and Captivate) provide templates that include an exit button that closes the student browser. While this is approach is obviously not conformant with the SCORM standard, we have added the ability for clients to use these authoring templates with a new "Content Requires Own Window" setting on the Content Record. We however still recommend that clients replace this template button with a button that sends the SCORM LMSFinish command and navigates the user to a completion page to conform to the SCORM standard. To use this new option, post content import, clients can set this option to "Yes" on the Content Record to enable the content to run in a Popup window that the content can safely close with an exit button.

5.4.2 IP Address Restriction

KMx includes capabilities to restrict access to content records to a specified range(s) of network IP addresses. This feature will allow clients the ability to publish materials that can only be accessed from designated "Authorized" Internet or network workstations

Each KMx Content Record can be set to restricted access by IP address.

Many organizations have both internal and external user populations. These clients may require IP address content restrictions to ensure that external users cannot access certain restricted content. At the bottom of the Review Organizational Information option under System Administration enter the Organization-wide IP address filter mask. Content that is restricted by IP address will not be available to users outside of the Organization IP filter mask entry.

Review Organization Information IP Address Setup

6 Administer Personnel

General administration of Member and User information is provided by this option.   Select Modify Member Information to review and update member records.   Personnel information can be maintained within KMx or synchronized with an external system. It is recommended that use of the Administer Personnel options be minimal if an external source is utilized. From the process option menu, new individuals can be inserted into the system and member profile information can be reviewed and updated.
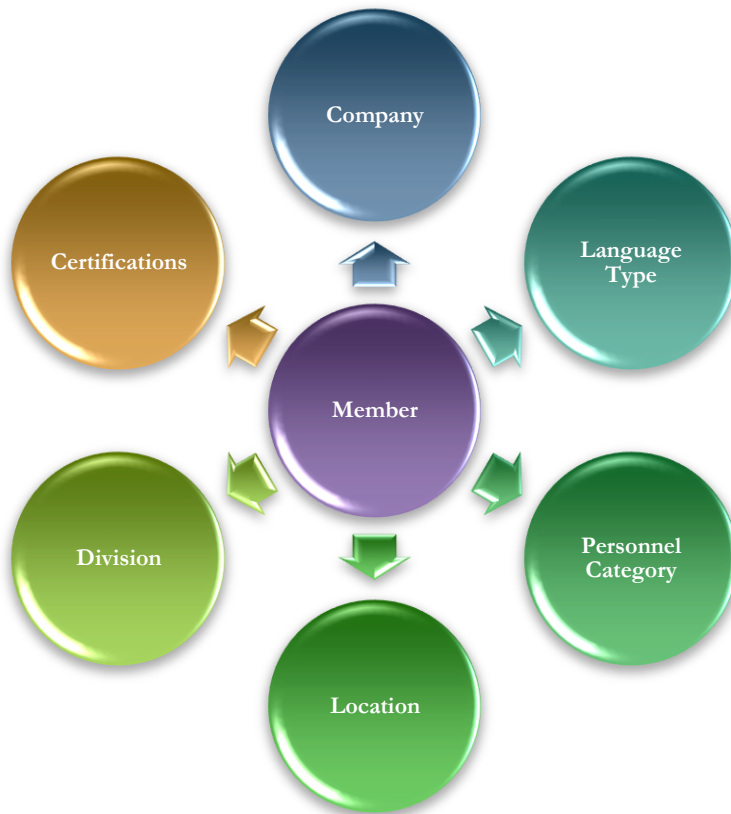
6.1 Review a Member Record and Member Search Features

Under the Administer Personnel main menu option, the administrator has the option to Review a Member Record or to Search for a Member. For clients with more than 1,000 users, the Search for a Member option is usually an easier method for finding and opening a member record.

To accomplish a search, select the appropriate type of search (name, email address, etc.) and then enter in the search string. The search response times will be significantly faster than the prior method which searched all names, email addresses, usernames and directory services identifiers for every search. The results should also be significantly more accurate by specifying the information to be searched for with the user supplied search string.

The Member record has numerous options that provide details regarding a member, including the Company assignment, the status as a Supervisor or Instructor and other demographic information. From the Member Record, the administrator can also review member enrollments, certification assignments, individual grade books, test results and response information and personnel evaluation history.

6.2 Company Assignment

From the Administer Personnel process menu, an administrator can also insert and review organization subdivisions, called Companies. See the Site Hierarchy topic above for additional information.

6.2.1 Ad Hoc Email to Company

Under the menu area to review a company record, it is possible to send an email to all members of the company.

6.3 Dynamic Calcuation of Organizational Personnel Hierarchy

KMx includes an optional setting on the Organization Setup Form (under System Administration) to recalculated the entire organization reporting hierarchy as an automated background process. This process populated a data field in the Members data system named Member Company Mask. Member Company Mask is an alpha-numeric representation of the position of each individual in an organizational hierarchy. This new feature allows Dynamic Reports to select personnel based on their relationship to the position of the individual requesting the report. In previous releases, a supervisor could generate reports that dynamically selected their direct subordinates, but not subordinates further down their organizational hierarchy. The Supervisor Menu options automatically adjust the default personnel evaluation and other default reports based upon the value of this new option.

6.4 Personnel Category Assignment

For most organizations, the assignment of members to Personnel Categories provides the primary mechanism for classification. Personnel Categories are normally assigned via the batch user import or from the client Human Resources Information System using a daily feed process.

6.5 Supervisor Options

Supervisor IDs enable KMx to provide managers with access to subordinate personnel profiles. The Manager/Supervisor is provided with a new option on the Student/Instructor Interface labeled Supervisor Access. Supervisor assignments are normally accomplished via the batch user import process or from the client Human Resources Information System using a daily feed process.

6.6 Instructor Options

The Member Record enables the designation of a member as an Instructor. Instructors can be provided with administrative options via the Student/Instructor/Supervisor Interface. Designation as an Instructor also provides the authority to use the KMxLive Instructor Console (see the topic titled KMxLive), provides the member with the authorization to proctor an exam (see the topic titled "Exams, Surveys and Performance Evaluations) and allows the member to moderate a message board (see the Message Board topic under Content Types above).

6.7 Enrollments

From the Member Record, an administrator can review the enrollments and transcripts of a member. The administrator may also change virtually any enrollment result information, including the completion of a course, the grade achieved and individual grades on exams contained within a course. Review of a member grade book also provides the ability to determine the individual responses for a member that has completed an exam or a survey. Administrators are not permitted to change student response information or change the SCORM system records for an enrollment.

6.8 Certifications

The Member Record provides an interface to review the assignment of Certifications. The option provides the list of currently assigned Certifications as well as the ability to add, review or delete a Certification assignment.
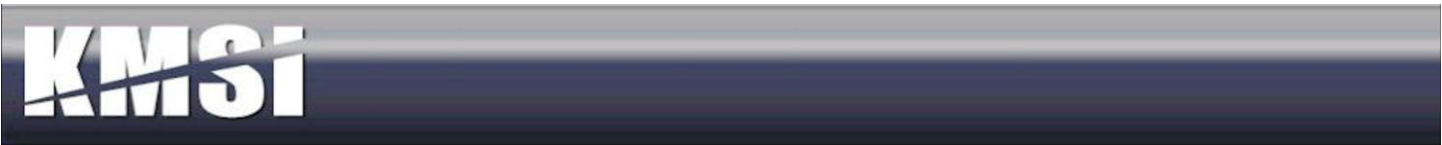
7 Personnel Categories

A personnel category provides the ability to define the knowledge and skill requirements associated with an organizational position. Personnel categories also provide for the creation and tracking of assignments to meet the requirements. In addition, creation of custom course catalogs, provisioning of collaboration tools and documentation specific to the classification can be accomplished by using a category profile setup. To create a new Personnel Category, select Develop Personnel Requirement from the main menu, select Insert a Personnel Category from the Process Options menu and complete the Modify Category Information form. Category Title and Short Title are required entries.

Personnel Category

Knowledge/Skill Requirements

Assignments

Courses	Classes	General Assignments
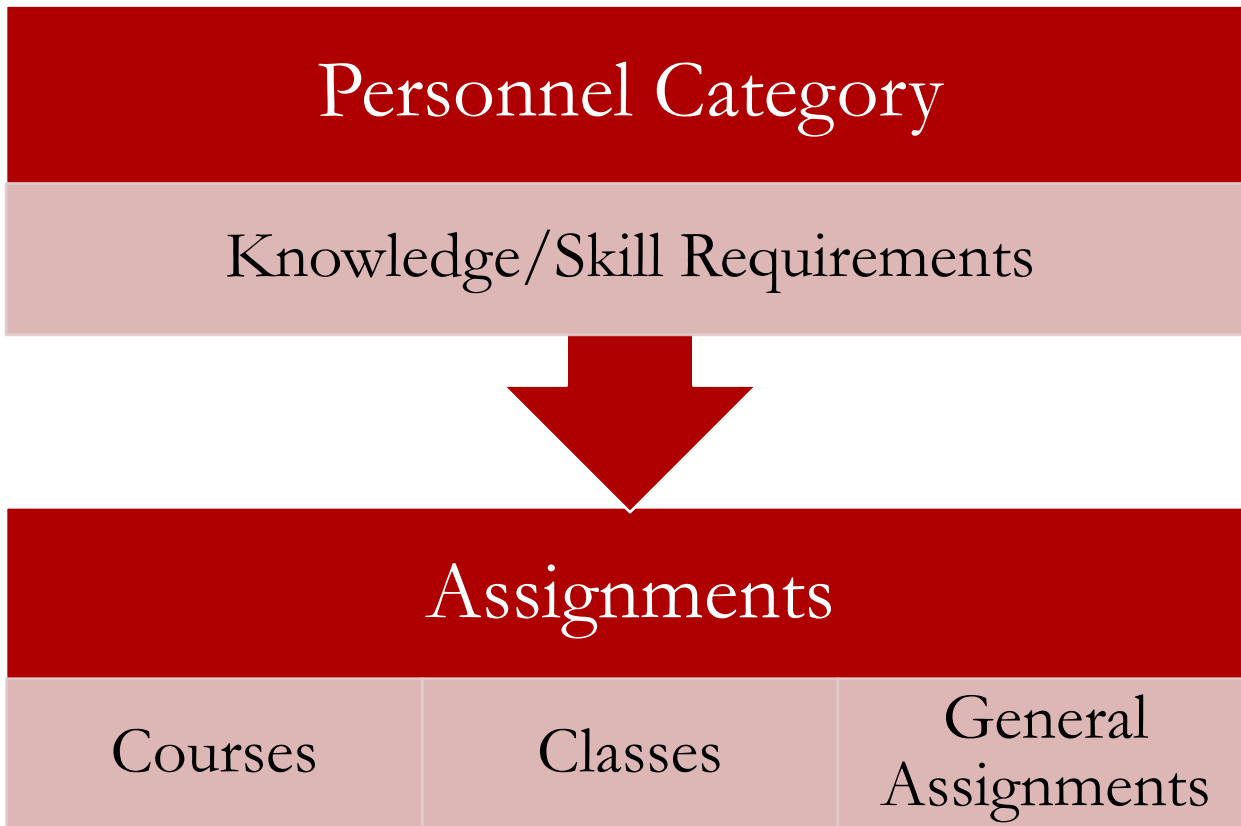
7.1 FLSA Exemptions

The Personnel Category Form provides the ability for administrators to select the FLSA (Fair Labor Standards Act) exemption status for the category as well as the type of exception that has been claimed.

7.2 Peer Reviews

The Peer Review option on the Personnel Category Form provides a Completion Due Date field that is used for exception reporting and notifications.

7.2.1 Personnel Requirements & Assignments

Personnel Requirements are the foundation for assignment of Performance-Based Training Objectives.   The develop personnel requirements icon and associated process options provide the mechanism for creation of Personnel Categories that provide specific requirements that are measurable and include prescriptive assignments. Course requirements provide the depth and location of training requirements established for a particular course of instruction. Condition and Standard combinations are represented by client defined abbreviations, for example:

T1 – Theory supporting normal operations

O1 – Operate under normal conditions

M1 – Perform maintenance using documented procedures

O2 – Operate under casualty or degraded conditions

Personnel Category Requirements define the Subject Areas (K/S Tables), the level of competency required and whether the requirement is to be completed as either an initial or advanced point in an individual's qualification in the category. Requirements can also be designated as Required or Recommended for the classification. From the Modify Category Information form, select Review Requirements to add new requirements or select a requirement for revision. From the Select Requirements information form, complete the K/S Table (subject area), Training Level (competency level) and Requirement Type (initial or advanced). A description can be provided to add clarity for the student regarding the requirement.

Personnel Category Assignments define what actions a person assigned to the Personnel Category need to accomplish to meet a specific Personnel Category Requirement. Assignments can be online courses, formal class participation, informal activities (read a document, review a website) or other classifications that are unique to the organization (see Create and Manage Activities, Activity Types). From the Select Requirements information form (see Personnel Category Requirements), select the Assignments option. This will cause a popup to display with the ability to add or modify Personnel Category Assignments specific to the Personnel Category Requirement. From the Review Personnel Assignment information form, complete the Activity Type and Description fields. If the Assignment Activity Type is an Online Course or a Formal Class, select the course title. If the Assignment Activity Type is an informal assignment (read a document, review a website or other classifications that are unique to the organization), select the appropriate Assignment Title (see Create and Manage Activities to create General Assignments for this list). Notification and certification entries are optional and will enable enhanced reporting and tracking of critical assignments.

7.3 Catalog Assignments

KMx course catalogs can be defined as either unrestricted (anyone can access the catalog) or restricted (only personnel in a specific Personnel category can access the catalog). Unrestricted catalogs are available from the course catalog options on the student interface. Restricted catalogs are only available from the Category Profile option on the student interface. Creation and assignment of a restricted catalog requires the administrator have System Administrator rights in order to establish the restricted catalog (see System Administration options). From the Modify Category information form (see Personnel Categories and Category Profiles), select Catalog Assignments to add or modify Catalogs designated for the particular Personnel Category.

7.4 General Assignments

General Assignments are activities that are not associated with a course or class. General Assignments are normally informal activities that are associated with a Personnel Requirement (see Personnel Categories and Category Profiles). In order to establish a General Assignment, the content to be assigned must exist in the KMx content management system (see Organize and Develop Content). To create a General Assignment, select Create and Manage Activities, Insert a General Assignment Record and complete the Assignment Title, Activity Type, K/S Table and Content Record selections. Once created, the General Assignment can be included as a Personnel Category Assignment to meet a Personnel Category Requirement (see Personnel Categories and Category Profiles).

7.5 Assign Documentation to a Personnel Category

KMx documents can be created to supplement the qualification of individuals (see Create Reference Documentation). KMx eBook documents are only available from the Category Profile option on the student interface. Select Develop Personnel Requirement from the main menu, select Insert or Review a Document Assignment Record from the Process Options menu to add or modify eBooks designated for the particular Personnel Category.

7.6 Peer Evaluations

The Personnel Category Record provides the ability to assign a Personnel Evaluation (see the topic titled "Exams, Surveys and Evaluations") to a Personnel Category. The assignment of a Peer Evaluation will create a link on the Category Profile page of the Student/Instructor/Supervisor Interface that enables personnel in the category to complete the evaluation form for other personnel in the category.

7.7 Message Board Assignments

The Personnel Category Record provides the ability to assign a Message Board (see the topic titled "Content Types, Message Boards") to a Personnel Category. The assignment of a Message Board will create a link on the Category Profile page of the Student/Instructor/Supervisor Interface that enables personnel in the category to contribute and participate using the selected Message Board.

8 Courses

In KMx, Courses are a primary data element. Course Records provide the definition of what the course consists of, including the association of course requirements (learning objectives), eCommerce information and course execution parameters (passing score, Course AutoComplete, etc.).
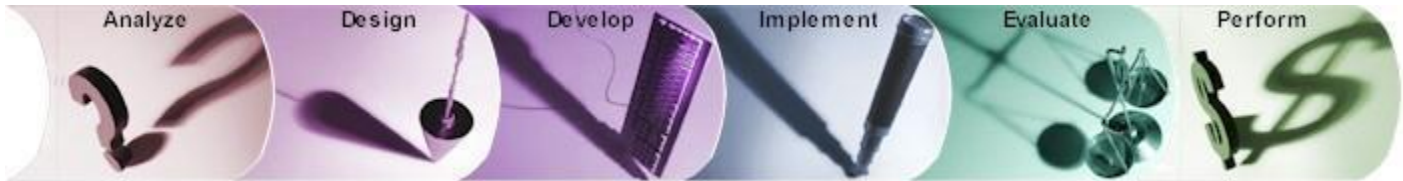
8.1 Enhanced ADDIE Model

The KMx course development process implements change management methods to provide predictable outcomes. This process is based on the application of the instructional system design and development model specifically tailored to ensure performance-based results.

8.1.1 Analysis

Provides the identification of behaviors, conditions and standards of performance required to produce the desired performance improvements. These elements are formed into program objectives documenting the primary goals and delivery strategies for the program.

8.1.2 Design

Provides the preparation and organization of objectives for the individual performance improvement activities, the development of performance-based evaluation techniques and tasks, and a program evaluation executive summary.

8.1.3 Development

Provides the preparation materials (text, images, audio, video, and other media) required to convey and measure the performance improvement activities.

8.1.4 Implementation

Provides delivery of the performance improvement activities and evaluation materials to an initial audience to allow learners, facilitators, and project sponsors to evaluate the program's effectiveness.

8.1.5 Evaluation

Provides a quality management component for the program. Evaluation takes two forms, formative and summative. Measuring the achievement of the Program Objectives is a primary activity of this phase.

8.1.6 Performance

Provides a continuous improvement process designed to evaluate accomplishment of organizational objectives and provide a process for implementing change.

