Basic eLearning ToolSet (