8.2 Course Records

Development of a course within KMx requires the creation of a course record. The course record captures title and descriptive data as well as provides numerous options for course presentation and display options. From the main menu, select Develop Course Requirements to Insert a new Course Record. The Course Record provides overall course level

information and meta-data for a course.
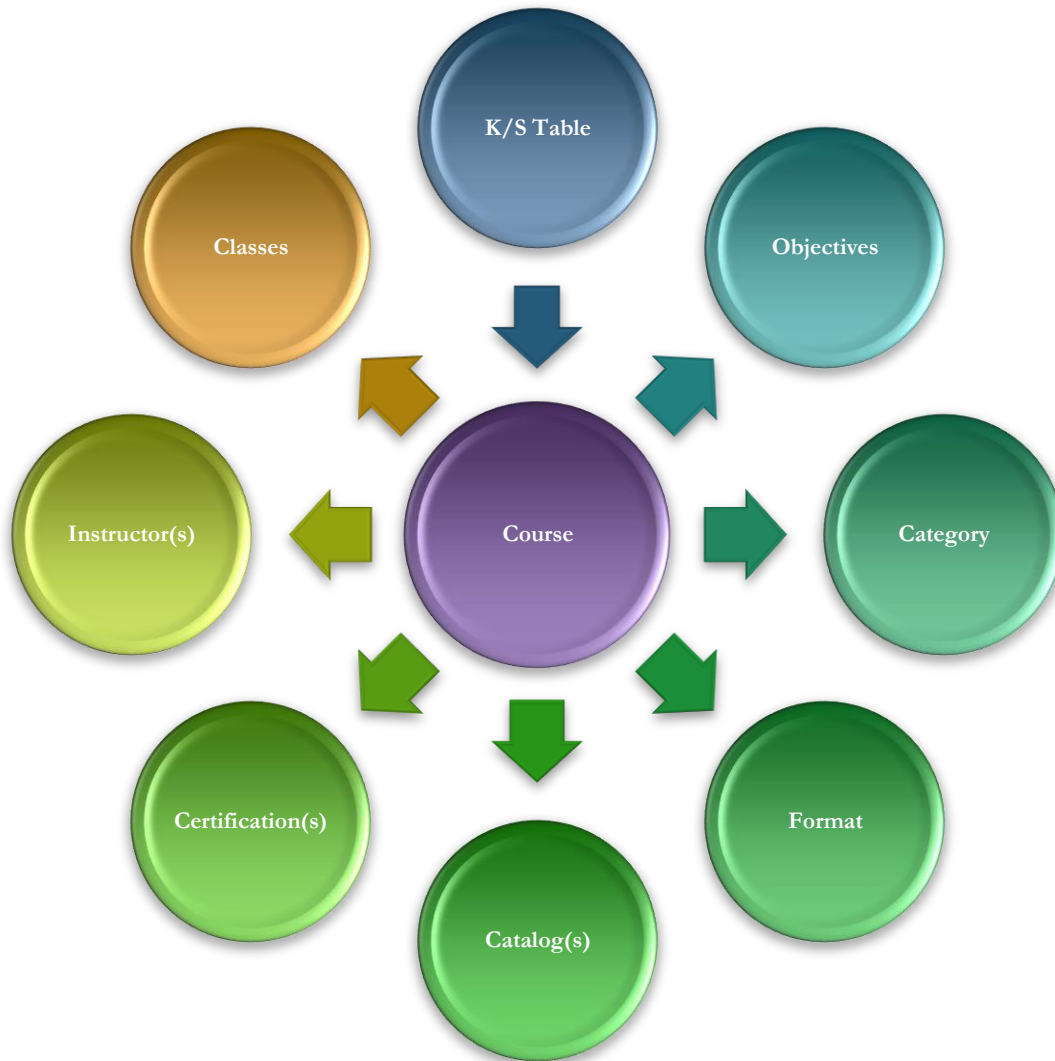
There are numerous options associated with the course record that will assist you in tailoring your offering to your students. These options include Display Navigation Bar (provides a Next/Back navigation bar to support linear progress through the course), Must Enroll in Class (makes the course only available for self-registration if it is the subject of a scheduled class) and MS Word Title Page (provides a expanded description of the course for use by the course catalog and becomes the first page the student navigates to if the navigation bar is on).

We suggest you try different combinations of the options provided prior to placing the course in the Course Catalog to determine which combination best meets your needs.

8.2.1 Course AutoComplete

KMx includes capabilities to automatically set the enrollment completion status based on the completion of all SCOs and the availability of retakes for scored SCOs. This setting is optional.

If the AutoComplete Enrollment option is set to "Yes" the system will determine overall enrollment pass/fail status based on all SCOs and all available scored event retake options. If the student has a passing weighted score and has completed all SCOs the result will be "Completed Satisfactorily". If the student has a weighted failing grade and has completed all SCOs, then the result will be "Completed Unsatisfactorily". All other conditions will leave the enrollment in a "Not Completed" state.

8.2.2 User Self-Claimed Courses

KMx provides the ability for clients to easily setup courses for end-users to report courses taken outside of the workplace (Forklift certification, Medial Seminars, Company Reimbursable Education, etc.). Added to support Continuing Education reporting requirements, this new feature also provides clients with the ability to control the data entry screens needed to record the course completion. The new feature is enabled on a Course Record with an option to make the Course a Self-Claimed Course. Clients can also allow the end-user to enter the title of the course to be recorded in their transcript.

8.2.3 Course Universal Prerequisites

The ability to set universal course prerequisites is available in a popup Form to minimize the load times associated with the Course Record Form. The control is a Multi-Select with Sorting Control to make the process of selecting multiple prerequisite courses easy. Unlike the prerequisites established as part of a certification or personnel category continuum, Universal Prerequisites are designed to force a sequence of courses to be completed in a specific order for all users. This new feature is enabled on the Course Record and is activated by selecting one or more courses as prerequisite to the current course.

8.2.4 Completion Reminders

KMx includes up to three timed completion reminders to be sent to the end-user post enrollment unless they have completed the course. This is particularly helpful for clients that have established required training programs that want to automate the reminders for end-users to complete training within a prescribed timeframe. Each reminder can be set to be delivered at any time period available.

8.2.5 Instructor Qualification

KMx provides the ability for clients to create instructor qualification programs and manage instructor scheduling based on qualifications achieved. In addition to the ability to create the certification program a requirement leading to qualification, the administrator now has the ability to enforce the resource scheduling system to allow only those instructors determined to be qualified to be scheduled. On the Course Record there is an option to "Review Qualified Instructors". This option presents a list box control to add/delete and edit instructor qualifications for the course. Under System Administration, Review

Organization Information, there is a new option titled "Use Advanced Resource Scheduling". If this feature is set to "Yes", then only those instructors that are qualified to teach a particular course will be available for scheduling.

8.2.6 Enable Launch from Student History Page/Transcript
This option provides the ability to enable/disable launch of a course following completion for review purposes.

8.2.7 Disable Prerequisites when Launched from Student History/Transcript
 Provides the ability for a student to have continued access to course materials from their transcript even if a new Universal Pre-Requisite is established after the student has completed a course.

8.2.8 Certification Assignments
A course can be associated with one or more Certification programs. Certification programs are a collection of courses that are grouped together to achieve a performance goal. Each course assigned to a certification can be required or elective, date restricted (start/completion) and can include recertification requirements. For more information on how to leverage this set of features, see the topic titled "Certification Setup".

Course 1	• Activity Type • Prerequisite • Exclude/Equivalency • Start Date • Due Date • Recertification Period
Course 2	• Activity Type • Prerequisite • Exclude/Equivalency • Start Date • Due Date • Recertification Period
Course 3	• Activity Type • Prerequisite • Exclude/Equivalency • Start Date • Due Date • Recertification Period
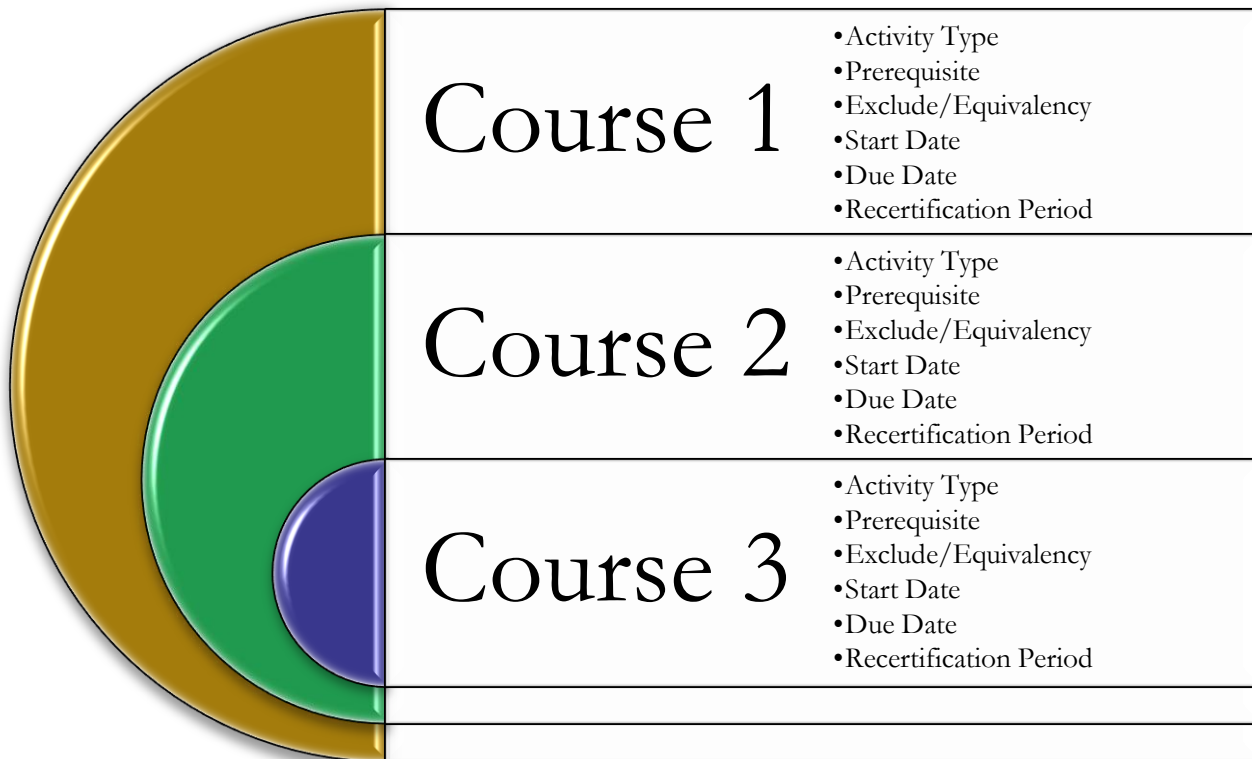
8.2.9 Catalog Assignments
KMx provides two separate methods for the assignment of a course to a catalog. The method that the Organization will use is determined by the "Use Many to Many Course Catalog" setting on the Review Organization Information Form under System Administration. If the use many to many option is set to no, then the Course Catalog Dropdown at the top of the Course Record is used to determine catalog placement. If the use many to many option is set to yes, then the Review Catalog Assignment popup option is used to provide the ability to assign a course to one or more catalogs.

8.2.10 Navigation Bar Options

To provide for the maximum developer flexibility, a KMx course can have one of three navigational options:

Display Navigation Bar – Used for a multi-element course where Next and Back navigation is appropriate for sequencing the learner through each element.

Syllabus View (Display Navigation Bar is set to No) – Used for a multi-element course where a syllabus (table of contents) navigation model is more appropriate.

Single Element – Automatically selected by KMx if the course does not have multiple elements. Under this option, no navigation interface is provided.

8.3 Course Requirements (Learning Objectives)

Course requirements provide the depth and location of training requirements established for a particular course of instruction. Selecting the AutoGen Requirements by K/S Table automatically generates Course Requirements based on established course metrics.   Course requirements can also be assigned and developed using the Insert and Review Course Requirements option.

Course requirements, also known as learning objectives, assist the developer, instructor and student by providing the goals for the course of instruction. Course requirements can be generated automatically or entered manually into the KMx data system. KMx will allow a course to exist without training requirements or objectives; however we strongly recommend you consider the positive aspects of establishing performance goals for your courses.

8.3.1 Using the AutoGen Feature to Develop Course Requirements and Objectives

Following the review and modification of the subject area K/S Table, the instructional designer can proceed with the course development process using the KMx Course Requirements AutoGen feature. This feature uses expert system technology to automate the creation of performance based training objectives and course requirements documentation. Leveraging relational database technology, the expert system provides knowledge and skill training level classifications that document conditions and standards of performance associated with behavior accomplishment. The level classification system is pre-populated with customizable condition and standard information unique to a K/S Template.

The Course Requirements AutoGen process requires the identification of the training subject area and the selection of a performance standard for generation of candidate training objectives. The process requires a few seconds to generate the course requirements and training objectives for review and modification by a subject matter expert. The subject matter expert review can be conducted online or be provided to the subject matter expert in a printed or word processing format to facilitate the process.

A Course Requirement Record documents the Behavior, Condition and Standard of Performance. The record also documents the placement of the objective and the supporting content in the course outline. Performance Measures can be assigned to a Course Requirement to enable tracking of performance improvement metrics.

8.3.2 Insert Course Learning Requirements (Objectives)

From the Develop Course Requirements main menu option, select insert a Course Requirement Record to create a new learning objective for the course.

8.4 Course Outlines

Course outlines provide the structure for further course development.   Course outlines can be developed by selecting the AutoGen a Course Outline to automatically generate a course outline based on course requirements.   Course outlines can also

be developed by using the Insert options for a Part, Section or Topic.   To modify your course outline, select the Review Course Outline option. Course Objectives document the behavior, condition and standard requirements for a course. Course outlines document the assignment of objectives within a course and provide the structure for further course development.
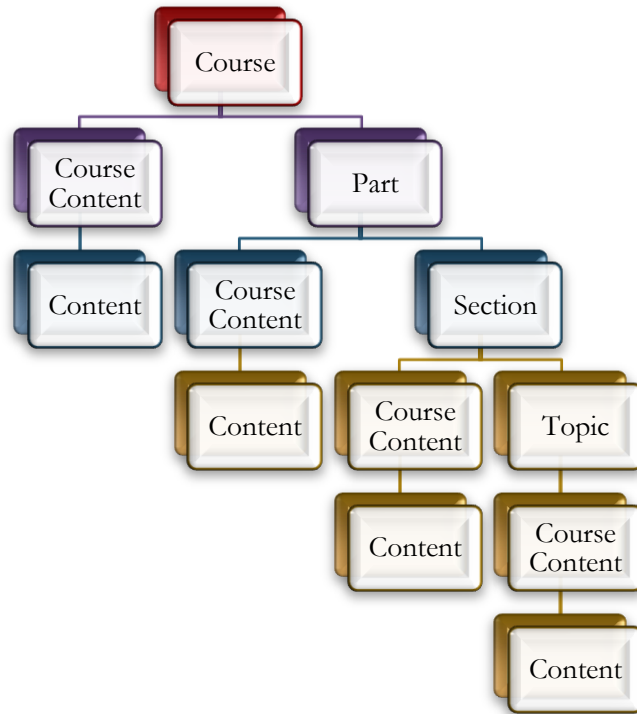
8.4.1   Using the AutoGen Feature to Develop the Course Outline

Following review and modification of the course requirements and training objectives, the instructional designer can proceed with development of a course outline using the KMx Course Outline AutoGen feature. This feature leverages expert system technology and processing rules to rapidly generate a course outline based on the course requirements, the relationship of knowledge and skill K/S Items (behaviors) and the training objectives for the course. The feature recognizes the requirements for supporting content and creates placeholders in the course outline to facilitate further development.

The Course Outline AutoGen process requires the identification of the Course for outline generation. The process requires a few seconds to generate the course outline and content placeholders for review and modification by the instructional designer. The instructional designer review can be conducted online or be provided in a printed or word processing format to facilitate the process.

8.4.2   Create/Review the Course Outline

Course Outlines can have up to five levels: Course, Part, Section, Topic and Course Content. As illustrated below, this course utilizes all five levels.
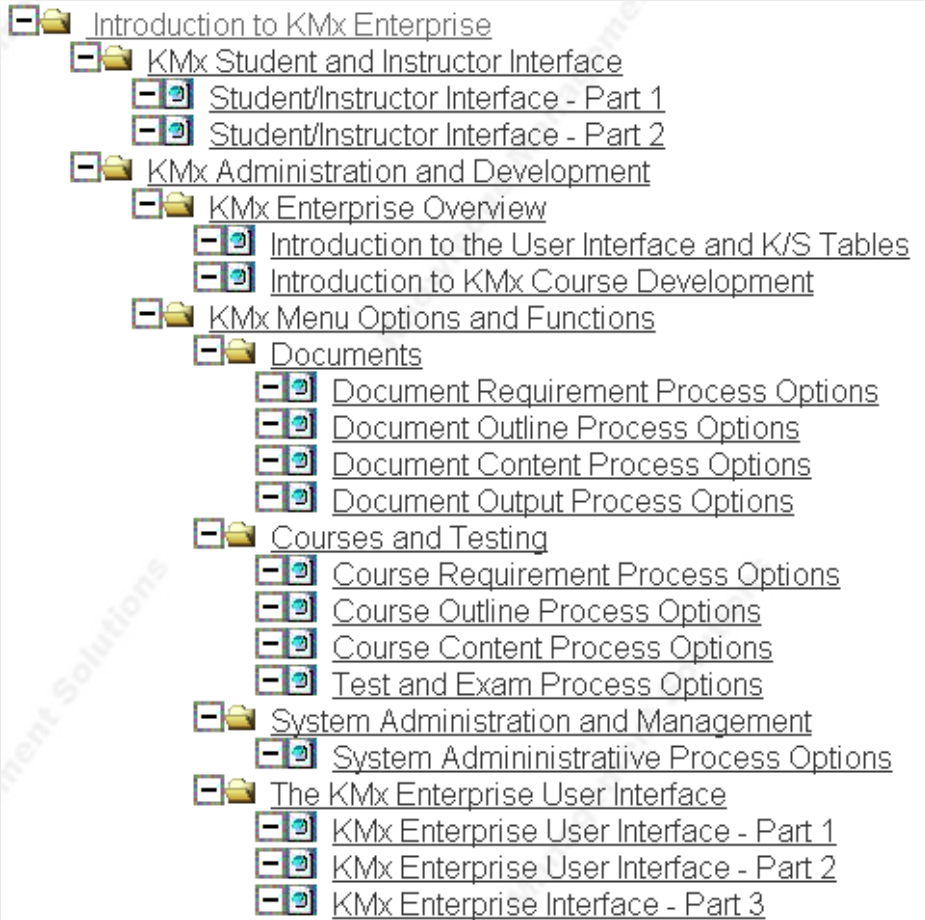
8.5 Course Content

Course content development is accomplished by forming a relationship between content objects and a course outline (see Organize and Develop Content Objects).   Course outlines developed using the AutoGen feature will have placeholders inserted for each required content object.   Use the Review Course Outline option to view the course outline and assign content objects where Edit/Upload Content appears in the outline.   A content record that is Not Assigned indicates that a course content record has been inserted without selection of a content record relationship.

KMx stores content by using a Content Record accessible through the Organize and Develop Content main menu. Course Content Records are pointers from the Content record to the Course Outline (see above). This approach enables reuse and maintenance of content without duplication. The Course Content Record form (see above) documents this relationship and any other information unique to the use of the content in the current course.

Course content provides the actual instructional materials within your course. Course objectives and requirements provide the goals, course outlines provide the structure and course content delivers the information, testing and remediation to ensure the course requirements are achieved.

In KMx, course content development is accomplished by forming a relationship between content objects and the course outline. Content objects are files that support the requirements of your K/S Table (subject area) and can originate from numerous applications and file formats, including:

- Microsoft Word
- Microsoft PowerPoint
- Microsoft Excel
- Microsoft Presentation Broadcasts
- Adobe Portable Document Files (PDF)
- Macromedia Flash
- Macromedia Dreamweaver (using the SCORM Packaging option)
- Image file formats (.gif and .jpg)
- Streaming Media files (Microsoft or Real formats)
- External URLs
- SCORM Content Objects

As discussed previously, course outlines developed using the KMx AutoGen feature will have placeholders inserted for content objects required to achieve the course requirements and objectives. KMx provides a expandable course outline editing interface to review and assign content objects to populate the course outline. Visual indicators are provided to assist the developer in completing this process. This is the Course Development Toolbar. It is available from the Develop Course Outline and the Development Course Content main menu items. Using the Review a Course Outline process option and selecting a course will open this toolbar. It is used in conjunction with the Course Outline to insert elements into a course. The toolbar has an Insert Content icon to create a link between the course outline and a content object already available in the content management system. It also has icons for the insertion of content both into the course outline and the content management system for MS Word, MS PowerPoint, MS Excel, Adobe (PDF), Video/Audio (Windows Media formats), Flash (SWF), Image (JPG/GIF), Exam and external URLs. Beneath these icons are tools to Expand and Collapse the Course Outline Tree (see example below) and to create course outline subdivisions (Parts, Sections and Topics).

8.6 Course Output Options

Courseware can be output in numerous formats and presentations, including eLearning, SCORM compliant objects, MS Word (various formats) and XML. Select the Review a Course as eLearning to generate files required for general use as asynchronous courseware or as support materials for synchronous learning activities. Select Output a Course to select from the many electronic and print formats available. Courseware can be output in numerous formats and presentations, including:

- eLearning
- SCORM content aggregation packages
- MS Word documents (Instructor Guide, Student Guide, SSWB)

9 Exams, Surveys and Performance Evaluations

Tests are established to verify the understanding and retention of information.   Tests are organized by course and K/S table to allow for measurement reporting of individual achievement through formalized training and informal activity. Organization of tests and test items by K/S table also promotes re-use and ease of maintenance of testing materials.

KMx provides a comprehensive testing and examination system suitable for high-stakes exams:

- Extensive test item types including true/false, multiple choice 3-6 answer, fill-in, scored-scale, matching and drop-down.
- Pool and specification based test item randomization.
- Test item answer randomization.
- Timed testing.
- Proctored testing.
- Scored, un-scored and weighted testing.
- Complete test item and test reuse with fully independent weighting, retake, pre-requisite management and test item response analysis.
- Use of supporting media including audio, video, flash, graphics, supporting documentation and more.
- Enables authors to provide end-users with test item remediation, rationale, references and more.
- Enables behavioral indexing of all test items and their use for organizational analysis, competency and talent management and more.

Tests are developed by Inserting a Test Record and Inserting Test Item Records.
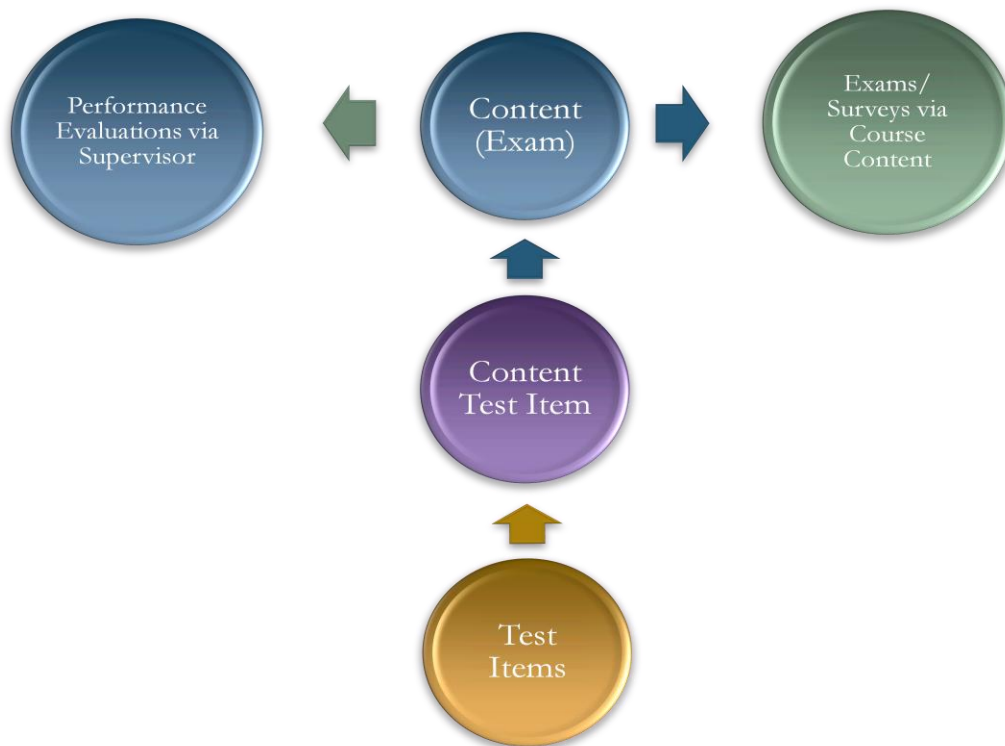
Once inserted these elements are related by using the Assign a Test Items to a Test option. You may also Review a Test Record and Test Items from this menu option. Tests are included in a course by using the Assign a Test to a Course option. Once assigned to a course, tests will appear in the course outline as content objects and may be modified using the Review Course Outline option from the Course Content Development menu. Statistical and grade book reports are available from the Generate Reports menu option.

Test are developed using the Develop Testing Materials main menu option. Insert a Test Record using the process menu option. Exams and surveys require the selection of test items and the selection of options for the exam or survey delivery. Just like creation of a new content record, an exam requires selection of a K/S Table for future content management. As a minimum, the developer must provide a Title for the exam.

The selection of items is accomplished by using the Edit Content "Click here" button on the Exam Content Record form. Adding test items to an exam or survey results in the creation of a list as depicted in the screen below.

Test Title: Generic End of Course Survey
Test Description: Please complete this survey.

Test Item
```
1 . Instructional Content ...................................................
2 . Classroom and Facilities ..............................................
3 . Your Instructor .......................................................
4 . Please provide your comments in the spce provided below: ...........
```

[Next]   [Add]   [Done]

Each entry on the list provides access to a test item assignment record. Questions may be sequenced using this record or randomization can be accomplished using the options on the Exam Content Record form.

Question:	Classroom and Facilities	❓
Sequence:	2	❓
This item starts a table view:	no	❓
This item completes a table view:	no	❓
Comments for start of table information:		❓

[Done] [Return] [Copy] [Delete]

In KMx, exams are content objects that are assigned to a course and indexed to a K/S table (subject area) to allow for measurement and reporting of achievement through formalized training and informal activity. Organization of exams and test items by K/S table also promotes re-use and ease of maintenance of exam materials. Exams are developed by assigning test items to the exam. Exams are included in a course by assigning the exam as a content object into the course outline. Once assigned to a course, exams will appear in the course outline as content objects and may be modified from the course outline tree.

9.1 Preparing a Test Item Import Spreadsheet

Test questions can be imported in to KMx in the form of a Microsoft Excel Spreadsheet. **Click here** to download the test item import template. The first row of the spreadsheet is assumed to contain the column headers and will be ignored during the import. Each subsequent row represents one test question and consists of 12 columns as follows:

A. test_item_type_id A number from 1 - 6 indicating the format of the question:
- 1 - True / False (2 answer)
- 2 - Multiple Choice (4 answer)
- 3 - Multiple Choice (5 answer)
- 4 - Fill In the Blank
- 5 - Multiple Choice (3 answer)
- 6 - Multiple Choice (6 answer)

B. test_item_reference Optional. A description or citation indicating an authoritative reference associated with the question. It will be displayed to the student only after the test responses are submitted, and if the test is configured to show the test results. This may be left blank if desired.

C. test_item_rationale Optional. A rationale describing the appropriate response. It will be displayed to the student only after the test responses are submitted, and if the test is configured to show the test results. This may be left blank if desired.

D. checkbox Optional. A value of 1 indicates a test question can have multiple answers.

E. test_item_correct_answer A number from 1 - 6 indicating which of the possible responses is correct. For Fill In the Blank type questions, the value may also be set 0.

F. test_item_question The test question or statement to which the student is responding.

G. test_item_answer_1 The first possible response to a true/false or multiple choice question.

H. test_item_answer_2 The second possible response to a true/false or multiple choice question.

I. test_item_answer_3 The third possible response to a multiple choice question.

J. test_item_answer_4 The fourth possible response to a multiple choice question.

K. test_item_answer_5 The fifth possible response to a multiple choice question.

L. test_item_answer_6 The sixth possible response to a multiple choice question.

9.2 Test Items

Test Items are developed using the Develop Testing Materials main menu option. Insert a New Test Item using the process menu option. Test Items must be associated with a K/S Table. Test items can be True/False, Multiple Choice or Fill-in. As a minimum, the developer must complete the Correct Answer, Question and appropriate Answer Fields. Various options are provided to enhance the test item, including the addition of reference information, rationale, media files and remediation. The following screen provided a completed test item entry.

9.2.1 Drop-Down Lists

Many clients have leveraged the ability to provide KMx "fill-in" questions on their surveys and performance evaluations. There is also an option for "fill-in" questions that provide a drop-down list of possible "fill-in" responses. The approach allows for very long lists of possible answers to be presented to the end user and makes it easier for clients to tabulate the response data for reports and further action. In order to use the drop-down feature, create or edit a "fill-in" test item and select the drop-down option from the menu. Below the drop-down selection option a text box will appear that will enable you to create the list of possible responses for the end-user. The list can be words, numbers or phrases delimited with a pipe character (usually shift-backslash on a standard QUERTY keyboard).

9.2.2 Expanded Multiple Choice Options

KMx allows for up to 9 possible answers to a "multiple-choice" type question. This capability was designed to facilitate surveys and performance evaluations, however all "multiple-choice" type questions can have a correct answer and can be scored.

9.2.3 Creating Matching Type Questions

In KMx all test item types, including table view and Scored-Scale items can have a correct or multiple correct answers. This approach also enables clients to "score" surveys and performance evaluations for reporting purposes. This approach also enables clients to develop Matching questions. To create a matching series of questions, select Multiple Choice with the appropriate number of responses for the number of items to be matched. Matching is accomplished by using the Table View option when assigning the test item(s) to the test. For example:

Match the following items with the correct purpose statement:	Used to slow or stop the vehicle	Used to smooth bumps in the road	Transfers Power from the Engine to the wheels	Enables the vehicle to be pointed
1. Brakes	X	o	o	o
2. Suspension	o	X	o	o
3. Drive Train	o	o	X	o
4. Steering	o	o	o	X

9.2.4 Fill-in-the-blank questions

 KMx includes fill in the blank style question types for use in quizzes and surveys. Automatic grading of these questions in not supported. A report to show all answers to all questions by all individuals who take a course or class is also included to support grading of the fill-in-the-blank style questions as well as statistical analysis of the responses. A test question may contain up to 768 characters. A fill-in response may contain up to 255 characters. Adding this assessment format type meets the needs of many customers to collect free form feedback on course offerings as well as a desire by others to expand the format of quizzes and exams.

9.2.5 Drag & Drop Test Items

Drag & Drop test items enable the user to demonstrate the ability to put a series of items into the correct order using the Drag & Drop controls. The creation of a Drag & Drop item is the same as other test item types with the additional step of selecting "Yes" on the option labeled "Use Drag & Drop Sequencing" and entering the correct sequence into the "Correct Answer" field. Items are scored on a correct/incorrect basis (i.e. any wrong selection by the user will result in the item being scored as incorrect).

Example Drag and Drop Test Item

Correct Answer:	45321
Question:	Drag & drop the following steps of the KMx SCORM package import process into the correct sequence:
Answer 1.:	Upload the SCORM Package and Review the Import Results messages
Answer 2.:	Browse for the SCORM Package zip file
Answer 3.:	Select the K/S Table for the package to be imported
Answer 4.:	Select Organize and Develop Content from the KMx Main Menu
Answer 5.:	Select Import a SCORM Package

When viewed by the user in a test or exam, the items to be sequenced will have a red outline with a button that is labeled "Set". Once the user has put the items into the correct sequence, selecting the "Set" button will lock in the user response and change the outline color to blue. Should the user move an item in the sequence after selecting Set, the outline will turn red to indicate that a change has been made without the Set button being pressed to lock in the change. Selecting Set will once again lock in the sequence and turn the outline to blue.

1. Drag & drop the following steps of the KMx SCORM package import process into the correct sequence:

Upload the SCORM Package and Review the Import Results messages
Browse for the SCORM Package zip file
Select the K/S Table for the package to be imported
Select Organize and Develop Content from the KMx Main Menu
Select Import a SCORM Package

Set

1. Drag & drop the following steps of the KMx SCORM package import process into the correct sequence:

Select Organize and Develop Content from the KMx Main Menu
Select Import a SCORM Package
Select the K/S Table for the package to be imported
Browse for the SCORM Package zip file
Upload the SCORM Package and Review the Import Results messages

Set

9.3 Tests and Exams

In KMx, tests and exams are scored based on the equal weighting of questions (i.e. 1/N where N equals the total number of questions delivered). The ability to randomize both questions delivered and the answers of the questions can provide an extremely secure method for high stakes exam delivery. Tests and exams do not have a passing score. The test/exam produces a score; however the determination of if the score achieved is a passing score is determined by the course and the course content linking record that employs the exam. For many clients, courses will have a single "Final Exam" that has an applied weight of 100% (it essentially is the learner final grade) in the course that uses the exam. For other clients, courses can consist of any number of progress checks and exams with various weights applied.

9.4 Surveys

Surveys are essentially exams that are not scored. KMx provides the fill-in question type as a non-scored element specifically for surveys and performance evaluations. KMx provides the ability to display a multiple choice question set in a grid to enable the client to create surveys that ask a number of questions against a ratings scale (i.e. poor to excellent). The ability of KMx to capture and collate the student response data into statistical information is the primary reason so many clients use the KMx survey response tools (see the topic titled "Reporting").

9.5 Performance Evaluations

KMx includes capabilities to automate the process of administering a large-scale organizational review program. These features include dynamic group reporting, subordinate summary and results management, and automated assignment and tracking.

The Supervisor, Personnel Administration and Generate Reports Menus have options for reporting and management of Personnel Evaluations, including Statistical and Group Average information. See the topic titled "Supervisor Options" for more information.

9.5.1 Organizational Due Date Assignments

A utility that is available under System Administration, Review Organization Information, named "Set All Member Evaluations". This utility provides administrators with the ability to set all members (employees) performance evaluation due date to a specific date or to set it to the member's next anniversary based on hire date. These two methods accounted for most of the requirements provided to us by our clients. We are considering the addition of a Company-based filter in our next release to enable the administrator to restrict the assignment to personnel within a company.

9.5.2 Exception Reporting

The reports on the developer/administrator and the student/supervisor/instructor interfaces enable exception reporting of evaluations based on due date. This approach was designed to make it easy for supervisors to stay on top of the evaluations they are responsible for and enable organization-wide visibility into any exceptions.

9.5.3 Special Evalauation

Administrators and supervisors can assign "Special Evaluations", including a due date for accomplishment. Special Evaluations are not globally assigned like Organization Evaluations. The Special Evaluation assignment options are available under Administer Personnel, Review a Member Record.

9.5.4 Supervisor Options

The Supervisor Menu on the Student/Instructor/Supervisor interface provides exception reporting associated with personnel and peer evaluations based on due dates assigned. If due dates are not assigned for an evaluation, the reports will only show the evaluations that have been completed.

10 Classes

General administration of Class and eLearning enrollment information is provided under the Administer Classes main menu option. Classes are Scheduled implementations of Courses with Activities and Resources. Select Insert a Class Record to create a new class convening. Select Review a Class Record to Assign Instructors, Review Class Rosters, Student Grade Books and scheduled Activities. Select Review eLearning Enrollments to review asynchronous enrollments and student Grade Books.
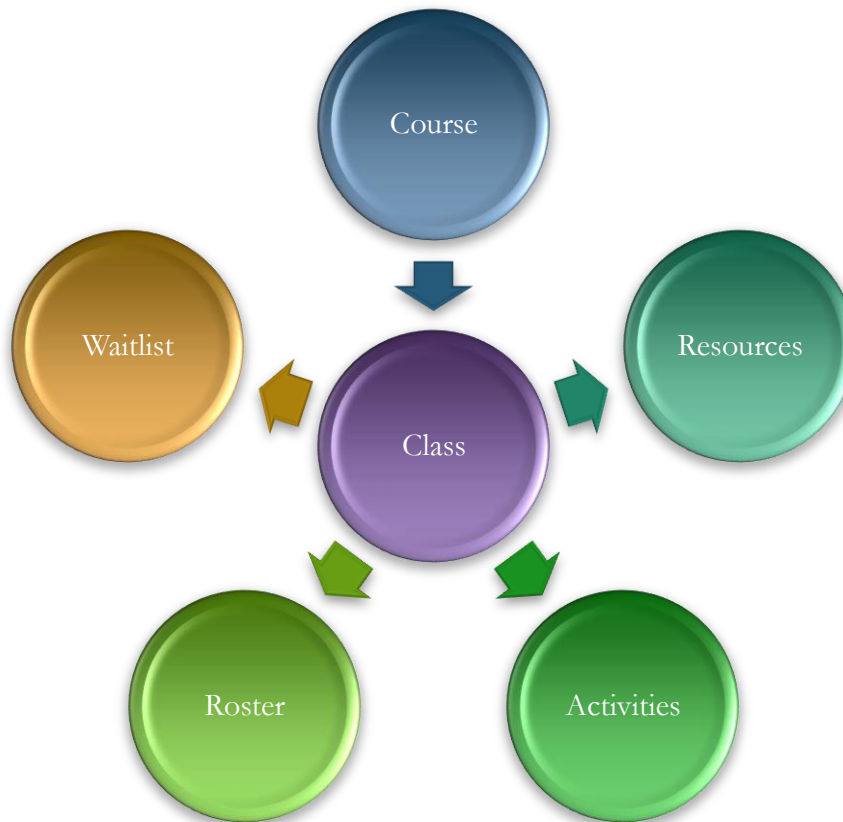
Classes are scheduled implementations of a course. This means that in order to schedule a class, a course must exist to be scheduled. The first step to creating a class is to "Insert a Class Record". The class must have a unique title to differentiate it from other classes in the catalog. A good approach is to use the course title plus additional information to differentiate the class from other convening's of the same course like location or timeframe (fall, 1st Quarter, October). In order for students to be able to self-register for the class, the start date must be in the future and the course must be available in a catalog that the student has access to. Class start and end dates, maximum class size and waitlist information should also be completed. Use the Master Schedule to review and to edit class records. A class record that has multiple convening's can be copied the copy button at the bottom of the class form. The class calendar will be available for all students enrolled in the class (see Class Activities).

10.1.1 Administrator Class Search

When searching for a course under the course outline or class administration menus, administrators are provided with options to filter their course search. The search can be filtered on a particular catalog or all catalogs or on a particular K/S Table or all K/S Table. Selecting both options will limit the search to only course found in both the specified K/S Table and the specified catalog. The foreign catalog key may be entered as search criteria to produce a match.

10.1.2 Waitlist / Cancellation / Notification

Waitlist Classes can be enabled with a waitlist, administrators can specify if a waitlist is authorized for a particular offering, and if so, how large it may grow. Each night a batch process runs to see if there are any open seats and notifies the appropriate number of waitlist members that they can come back and register.

10.1.3 Automated Reminders

Classes can specify that reminder messages should be sent to enrollees in advance of the class convening data.

10.1.4 Self-Cancellation

Self cancellation is supported for non-ecommerce courses and classes. Administrators can control if this is supported system wide or as needed for individual offerings. The self-cancellation, waitlist, and the various automated reminders allow training managers who chose to do so, to put more responsibility for training selection, enrollment and attendance on to their learning community without taking on additional administrative work themselves.

10.1.5 Student Messaging

Classes can specify that reminder messages should be sent to enrollees in advance of the class convening data.

10.2 Resources

Resources (classrooms, instructors etc.) are consumed by classes. Before a resource can be scheduled it must first be created in the system. Use the Insert Resource Record option to identify the resource title, type and quantity.
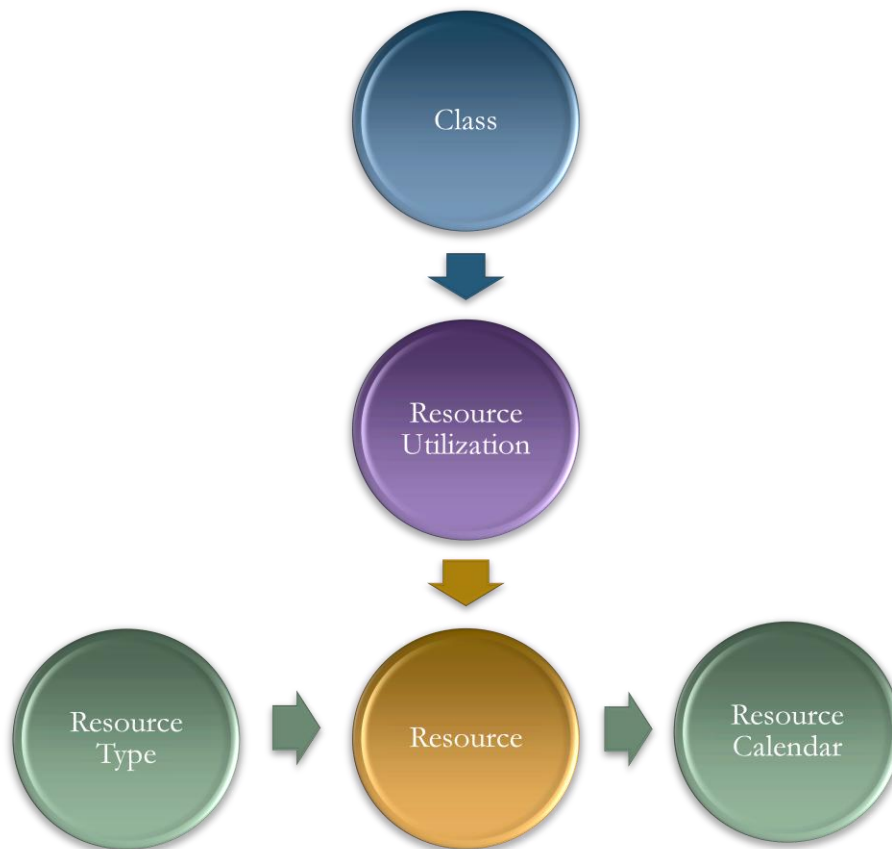
If the resource is an instructor, the instructor's name and qualifications make a good resource title. Make sure to identify which individual is associated with the resource record. If the individual being setup as an instructor is not on the list, use the personnel administrative options to identify the individual as a qualified instructor. In order to schedule a resource, use the insert resource utilization record option. Select the course/class that the resource is scheduled to support and the start and end dates/times of the assignment. Use the Master Schedule to review resource scheduling conflict and to edit resource schedules. Setting up a 3rd party Virtual Classroom requires support from your System Administrator.

10.2.1 Advanced Resource Scheduling Options

KMx includes an "Advanced Resource Scheduling" tool that enables clients to restrict selection of resources (Instructors, Classrooms, etc.) based on availability, configuration (computer lab, number of seats) and instructor qualifications/certification. We will host free training sessions using KMxLive to promote the use of this new feature. Configuration of this option is controlled using the Review Organization Information option under the System Administration main menu icon.

10.2.2 Instructors

In KMx, Instructors that can be scheduled in connection with a class are also considered Resources. Before an instructor can be scheduled for a class session, a resource record must be created that identifies the Member (must be a qualified Instructor) as a Resource that can be scheduled. This process allows clients to create complex resource utilization comparison reports and also provides the mechanism by which the Instructor calendars are maintained.

10.2.3 Classrooms

In KMx, Classrooms that can be scheduled in connection with a class are Resources. Before a classroom can be scheduled for a class session, a resource record must be created that identifies the classroom attributes. This process allows clients to create complex resource utilization comparison reports and also provides the mechanism by which the classroom calendars are maintained.

10.2.4 Virtual Meeting Technology

Virtual meeting technologies, including Webex, GotoMeeting and other products with facilitator/user URLs can be setup and scheduled as resources.

10.2.5 Other Resources

KMx provides the ability to establish resource types other than Instructors and Classrooms. Resource type may include learner materials, training equipment and other categories where tracking of assets is required. The ability to review or insert new Resource Types is available under the System Administration main menu icon.

10.3 Class Activities

Class Activities can be several types, including online course, formal class, read document and review website. These types define how KMx will present the activity to the student. A formal class activity indicates that the start and end date/time are fixed and that the activity will occur during this period. All other activity type date/times are used to indicate when the activity should be completed.
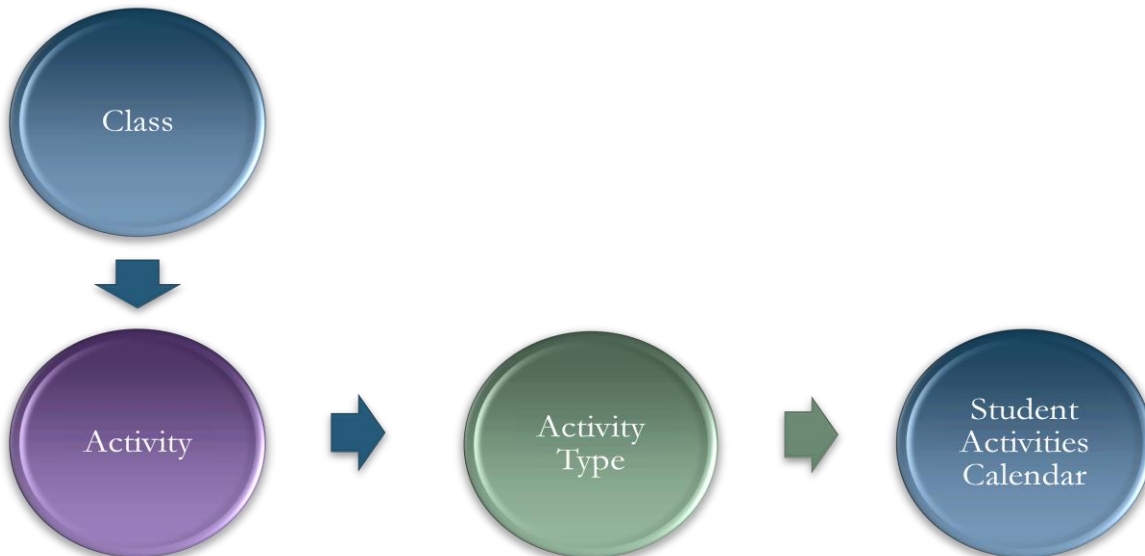
Activities can be simple instructions or URL references that are provided to the class members, or complex presentation broadcasts or virtual classroom events. Use the Master Schedule to review and modify class activities. The event will appear on the class calendar for all students enrolled in the class.

10.3.1 KMxLive Activities

KMxLive activities require the availability and selection of a PowerPoint presentation to be presented during the broadcast. These activities also require a special URL that is provided by your system administrator. Select yes for the "Presentation Broadcast URL" option. Select the K/S Table that contains the PowerPoint presentation, and then select the PowerPoint presentation. Enter the URL provided by your System Administrator. Select the communications type for the students to interact with the presenter as follows:

- HTTP Chat for text based chat in a firewall friendly environment
- Email for large groups where chat may be inappropriate (enter email address as the communications address(
- IRC Chat for organizations that maintain an IRC communications server (enter IRC server address as the communications address and enter the IRC TCP port).
- MS Netmeeting for organizations that maintain an LDAP/NetMeeting Proxy communications server (enter proxy server address as the communications address).

For detailed information about using KMxLive, please see Appendix 2 – Configuring KMxLive.

10.4 Locations

In KMx, locations are normally addresses where classrooms are located. Available under the Administer Resources main menu option, organization locations should be setup prior to the creation of class records.

10.5 Class Batch Enrollment

Select the Batch User Enrollment option from the class record and in the popup window, enter the Directory Services IDs of the users you would like to enroll in the class.

10.6 After Class Notifications

KMx includes an After Class Notification feature that enables a time-based email template to be used for notifications at a specified period of time after class completion to be sent to individuals on the class roster. Clients requested this feature to enable post class surveys, activities and other information to be provided to the class participants.

11 Documents

Many clients use procedural documentation to ensure process adherence. KMx provides customers with the ability to develop procedural documents that are specific to the classifications or roles within an organization. KMx documents can be directly related to training content and can be output as MS Word or as eBooks.

11.1 Document Records

Development of a course within KMx requires the creation of a course record. The course record captures title and descriptive data as well as provides numerous options for course presentation and display options.

11.2 Document Requirements

Document requirements assist the developer by providing the goals for the document. Document requirements can be generated automatically or entered manually into the KMx data system. KMx will allow a document to exist without requirements; however we strongly recommend you consider the positive aspects of establishing performance goals for your documents.

11.2.1 Using the AutoGen Feature to Develop Document Requirements

Following the review and modification of the subject area K/S Table, the developer can proceed with the document development process using the KMx Document Requirements AutoGen feature. This feature uses expert system technology to automate the creation of document requirements to improve the quality of documentation. Leveraging relational database technology, the expert system provides knowledge and skill training level classifications that document conditions and standards of performance associated with documentation. The level classification system is pre-populated with customizable condition and standard information unique to a K/S Template.

The Document Requirements AutoGen process requires the identification of the subject area and the selection of a performance standard. The process requires a few seconds to generate the document requirements for review and modification by a subject matter expert. The subject matter expert review can be conducted online or be provided to the subject matter expert in a printed or word processing format to facilitate the process.

11.3 Document Outlines

Document outlines provide the structure for further document development. Document outlines can be developed by selecting the AutoGen a Document Outline to automatically generate a document outline based on the document requirements. Document outlines can be developed by using the Insert options for a Part, Section or Chapter. To modify your document outline, select the Review Document Outline option.

11.3.1 Using the AutoGen Feature to Develop the Document Outline

Following review and modification of the document requirements, the developer can proceed with development of a document outline using the KMx Document Outline AutoGen feature. This feature leverages expert system technology and processing rules to rapidly generate a document outline based on the document requirements, the relationship of knowledge and skill K/S Items (behaviors) and the objectives for the document. The feature recognizes the requirements for supporting content and creates placeholders in the document outline to facilitate further development.

The Document Outline AutoGen process requires the identification of the Document for outline generation. The process requires a few seconds to generate the document outline and content placeholders for review and modification by the developer. The developer review can be conducted online or be provided in a printed or word processing format to facilitate the process.

11.4 Document Content

Document content development is accomplished by forming a relationship between content objects and a document outline (see Organize and Develop Content Objects). Document outlines developed using the AutoGen a Document Outline feature will have placeholders inserted for each required content object. Use the Review Document Outline option to view the document outline and assign content objects where Edit/Upload Content appears in the outline. A content record that is Not Assigned indicates that a document content record has been inserted without selection of a content record relationship. You may need to Expand the document to view the entire outline.

In KMx, document content development is accomplished by forming a relationship between content objects and the document outline. Content objects are files that support the requirements of your K/S Table (subject area) and can originate from numerous applications and file formats, including:

- Microsoft Word
- Microsoft PowerPoint
- Microsoft Excel
- Microsoft Presentation Broadcasts
- Adobe Portable Document Files (PDF)
- Macromedia Flash
- Macromedia Dreamweaver (using the SCORM Packaging option)
- Image file formats (.gif and .jpg)
- Streaming Media files (Microsoft or Real formats)
- External URLs
- SCORM Content Objects

As discussed previously, document outlines developed using the KMx AutoGen feature will have placeholders inserted for content objects required to achieve the document requirements and objectives. KMx provides a expandable document outline editing interface to review and assign content objects to populate the document outline. Visual indicators are provided to assist the developer in completing this process.

11.5 Document Output Options

Documentation can be output in numerous formats and presentations, including eBook, SCORM compliant objects, MS Word (various formats) and XML. Select the Review a Document as an eBook to generate files required for general use as asynchronous documentation or as support materials for learning activities. Select Output a Document to select from the many electronic and print formats available.

12 Reporting

KMx provides two major reporting systems, Standard Reports and Dynamic Reports/Graphs. This section will review the use and capabilities of both systems.

12.1 Standard Reports

The reports menu is organized to make it easy to find reports. All reports are now available from the reports menu which organizes the options by:

- Members and Labor Categories Reports
- Enrollment, Results and Access Reports
- Class   & Resource Schedule Reports
- Course & Content Inventory Reports
- eCommerce Reports Menu
- Company & Supervisor Reports
- KMx Dynamic Reports
- Legacy and Misc Reports

An example of each of the standard reports is available in the KMx Reports Index. The index can be downloaded at http://www.kmsi.com/support.htm#references.

12.2 KMx Dynamic Reports

KMx Dynamic Reporting allows administrators to select from virtually any combination of user enrollment, accomplishment and requirement information to produce real-time reports. KMx Dynamic Reports can enable the administrator to filter report results "on-the-fly" at report runtime. This capability allows clients to not only create reports that will automatically filter the results based on any logical filter condition, but also allow reports to automatically adjust to the "authority" of the person generating these reports. The process options to insert and modify a Dynamic Report are available under the System Administration main menu icon.

12.2.1 General Dynamic Report Types

KMx Dynamic Reports has numerous templates designed for both general reporting advanced report development. The general report types are as follows:

- Certification Assignment Template – Used to assign personnel to a certification based on Member Data and/or Enrollment history information.
- Enrollment Data – Used to generate reports for specific courses, classes or other enrollment centered events.
- Member Data – Used to generate reports based primarily on member demographics information or other member based attributes.
- Personnel Category Data - Used to generate requirement and assignment completion detail reports based on personnel classifications.
- SCORM Data - Used to generate reports containing the actual SCORM Run-Time Environment Variable values generated by the execution of an eLearning program of instruction.

12.2.2 Advanced Report Types

The KMx Dynamic Report Advanced Report types provide an experienced KMx Administrator with the ability to access and query virtually any data resident in the KMx Data System.

Report Type	Description
Certification Completion Data - Detail	This report type replaced the previously available Certification report type and included additional fields to produce more detailed certification based reports.
Resource Utilization	This report type provides the ability to produce instructor and classroom schedule reports based on assignments.
Course Inventory	This report type provides the ability to create custom course inventory reports, including catalog availability.
Content Inventory	This report type enables the creation of detailed content inventory and utilization reports.
Test Item Inventory	This report type enables the creation of detailed test item inventory and utilization reports.
Company	This report type provides the ability to produce organizational reports including hierarchy and location information.
Certification Completion Data - Summary	This report type provides the ability to produce summary level certification completion reports that do not include individual course completion level detail.
Email History	This report type provides the ability to query the email history queue and produce reports on system email transactions.
Course Audit	This report type provides the ability to query the course audit system to produce reports detailing changes to the class records, including dates and person responsible for the update.
Class Audit	This report type provides the ability to query the class audit system to produce reports detailing changes to the course records, including dates and person responsible for the update.
Content Audit	This report type provides the ability to query the content management audit system to produce reports detailing changes to the content records, including dates and person responsible for the update.
Test Event Data	This report type provides the ability to produce detailed reports containing test event data, including the number of test attempts, score and dates of a test/exam.
Enrollment Archive Data	This report type provides the ability to produce reports concerning inactive or deleted users.
Course Access Template (Black List / White List)	This report type provides the ability to produce reports that document the ability for individuals to access courses using the course access template.
Catalog Inventory	This report type provides the ability to create reports that detail the structure and contents of catalogs available, including restrictions and access settings.

12.2.3 Dynamic Report Help Information

Since there are more than 50,000 possible report table/field combinations available under dynamic reports, KMx provides a Help Information link on the Dynamic Report setup form. This link generates a popup that provides an index of the available table/field combinations for the selected report type (Enrollment Data, Certification Detail, SCORM Data, etc.). The help information also provides a brief description for each field.
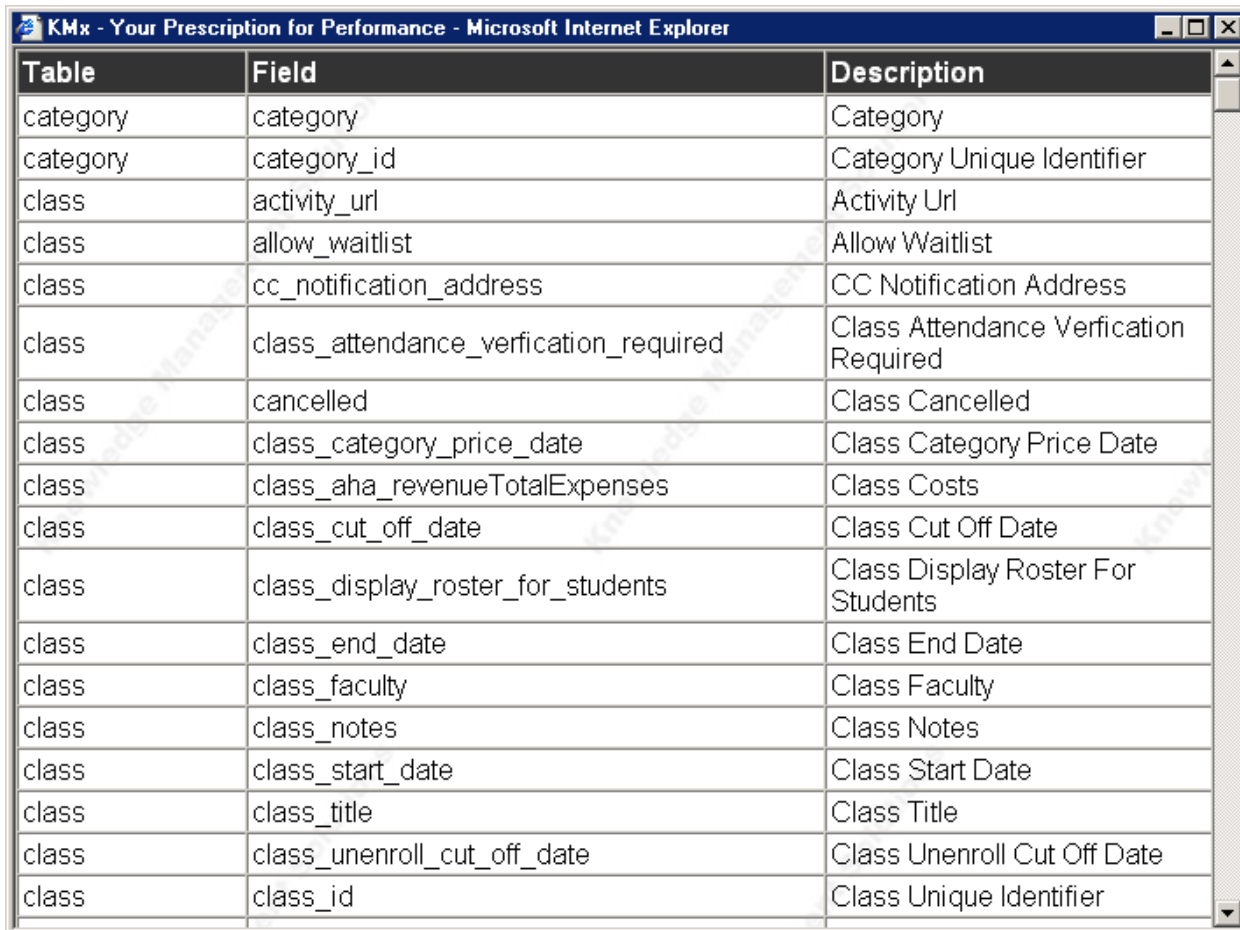
Table	Field	Description
category	category	Category
category	category_id	Category Unique Identifier
class	activity_url	Activity Url
class	allow_waitlist	Allow Waitlist
class	cc_notification_address	CC Notification Address
class	class_attendance_verfication_required	Class Attendance Verfication Required
class	cancelled	Class Cancelled
class	class_category_price_date	Class Category Price Date
class	class_aha_revenueTotalExpenses	Class Costs
class	class_cut_off_date	Class Cut Off Date
class	class_display_roster_for_students	Class Display Roster For Students
class	class_end_date	Class End Date
class	class_faculty	Class Faculty
class	class_notes	Class Notes
class	class_start_date	Class Start Date
class	class_title	Class Title
class	class_unenroll_cut_off_date	Class Unenroll Cut Off Date
class	class_id	Class Unique Identifier

12.3 KMx Dynamic Graphs

KMx Dynamic Graphs provides administrators with the ability to dynamically generate graphs from virtually any combination of user enrollment, accomplishment and requirement information. This feature will enable creation of highly colorful visual outputs of data elements, including:

- User and group demographics, requirements and accomplishments
- Course/class enrollments goals and statistics
- Performance of test items and exams
- Personnel classification requirements, completions and delinquencies
- Organizational unit requirements and accomplishments

12.4 Building a Report

From the KMx Main Menu, select System Administration, Insert a Dynamic Report. Select a report type based on the primary data that your report will draw from the KMx data system.

Use the Dynamic Report specification form to define columns, data tables and fields, sort and filter criteria, and to preview your report. Once save, the report will be available from the Generate Reports Main Menu icon. Dynamic Reports can have up to 20 tabular columns when the "Wide Report" option is enabled.
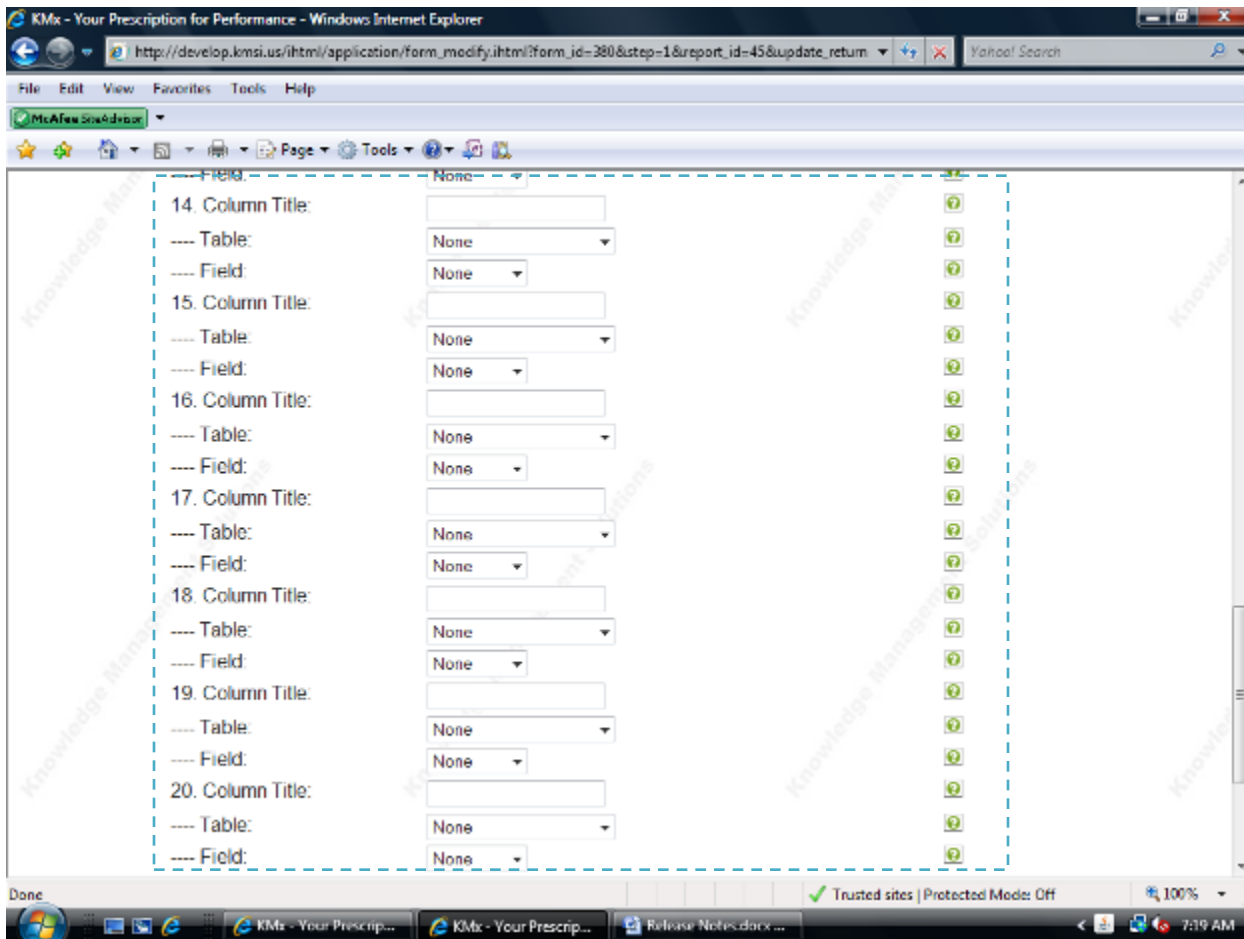
KMx has the ability to dynamically filter report results "on-the-fly" at report runtime. This new capability allows clients to not only create reports that will automatically filter the results based on any logical filter condition, but also allow reports to automatically adjust to the "authority" of the person generating these reports.

Dynamic Report Advanced Data Filter Menu

1. Filter Value: 06/01/07
---- Table: enrollment
---- Field: Enrollment Results Date
---- Operator: Is greater than
2. Filter Value: 12/31/07
---- Table: enrollment
---- Field: Enrollment Results Date
---- Operator: Is less than

Review/Modify a Custom Report Definition

Display Filter Options: yes
Display Sorting Options: no
Display Wide Report Options: no
Graphic Report: no
Allow Filter Changes: yes

12.4.1 Dynamic Reports - Dynamic Sorting and Filter Controls
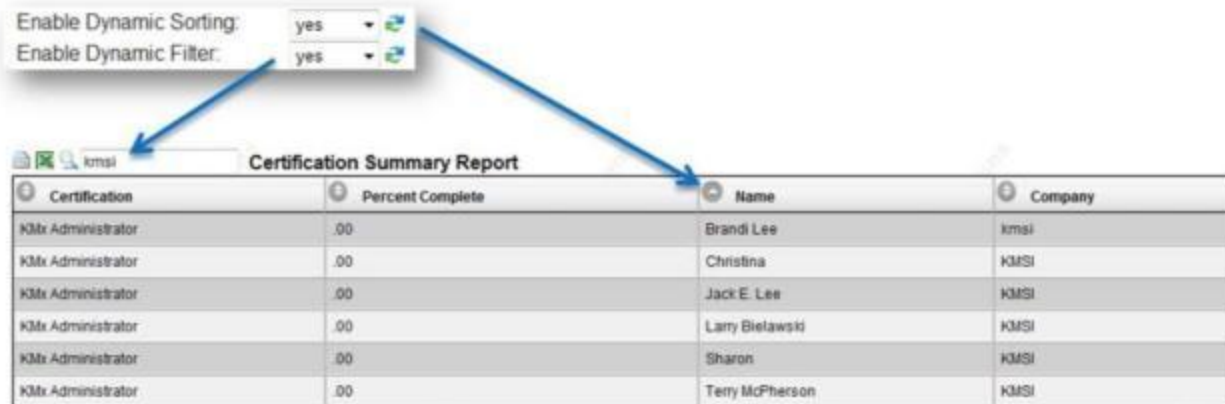
- Header & Alternating Row Styling
- Clickable Sorting Controls for Each Column
- Query/Filtering Tools

KMx Dynamic Reports provides the ability for administrators to designate new sorting and filtering options. The Dynamic Sorting option provides a stylized report template that includes a special header row that enables by column sorting of the report output. The sorting is accomplished by the user's browser and does not require the report to be regenerated. Dynamic Sorting should not be enabled for reports that produce more than 2,000 rows as this may generate warnings that a process is taking a long time to complete when conducting a sort.

The Enable Dynamic Filtering option is dependent on the Dynamic Sorting option being set to "Yes". Enabling Dynamic Filtering provides a search box at the top of the report that will enable a user to enter a word or phrase to be searched for within the output of the report. The report will remove rows that are not applicable to the word/phrase entered. Sorting of the report can be accomplished on the filtered results.

Used together, these features can enable a user to run a report that has been setup by an administrator and further tune the output prior to printing. The feature also provides an easy way for users to query the KMx data system based on parameters established in the report setup and enhanced by the sort/filter options.

The help files associated with each Dynamic Report Type have been updated to include extended field descriptions and use the dynamic sorting and filtering capabilities.

12.5 Building a Graph

KMx has the capability to dynamically generate graphs from virtually any combination of user enrollment, accomplishment and requirement information.
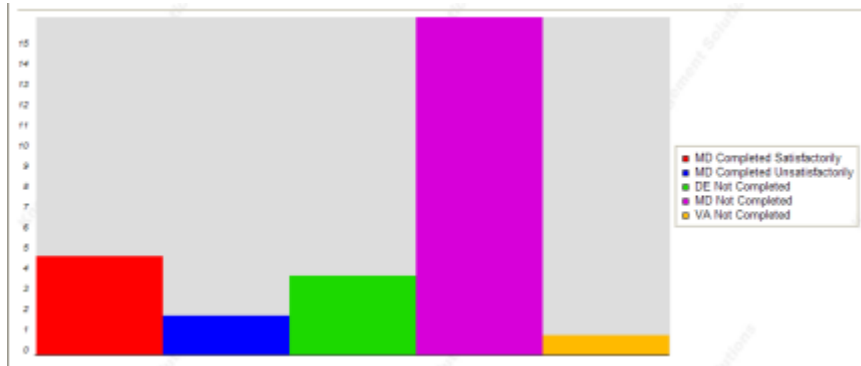
Using Relative Data = "Yes" provides a convenient alternative to Pie Charts
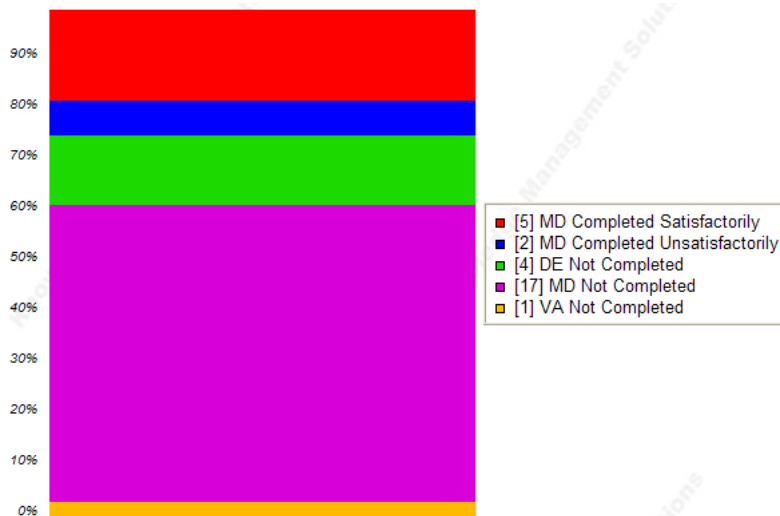
13 System Administration

The most frequently used System Administrative Features are discussed in this topic. KMSI offers an Advanced Systems Administrator course twice each year to provide administrators that have completed our KMx Developer/Administrator Training Program with the ability to leverage certain advanced features of the system. For a complete schedule of KMSI training programs, please visit www.KMxDirect.com.

13.1 Organization Configuration

Configuration of the primary and default features of the organization is accomplished using the Review Organization Information option under the System Administration main menu icon. The Organization Information Form is segmented into logical groups of options.

Overall Organization Information

Organization Name:	KMxDirect
Enroll Date:	01/16/2007 10:58:57
Service End Date:	01/16/2007 10:58:57
Organization Website:	http://www.kmsi.us
Description:	
Contact Name:	KMSI Support
Contact Email:	info@kmxdirect.com
Address Line 1:	
Address Line 2:	
Address Line 3:	
City:	
State:	
Country:	
Zip Code:	
Phone:	
Fax:	
Logo URL (100x100 jpg/gif) http://www.mydomain.com/image.gif:	http://www.kmsi.us/images/booth_banner_cert.jpg
Style Sheet for Student Interface:	/ihtml/application/student/interface.marketing/bluemaster.
Use Company Specific Header:	yes
Use Company Specific Stylesheet:	yes
Student Message:	

Student Interface Options

Display Student Catalog:	no
Display Instructor Calendar:	yes
Display Student User Info:	yes
Display Student Search:	yes
Display Student eCommerce:	no
Display Student Category:	yes
Display Student Records:	yes
Display Student Custom Link:	yes
Display Student My Activities Header:	yes
Display Student Merged Catalog:	yes
Disable Root Catalog:	no
Display Student Activity Calendar:	yes
Display Student Enrollments Pending Sup. Approval:	no
Display Shopping Cart Link:	no
URL For Custom Link:	/ihtml/application/student/interface.marketing/class_calen
Display Student Advanced Search:	yes
Advanced Search Label:	News & Info
Advanced Search URL:	http://www.kmsi.com/media_nohead.htm
Label for Custom Link:	Classes & Webinars
Use a Custom Header Page:	yes
Student Custom Header URL:	/ihtml/application/student/interface.marketing/student_hea
Custom Navigation Bar URL:	/ihtml/application/member_history_new_mobile.ihtml
Custom Student Information Form:	/ihtml/application/form_modify.ihtml?form_id=197&step=1
Display Course Download Column:	yes
Display the Message Board Column:	no
Display the Calendar Column:	no
Display the Launch Course Column:	yes
Display the Student History Launch Course Column:	no
Display the Student History Grades Column:	no
Display the Student History Download Course Column:	no
Display the Information and Grades Column:	no
Display Student Delete Enrollment:	yes
Display CEU Credits on Student Profile:	yes

Advanced Options

Text Report Format:	ASCII Text (*.csv) ▼
Display the Logoff Button:	yes ▼
Student Certificate URL:	/ihtml/application/student/grad_cert.ihtml
Student URL:	http://www.kmxdirect.com
Single Sign-On URL:	http://www.kmxdirect.com
Max. Image Width:	600
Max. Image Height:	400
Display previous responses to tests:	yes ▼
Warn on course exit:	no ▼
Student Search URL Label (content search):	Search Content
Student Search URL:	/ihtml/application/upload/search_advanced.ihtml?step=1
Use many-to-many course to catalog relationships:	no ▼
Student Enrollment Sort Order:	Alphabetically ▼
Display Certification History:	yes ▼
Student Information Include Path:	interface.marketing/information_include.ihtml
Student Reports URL for Co. Admins:	/ihtml/application/form_modify.ihtml?form_id=263&step=1&
Maximum Drop Down List Rows:	500
Enable Supervisor Access from Student Interface:	yes ▼
Student Reports URL for Supervisors:	/ihtml/application/form_modify.ihtml?form_id=371&step=1&
Days to wait for Supervisor Approval of courses:	10
ip range restrictions:	*.*.*.*
Use Advanced Resource Scheduling:	no ▼
CC Org Admin on Supervisor Approval:	no ▼
Site default evaluation form:	Employee Evaluation ▼
Annual Evaluation Based on Hire Date:	yes ▼
Notify Supervisor Evaluation Due Time Period:	Month ▼
Set All Member Evaluations:	Click Here
Enable Company Administrative Restrictions:	no ▼

Each option is supported by extensive help information to assist the administrator with the selections most appropriate for their organization.

13.2 Member Authorization Levels

Access to the options available on the KMx Developer/Administrator Interface is regulated by 15 Member Authorization Levels. The levels provide access relevant to roles within an organization and can be customized to support unique client requirements:

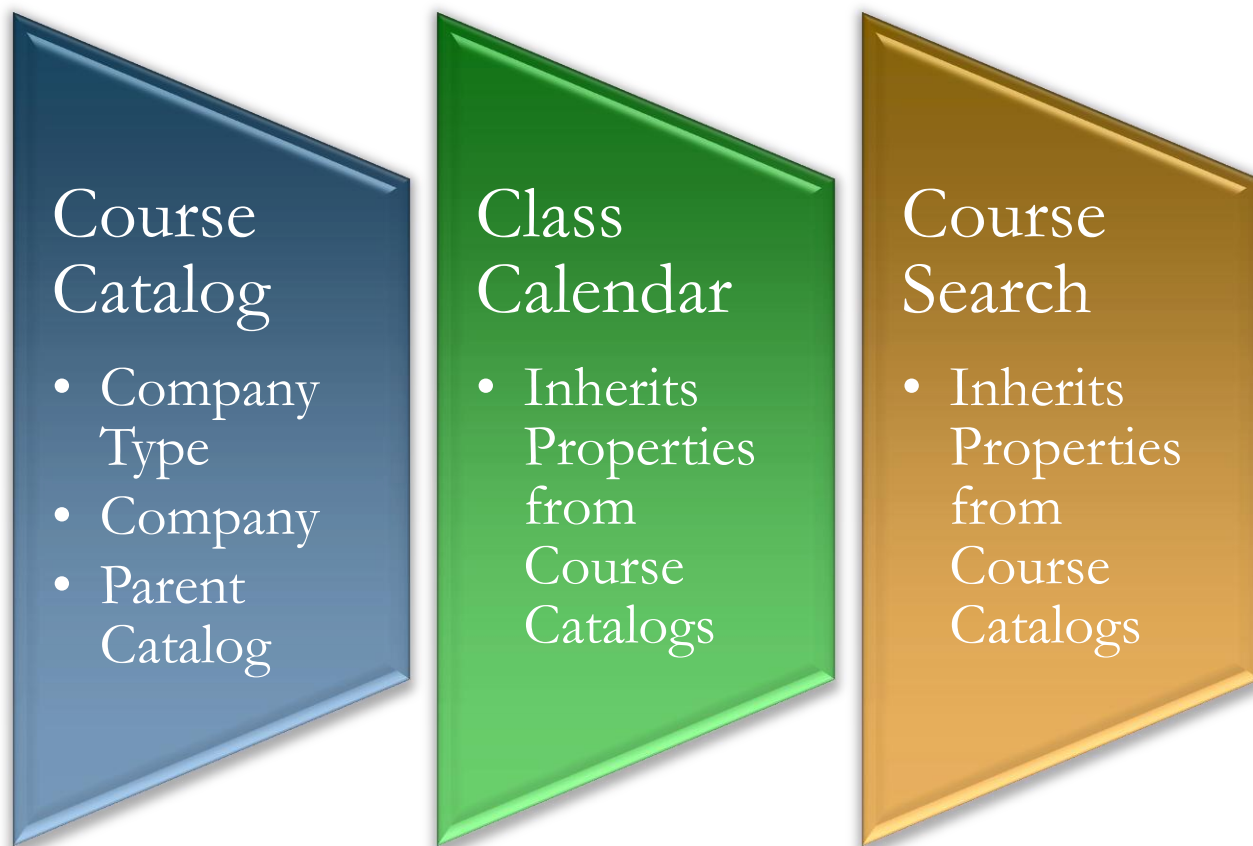To review/change a users Member Authorization Level, select System Administration, Review Member Authorization Level form the KMx Main Menu.

13.3 Catalog Setup

Within KMx, catalogs provide both a method of access for learner enrollment into courses and a security scheme to ensure courses are accessible to designated learner populations. Catalogs can be infinitely nested. Child catalogs (sub-catalogs) assume the security restrictions of their parent catalog and each of its parents. The Insert Catalog Record and the Review Catalog Record options are available under the System Administration main menu icon. Catalogs can be "Regular" or "Restricted". A Regular catalog is access using the Course Catalog option from the Student/Instructor/Supervisor interface. A restricted catalog is access using the Category Profile option from the Student/Instructor/Supervisor interface.

Course Catalog
- Company Type
- Company
- Parent Catalog

Class Calendar
- Inherits Properties from Course Catalogs

Course Search
- Inherits Properties from Course Catalogs

The default Class Calendar and Advanced Course Search options have respect the multiple company assignment/restriction capabilities. This feature also includes a "Multi-Select Dropdown" form control element (see below). In order to select an item using the Multi-Select Dropdown control element, simply click on the desired item. To include multiple selections, use the CTRL key in conjunction with clicking on the additional elements.

13.4 eCommerce Options

KMSI is responsible for the initial setup of the client's eCommerce options. This is normally accomplished during site startup. Once configured, clients have the ability to configure and provide a number of additional eCommerce features:

Configure eCommerce Information

Enable eCommerce:	yes
PayFlow Partner:	Verisign
PayFlow Merchant:	mbinnix
PayFlow Username:	mbinnix
PayFlow Password:	••••••••
PayFlow Transaction Mode:	Production New
PayFlow Max. Transaction Threshold:	1000.0
Secure Form Url:	https://www.kmxdirect.com/dotnet/application/ccvalidate2
Display MasterCard Logo:	yes
Display Visa Logo:	yes
Display American Express Logo:	no
Display DiscoverCard Logo:	no
Course Price Calc. URL:	category_price_calc.ihtml
Insert New Content Vendor for Voucher Mgmt:	Click Here
Review Content Vendors for Voucher Mgmt:	Click Here
Insert New Voucher Type:	Click Here
Review Voucher Type:	Click Here
Review Price Categories:	Click Here
Use Shopping Cart for Checkout:	no
Require CVV2 for Checkout:	no

Each of these advanced eCommerce features are covered in the KMx Advanced Systems Administration Course. For our complete class schedule, please visit www.KMxDirect.com.

13.4.1 Shopping Cart

KMx includes an option for clients to provide the ability for users to combine multiple eCommerce purchases with nearly unlimited discounting rules and payment options directly from their shopping cart.

The shopping cart approach makes it easy for users to enroll in multiple course/class offerings with a single ecommerce transaction. The shopping cart is an optional element. A Yes/No option is available on the Configure eCommerce Information screen under the System Administration main menu icon. If set to Yes, then all eCommerce transactions will be completed using the cart.

13.5 Advanced User Management and Batch Import

To facilitate large-scale personnel changes and member record updates, KMx provides a comprehensive Batch User Import utility provided under the System Administration main menu icon. The batch utilities are supported by a comprehensive help system that is tailored to the individual organization configuration. Please refer to the Batch User Import Help option prior to using this utility.

The batch user import utility leverages standard Microsoft Excel Spreadsheets (XLS format) to provide the export and import capabilities.

13.6 Certification Setup

Certifications are very similar to Personnel Category Assignments. The main difference is that a Member can be in an unlimited number of Certification continuums. A member can only be in one Personnel Category at a time. This approach allows certifications to be created for personnel independent of their Personnel Category or Company affiliation.

Course 1	• Activity Type • Prerequisite • Exclude/Equivalency • Start Date • Due Date • Recertification Period
Course 2	• Activity Type • Prerequisite • Exclude/Equivalency • Start Date • Due Date • Recertification Period
Course 3	• Activity Type • Prerequisite • Exclude/Equivalency • Start Date • Due Date • Recertification Period
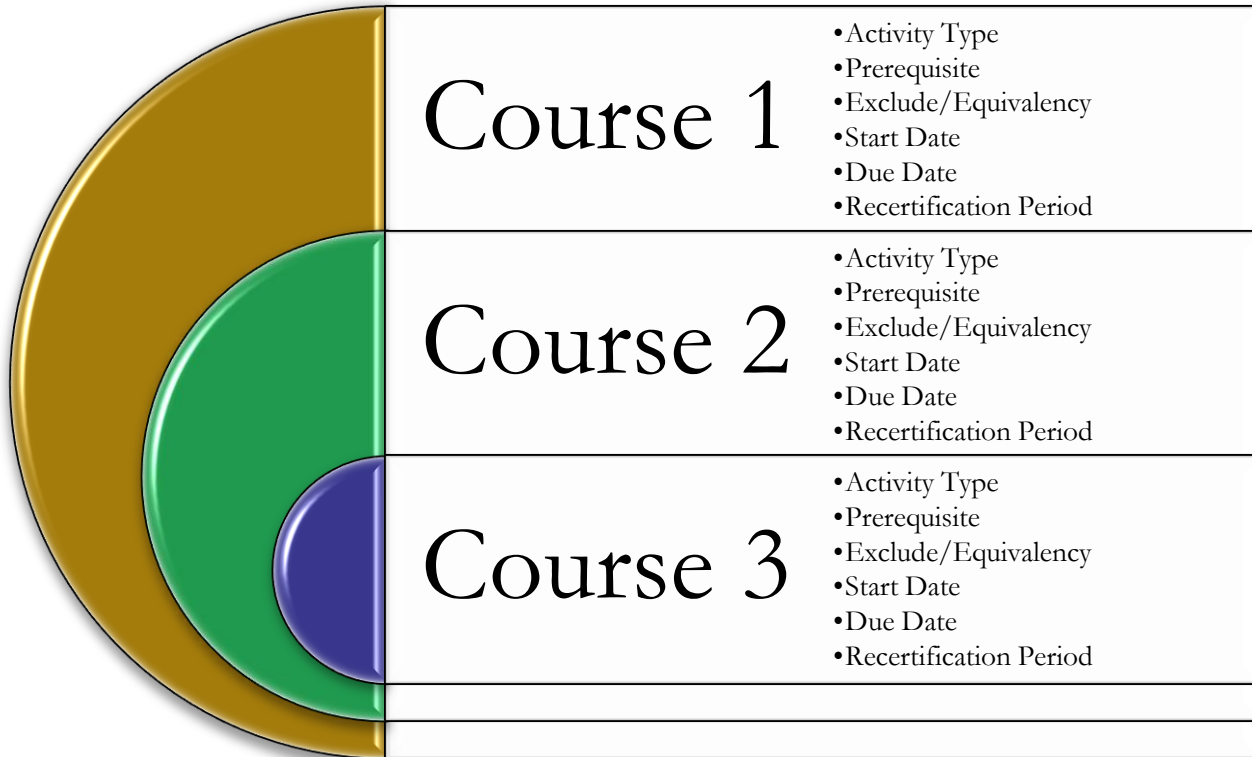
Certification Records are created under the System Administration Main Menu icon. Like Personnel Category Assignments, Certification Assignments appear on the Student Category Profile Page. Certification Assignments can have prerequisites, initial and recertification periods and other control elements.

Review/Modify Certification Record

Certification Title:	Testing Certification Assignments
Certificate CEU Type:	
Certification Description:	
Certificate URL:	/ihtml/application/student/grad_cert.ihtml
Certification Help Url:	
Certificate CEU Variable:	no
Certification Minutes:	60
Certification Short Title:	CERTTEST
Sequence:	0

13.6.1 Summary and Detailed Dynamic Reporting Options

KMx Dynamic Reports provides report types for summary and detailed reporting of Certification completion information. The primary difference is that the summary report type is designed to limit the detail of the data reported to overall individual progress in a certification program, vice course by course accomplishment level detail.

13.6.2 Cascading and Prerequisite Certifications

KMx provides the ability to establish certification hierarchies that include prerequisite certifications and the ability to cascade this hierarchy to create branching certification paths from common or foundation certification entry programs. These options are available on the Certification Record setup form.

13.6.3 Ad Hoc Email to Certification

Under the menu area to review a certification record, it is now possible to send all members an ad-hoc email. This provides administrators an easy way to communicate changes to the certification path to members assigned to that certification.

13.6.4 Member Certification Notification

A new notification is available that will notify a member when he is assigned to a certification. The template and contents of the notice can be edited under email templates. The certification record includes a flag indicating if such notices should be sent. By default this flag is set to no. To send these notices, first review the template and make any changes to the notification language. Then review the certificate record and set the flag to "yes" indicating that the notices should be sent for all new members assigned to this notification. Members assigned to the certification prior to implementation of this feature will receive this notification.

13.6.5 Pre-Calculate Certification Percent Complete

The ability of KMx to track a learner's progress through a certification, and to report that progress a percent complete is a key function that many customers depend on. This value has traditionally been calculated at the time the report was run, giving administrators and managers real time information but consuming significant resources preparing large reports. To speed up the reports, this value will now be calculated once each night and made available to the dynamic reporting system. The real time calculation will also still be available to allow customers opportunity to update their reports, but customers are encouraged to take advantage of the pre-calculated value in any reports where up to the minute information isn't absolutely essential.

The pre-calculated value of percent complete is available under dynamic reporting system in the table: member_certification, field name: "Member Certification Percent Complete (revised daily)"

13.6.6 Maintenance of Courses in a Certification

An administrator can either open the course record to change its properties as related to a certification or review/update all course/certification properties from the Review a Certification Record option under System Administration.

13.6.6.1 Language Specific Assignments

Courses within a certification profile can be designated as required for a specific language. This feature is useful when certification programs are created that have courses designated for users that speak a certain language (English, French, Russian, etc.). Language specific course certification assignments are made on the Course Certification Record. The preferred method is to create language specific certifications, however certain clients have multi-lingual workforces at a single location where provision of language independent certifications are more useful for reporting and management.

13.6.6.2   Persistent Email Reminders

When assigning a course to a certification, administrators may specify a frequency for recurring reminders to the learner until the assignment is complete. The recurring reminder will use the Assignment Reminder Notice and can be set to regularly email the user until the assignment is complete. The reminder frequency must be set to cause recurring notices to be sent.

13.6.6.3   Automatic Course Enrollment

When an administrator assigns courses to a certification, there is an option to Auto Enroll in the course. The default value for this is "no", and no action will be taken by KMx. When set to yes, members assigned to the certification will be automatically enrolled in the assigned course if all of the following conditions are met:

- Must enroll in class = "no"
- All pre-requisites for the course are met OR there are no pre-requisites assigned for the course.
- The enrollment would not violate any duplicate enrollment rules
- If the enrollment is a permitted duplicate, the learner will only be enrolled in support of a recurring training assignment within the notification window prior to the next due date.

Automatic enrollments are processed only once per day.

The Course/Certification Assignment Record

Certification:	Testing Certification Assignments
Educational Hours Awarded:	0
Activity Type:	None
Assignment Sequence:	0
Exclude If Enrolled In Course:	None
Prerequisite Course:	None
Assignment Start Date:	12/19/2007 14:22:56
Required Initial Completion Date:	12/19/2007 14:22:56
Recertification Period:	None
Send Notification Period:	None
New Member Certification Period:	None
This Course is an Elective (not required):	yes
Course CEU Program:	

The Student Category Profile with Certifications Assigned

Mike Binnix (SCORM) - Category Title: sample category for assigning people
Description:

Category Profile: sample category for assigning people

Subject Area: something new			
Assignment Type	Assignment Title	Current Status	CEUs
Online Course	demonstration course	Not Completed	0

Certification/Certificate Assignments

Testing Certification Assignments			
Assignment Type	Assignment Title	Current Status	CEUs
Online Course	aa supervisor approval required to take this course	Not Enrolled Enroll	3
Online Course	AHA Survey Example	Completed Satisfactorily	25

13.6.7 Dynamic Certifications

With KMx, clients can create an unlimited array of training continuums and certification profiles that are dynamically assigned to individuals based on any user demographic information or organizational relationship. This new feature will enable clients to create an unlimited array of requirements, assignment and continuums to meet both internal and external business drivers.

By using the Dynamic Reporting tool to create the Certification Group, administrators can easily verify which users are selected or removed.

Select A Report Type ❓

Report Type: #5: Certification Assignment Template ▾

Next

Certification groups can be established using any demographic information in the Members table.

Display Filter Options:	no ▾
Display Sorting Options:	no ▾
Display Wide Report Options:	no ▾
REMOVE users from a certification:	no ▾ ←
Certification Title:	None ▾ ←
Graphic Report:	no ▾
Allow Filter Changes:	no ▾

13.7 Email Templates

Email templates are available for review and modification under System Administration, Review Email Templates. KMx includes the following Email Templates:

13.7.1 Supervisor Approval Request – Email Template

The email to supervisors indicating that an employee has requested permission to take a course is now derived from a template. Previously it was derived from the language pack. This change will let customers more easily maintain the language in the email template.

13.7.2 Send Notification to Instructors when Assigned to Class

Sent to instructors when an administrator has assigned them to instruct a class.

13.7.3 Enrollment by Supervisor with Class

Sent to end-user when their supervisor has enrolled them in an instructor-led class.

13.7.4 Enrollment by Supervisor

Sent to end-user when their supervisor has enrolled them in an eLearning course.

14 KMxLive

KMxLive eliminates the barriers associated with delivery of live training using the Internet. KMxLive Features and Capabilities:

- Live Streaming Video & Audio
- Interactive Presentation Materials
- Student Chat Interface
- Live/Replay Quizzes, Exams and Surveys
- Graphic Audience Response System
- Polling and Hand Raise Features
- Up To 10,000 Simultaneous Students
- Extremely Low Bandwidth (56Kbps)
- Content "Push" to Students from KMx Learning Content Management System
- Replays are Instantly Available for use as Reusable Learning Objects
- Fully SCORM Conformant (Live and Replay)

14.1 Configuring the KMx Live Broadcast Workstation

To use a desktop computer or laptop as a workstation for originating a KMx Live Broadcast you must start with the following minimum system requirements:

- A Pentium class computer with the minimum CPU and Memory required for Microsoft Windows Media Encoder 9 or higher.
- Microsoft Windows 2000 or higher operating system installed.
- Microsoft Windows Media Encoder 9 or higher installed.
- A digital camera with the appropriate device driver installed (if you desire to produce audio only broadcasts then a camera is not required).
- A microphone installed.
- The workstation must be connected to the Internet.

Once these items are verified you must ensure that the broadcast settings for your presentation are configured to your workstation and loaded into KMx. To define these settings:

1. Open the file named default.wme that was provided to your system administrator.
2. Opening this file will launch Microsoft Media Encoder. When prompted to enter your user name and password, input the account information provided by your system administrator. Before pressing enter, make sure that you check the box to save the user name and password.
3. Press the Start Encoding button to verify your camera, microphone and Internet connection are ready for use with KMx Live. Media Encoder will provide an error dialog if any settings are incorrect for your workstation.
4. There are numerous tabs on the properties dialog to allow you to change items like: Audio and Video Sources, Bandwidth, Compression, and Output. Please do not change the output settings as these items have been preset for your KMx Live account.
5. You can now save the WME file using the File, Save options from the main menu.
6. Close Windows Media Encoder.
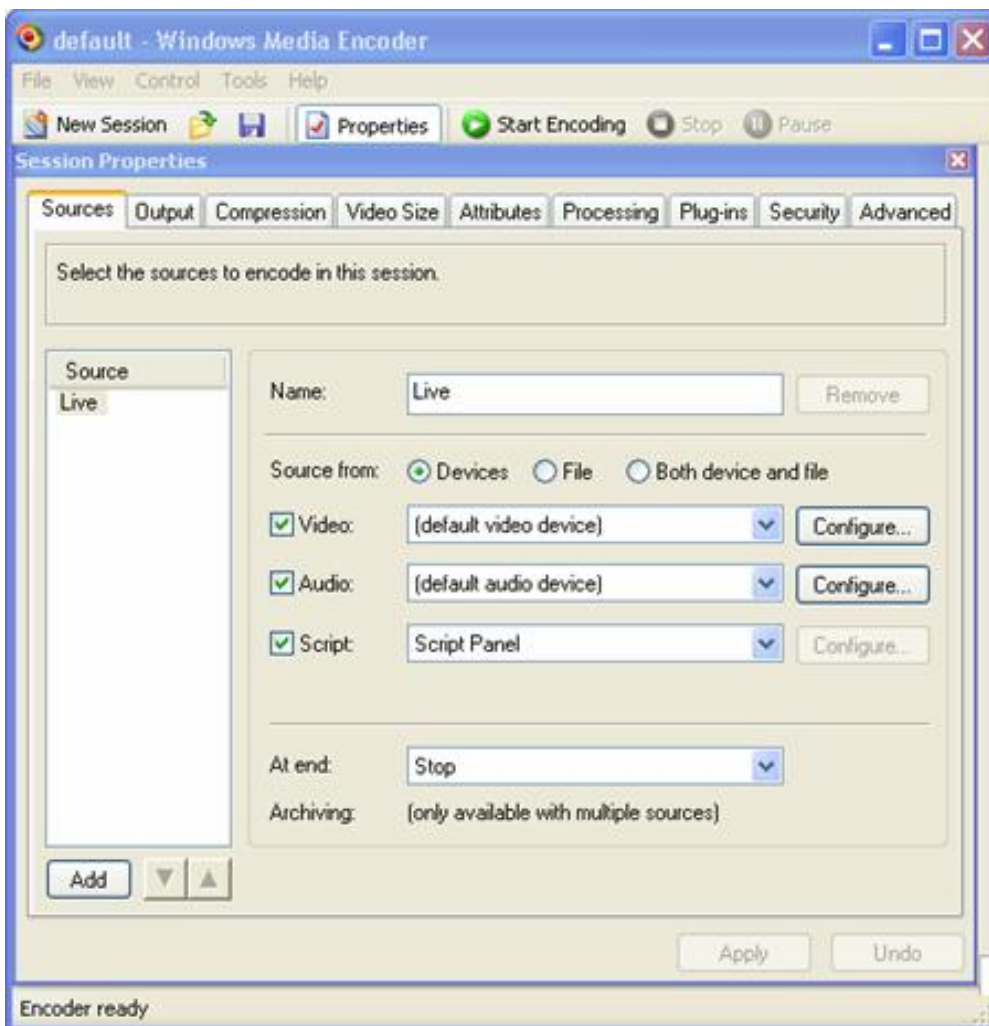
14.2 Upload the WME file to KMx

Once you have verified the ability of your workstation to broadcast using the default.wme file in the procedure above, you must upload this file to your KMx content management system. We recommend that you use the Organize and Develop Content main menu option and then Insert a Content Record, select a K/S Table and then select the content type Video/Audio. Enter a content title for your WME file that will associate it with the workstation you have configured it for.

Using the Edit Content button, Browse and Upload the default.wme file to KMx. Remember the K/S Table and content title that you entered so that you quickly find the file when setting up your class activity records.

14.3 Setup the Class Activity in KMx

You will need to upload your slides as a content object in KMx prior to the event, then you will need to define a Class Activity and provide the URL of your broadcast publishing point (see your System Administrator) and select the slides and the WME files that you have uploaded. Consult the KMx User's Guide or contact KMSI customer service for assistance with setting up a class activity if you are not familiar with the process.

Course:	Introduction to KMx Version 4.2 Updates
Class:	Introduction to KMx Version 4.2 Updates
Activity Type:	Formal Class
Activity Title:	KMx Live Virtual Classroom Event
Duration (hours):	3
Date/Time:	07/13/2007 14:00:00
Time Zone:	Eastern
Repeat Record?:	None
Repeat End Date:	06/28/2007 09:32:04
Presentation Broadcast URL:	yes
URL:	
Include on My Activities List:	yes
Select Course Content ID:	Click Here
Display activity link before activity date?:	yes
K/S Table:	KMx Enterprise Platform
PowerPoint Presentation File:	None
Media Encoder File:	None
Communications Type:	HTTP chat
Comms. Address:	
TCP/IP Port used by chat:	6667
Activity requires a 3rd party Virtual Classroom:	no

14.4 Test your Activity and Encoder Settings

Once your activity is setup, you should conduct a test of the activity and encoder settings to ensure your end-users are able to connect to your session. From the KMx Student Instructor Interface, select the Class Calendar for the Class which contains the Class Activity for your broadcast.

You must be enrolled in the class and be an Instructor (Administer Personnel) to launch a KMx Live session. On the calendar, find and click on the activity setup for the session. Select KMx Live Instructor Start to open the KMx Live Instructor console. When you are ready, select Start to commence your broadcast. Once the console message displays "Encoder started – begin broadcast" you are transmitting over the Internet. Use the slide navigation controls to control the display of slides, exams, surveys and media.

When you are finished with your presentation, select the Stop button and wait for the message "Encoder Stopped. Session Ended".

14.5 After the Broadcast

After completing a broadcast, you can upload the video file to KMx to create a play back content item. From the "Organize and Develop Content" menu, select Insert a new content object. Select the same K/S table where the PowerPoint slides are located that you used during the live presentation, then select "Presentation Broadcast Media" as the media type. When you are loading the titles, descriptions and other meta data about the media file, you will see one of the drop down lists request you to identify the associated PowerPoint deck by object. The video will be located on the "Select previously uploaded package:" list on the Edit Content popup. Once loaded, the Presentation Broadcast Object can now be selected for inclusion in a course outline.
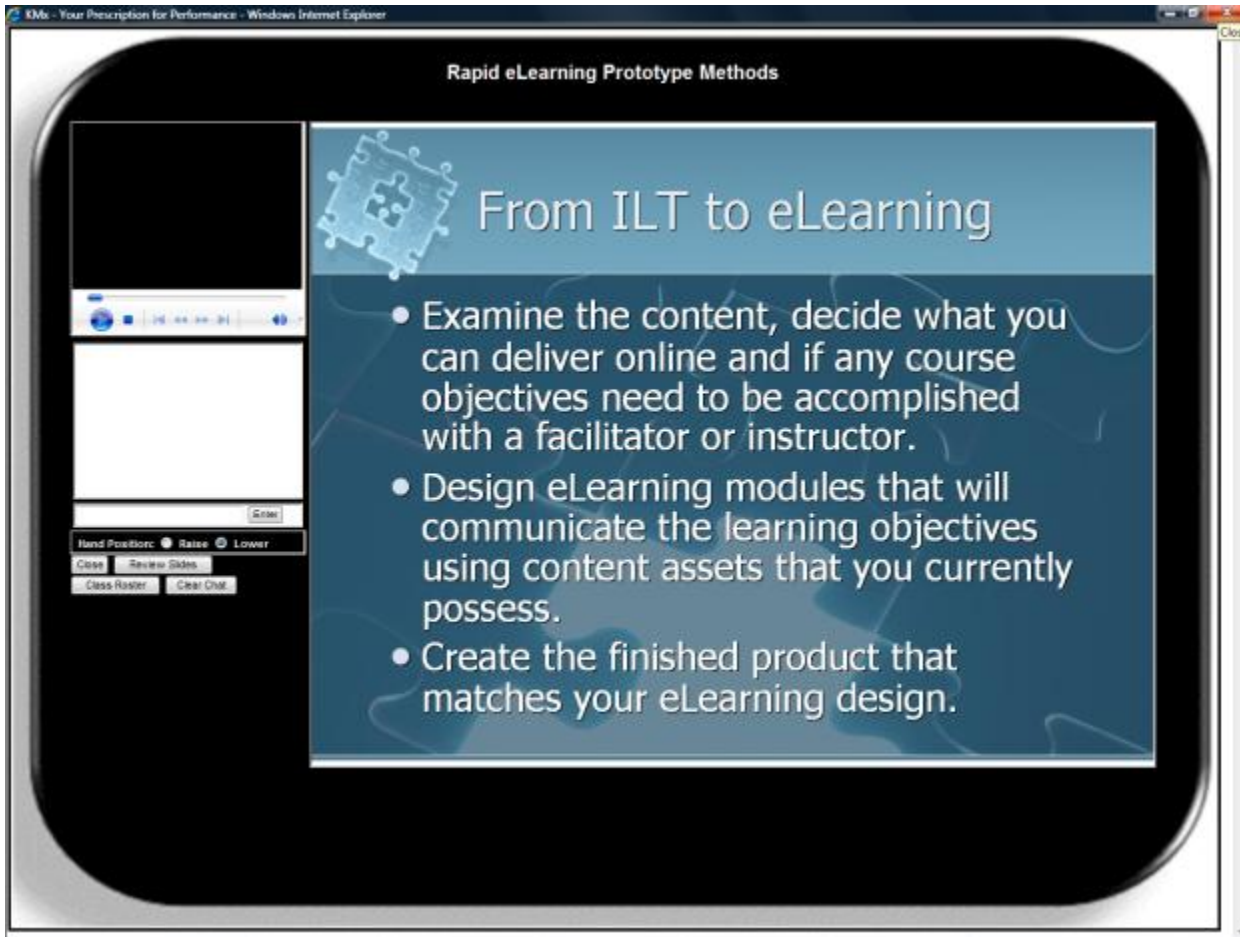
The KMxLive student console provides client configurable brand elements including the background image, fonts, control styles, etc.
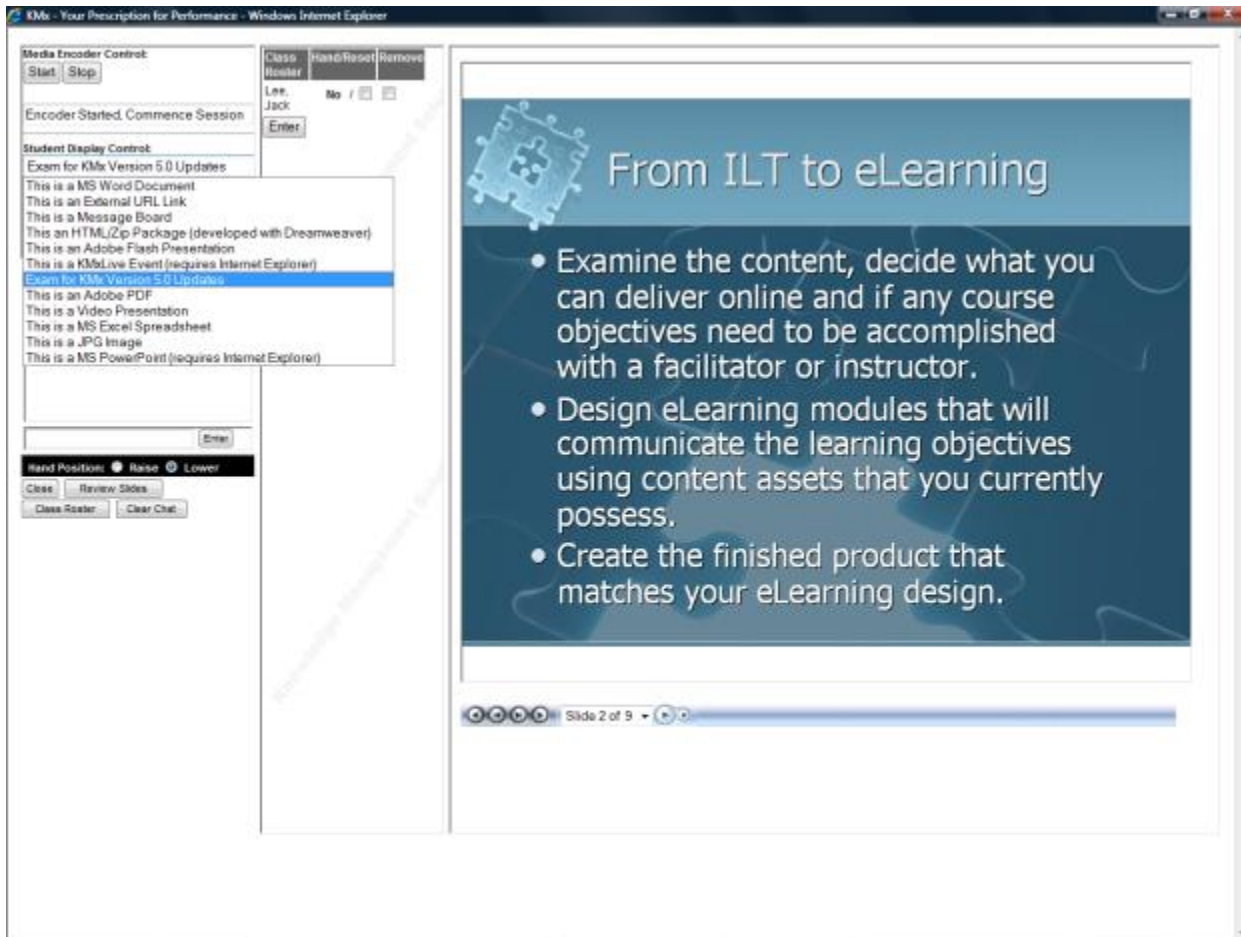
14.5.1 Use of Content, Exams and Surveys during Presentation

KMx provides the instructor with the ability to deliver any content elements to students during a KMxLive presentation. The instructor can select any element present in the course outline for "Push" to the students. See Content" Push" Controls below for more information.

14.5.2 Full Screen Video Controls

Provides the instructor with the ability to change the student's video from ¼ screen to full-screen and back with the press of a button.

14.5.3 Content "Push" Controls

Provides the instructor with the ability to "Push" any KMx content object to the student display window by selecting the available content object in the course outline and then selecting the push control.

14.5.4 Survey/Exam Results Sharing Controls

Provides the instructor with the ability to share both exam and survey statistical results with the student with the press of a button. The button is enabled for any content that enables collection of student response data (scored or un-scored) and presents a bar chart of the student responses.

15 KMxMobile

With KMxMobile, end- users can access courses, learning objects, exams and surveys using their iPhone, Android, Blackberry OS6, Nook Color, Amazon Kindle or Windows handheld device with full SCORM learning management capabilities, including:

- Time tracking (when, by whom and for how long was the learning object accessed)
- Bookmarking (allowing the user to save their progress and return at a later time)
- Assessment Scoring and Remediation (recording each student response and tracking retakes)
- Survey and Performance Appraisal Delivery
- Pass/Fail and Completion Status Recording
- Real-time tracking with no post-lesson upload of progress information

KMSI has also included a full mobile collaboration suite with the KMxMobile release. Collaboration features include mobile chat rooms, threaded discussion boards, surveys, performance evaluations, a searchable knowledge management system, a performance management system and talent management tools.

15.1 Browser and Mobile Device Content Capabilities

KMx has been thoroughly tested on all the major Operating Systems (OS) and Browser variants. Even so, clients are sometimes surprised and disappointed that their courseware will not operate on certain a certain OS or Browser. This is a function of the client selected content media. The key to decision-making with regard to learning content is a thorough understanding of the end-user environment. The following chart illustrates the capabilities of OS and Browser technologies with regard to the content technologies supported.

Platform	Windows OS (89.4%)			MAC OS (7.83%)			Handheld OS (3.2%)				Total
Rich Media	I E	Safari	Firefox	IE	Safari	Firefox	MS CE	iPhone	Palm	Black berry	End-Users
VML/XML	Green	Red	Red	Red	Red	Red	Green	Red	Red	Red	73%
SWF	Green	Green	Green	Green	Green	Green	Green	Red	Green	Red	98%
FLV	Green	Green	Green	Green	Green	Green	Green	Green	Green	Red	99%
WMV	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	100%
JVM	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red	Red	Red	50%
JavaScript	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	100%
Users %	71.1%	0.1%	18.2%	0.5%	7.13%	0.2%	1.2%	1.1%	0.1%	0.8%	100%

Currently, Microsoft Windows on the PC-Based computing platform enjoys the market leadership position with over 89% share. Microsoft's Internet Explorer browser has become the standard for compatibility and compliance. The chart above provides current statistics and technology availability information for clients that are in the process of selecting rich media tools. The "Total" column represents the percentage of Internet users who have the ability use each of the rich media technologies with their preferred OS and browser. It is important to note that even though 18.2% of PC users prefer Firefox; these users have access to Microsoft Internet Explorer and can run VML/XML based courses.

Available	Green
Limited Availability	Yellow
Not Available	Red

15.2 Content Sources and Required Plug-in Support

Source Technology	KMx Delivered SCORM eLearning Content	Required Supporting/Plug-in Technologies
Microsoft Word	HTML	JavaScript
Microsoft Excel	HTML	JavaScript
Microsoft PowerPoint	HTML	JavaScript
Adobe PDF	No Change (PDF)	JavaScript, Adobe PDF Reader
Adobe Flash	No Change (SWF)	JavaScript, Adobe Flash Player
Video/Audio	No Change (WMV. WMA, MPG, 3GP, etc.)	JavaScript, Microsoft Media Player or Apple QuickTime
Presentation Broadcasts (KMxLive Recordings)	WMV/ HTML	JavaScript, Media Player
Message Boards	HTML	JavaScript
Exams/Surveys/Performance Evaluations	HTML	JavaScript
Images	No Change (GIF, JPG, PNG etc)	JavaScript

As can be seen from the table above, JavaScript is required for every KMx content type. This is a function of the SCORM record keeping capabilities and the ability to track student progress, answers and bookmarks. Thankfully, every major OS/Browser supports JavaScript. Certain third-party course libraries (like Skillsoft) require the use of a Java Virtual Machine (JVM) and are severely limited in their cross-platform capabilities. Most third-party authoring tools (like Articulate and Captivate) render their output using Adobe Flash or SWF files. The SWF (Adobe Flash) content type was at one time an almost universally accepted rich media type for cross-platform courseware delivery. With the advent of mobile devices, like the Apple iPhone and Blackberry, this is no longer the case (see the illustration above). Many third-party authoring tools claim to be able to provide content that will operate on mobile devices, however in almost every case the content delivered to the mobile device is a separate course (with disconnected or no student record keeping). Most clients are very disappointed at the dumbed-down approach that these third-party authoring tools use for delivery of courseware to a mobile device. KMSI is dedicated to assisting our clients with the selection of content and media types that are appropriate for their end-users. KMx V6 provides the industry's most capable cross-browser and OS compatible environment for the delivery of virtually any type of eLearning content.

15.3 Test/Survey Navigation

In order to enable the delivery of exams, surveys and performance evaluations to mobile devices, KMx includes a test delivery interface than enables the end-user to select from multiple-choice responses without having to use a radio button or a checkbox as the primary interface. All multiple choice test item options are "hot" spots with a color change to make mobile selection easier and readily visible. In addition to the "hot" spot changes, the KMx Test Item Navigation Bar is configurable in the KMx language packs. This enables clients to create their own item to item interface controls using simple HTML and images. See the example below:
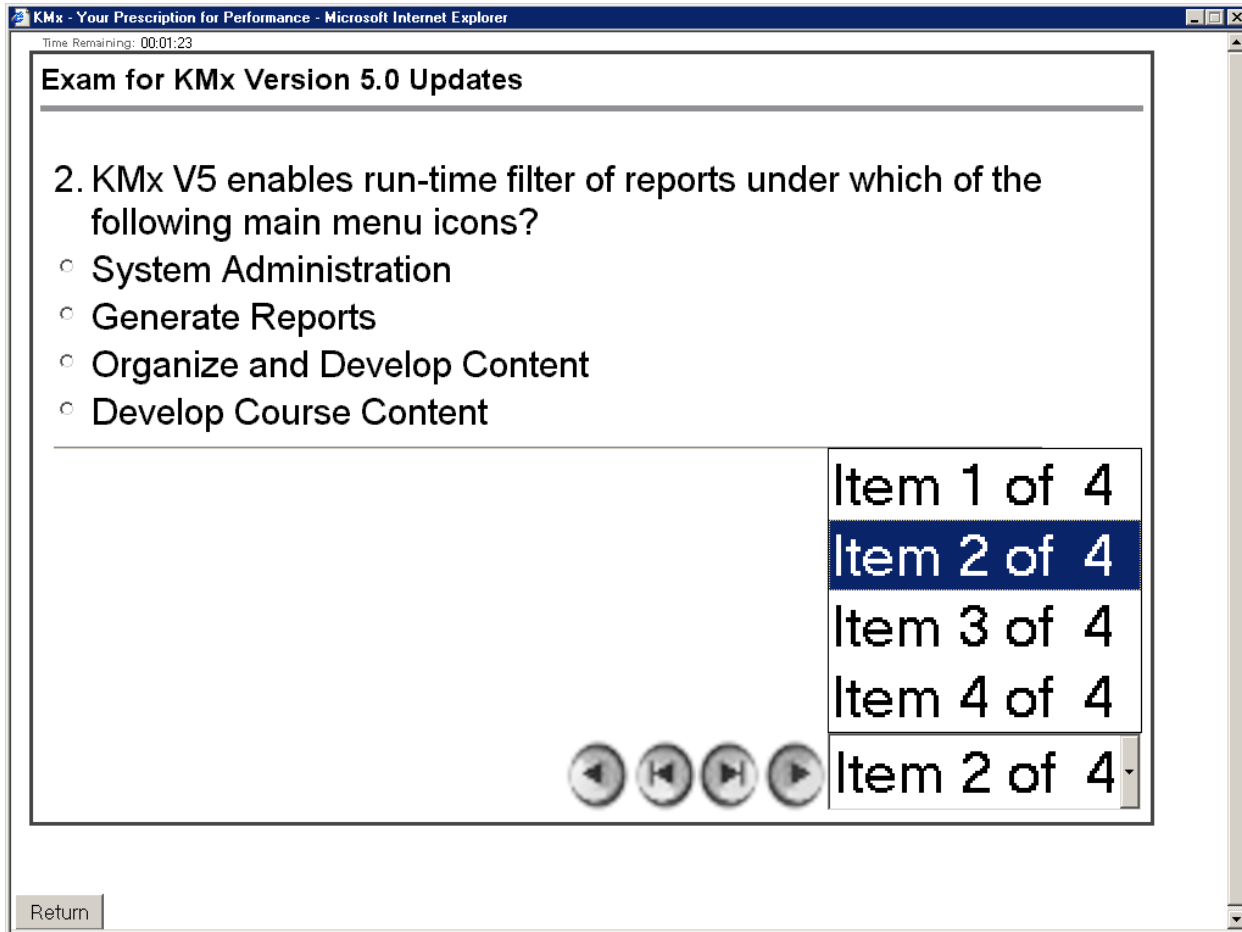
15.4 Course Navigation

KMx includes a Navigation Bar designed for mobile device use. This Navigation Bar has been tested on most major mobile devices, including the iPhone, iPod Touch, Blackberry and Windows Mobile platforms. While, the Mobile Navigation Bar is less capable than the standard browser Navigation Bar, it does provide a convenient mechanism for deployment of sequenced content to a mobile audience.
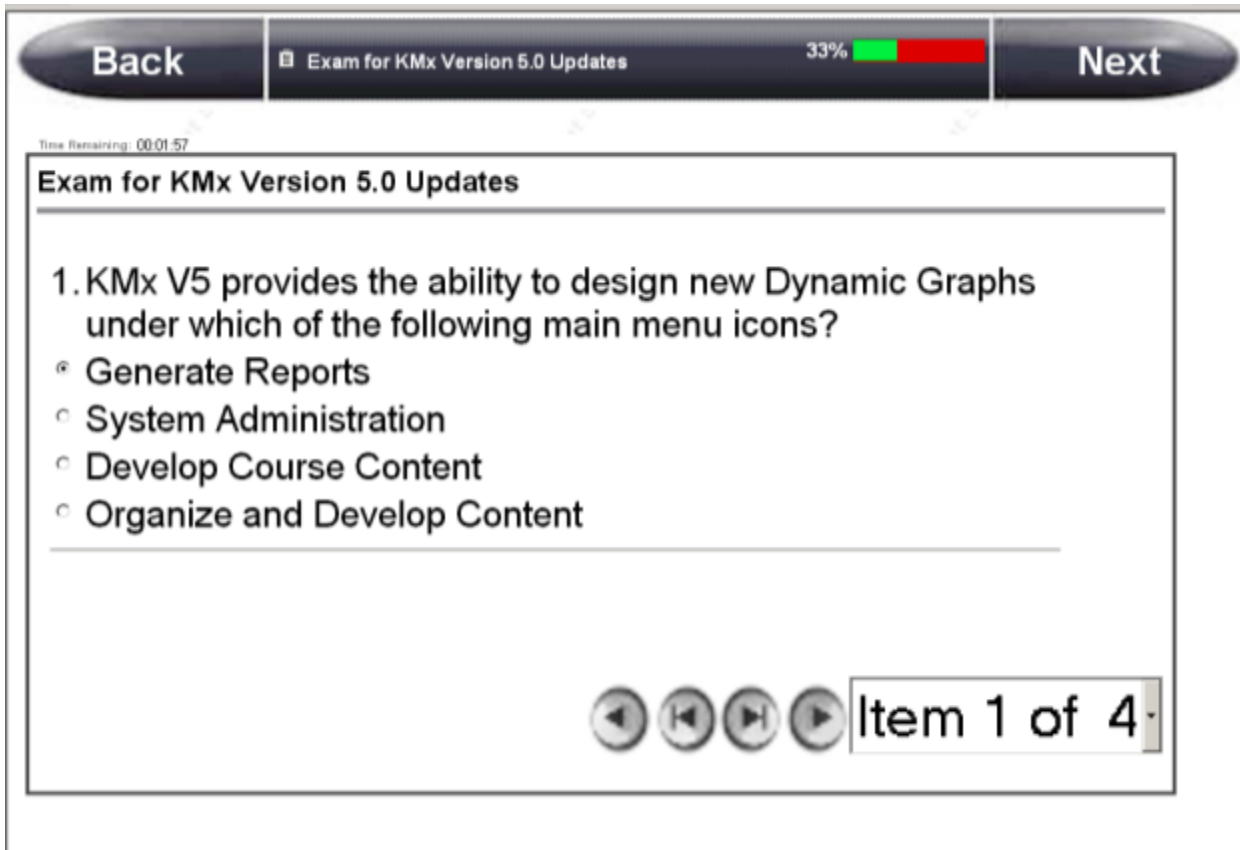
15.5 Device Specific Video Content Behavior

With the advent of the Apple iPhone and 3G networks, video based mobile content is more popular than ever. KMx supports the ASF, WMV streaming media formats and MP4, 3GP, FLV and MOV video. In order to ensure that the video plays correctly on the selected device, the video behavior is tuned based on the user's device and browser. This may cause some minor display differences between devices as resolutions vary greatly, but the overall experience for the end-user will be the best possible based on the device used.

15.6 SCORM Run-Time Environment

KMx provides the industry's only fully conformant Sharable Content Reference Model (SCORM) Run-Time Environment (RTE) compatible with all popular handheld and mobile devices. The only requirement for the device is that it accepts session cookies (to maintain good security during the session) and that it have JavaScript enabled. Many of our clients are very surprised to see their content (even content developed or provided by third-parties) working perfectly on their Android, Blackberry or Windows Mobile device. This presents a significant advantage for our clients that would like to leverage their investment in mobile technologies for performance support, training and talent management activities.

16 Web Services

KMx is supported by a number of web-services that have been created to enable customers to provide integration with third-party technologies and craft their own user experience by leveraging XML, XSL and SOAP technologies. The web-services are advanced tools that are covered in our KMx Advanced Systems Administrator Course. For our complete class schedule, please visit www.KMxDirect.com.

16.1 Catalog web service

This read only service provides customers a means to query the KMx course catalog for course titles, descriptions, access restriction information and ecommerce details such as pricing and discounts. This service also includes classes and schedules. This can be useful for customers who wish to market training offerings on other web sites. KMx can serve as the master record of all training offerings, while allowing other sites to advertise the offering details.

Some customers may also find it useful for integration with HR systems, allowing the KMx platform to serve as a master record of training offerings while keeping the HR system up to date with course numbers, titles and descriptions.

16.2 Company web service

This service allows customers to retrieve and maintain a list of companies (subordinate organizations) in KMx for their organization. This service is intended for large organizations that operate many divisions, or have large groups of dealers, resellers, or customers operating as independent entities within their KMx implementation.

16.3 Course Finder web service

This service provides methods to search for course and class offerings by topic, date and location. Location based searches can by state or by zip code + radius. It will complement the Catalog Service by allowing customers to provide search functions from within their own portal or intranet web interfaces before redirecting interested users to the KMx interface for registration.

16.4 Enrollment Web Service

This is a read only service with a variety of methods allowing users to query the enrollment status of an individual in a course, a list of courses, or a list of individuals in a course. The result sets returned can be used in a wide assortment of applications including:

- Custom Reporting

- Data-warehousing to merge to correlate with other corporate performance, or personnel data

- To implement access rules to applications or systems that has training pre-requisites.

16.5 Medbiquitous Activity Reporting

This service will let customers who must collect and manage Continuing Medical Education information use the Medbiquitous activity report schema to post training activity to the KMx platform to provide a central repository of CME credit earned from a variety of sources.

17 Integration and Session Security Management

17.1 Single Encrypted Session Variable

Early releases of KMx relied on multiple encrypted session variables (also known as soft cookies) to maintain session identification and security information. This approach is commonly used by banks and other secure sites to identify user permissions and attributes during navigation of a website. We have preserved this approach which has been extremely successful with our clients. Clients that completed their KMx startup after January 2011 use a new approach that consolidates the multiple variables into an encrypted data string. This new option will allow clients that require space in the session variable header to have soft cookies to support their portals, site monitoring services and other content that require access to the session header.

17.2 Single Sign-on

Single sign-on facilitates direct access to specific administrative functions. Customers can direct supervisors and company administrators to specific functions by specifying the form_id and other parameters as part of their integrated access path from intranets, portals or other websites set up as KMx access points.

18 BrowserHawk Student Workstation Testing

KMSI hosted clients have access to our BrowserHawk testing system. This third-party software is capable of determining the end-users browser and workstation configuration to quickly isolate issues. For example, many clients use Adobe Flash presentations in their training programs. Using the BrowserHawk software will enable the client to provide the end-users with a browser test link to determine if they have Adobe Flash installed before the student runs into an error. This testing system is configurable to client specifications regarding browsers, plug-in requirements, Java versions and much more.

The table below summarizes your system's readiness to proceed with training. If your status shows a red X for any option below, please follow the accompanying recommendation, then return to proceed with your training. Thank you.

Option	Your Settings	Status	Recommendation
Browser	IE 6.0	✓	Your browser is appropriate for the learning platform.
Session Cookies	Enabled	✓	Your session cookies are enabled appropriately for the learning platform.
Javascript	Enabled	✓	Javascript is enabled appropriately for the learning platform.
Flash	Enabled	✓	Adobe Flash is enabled appropriately for the learning platform.
Popups Allowed	Enabled	✓	Popups are enabled appropriately for the learning platform.

Retry this test

Close Window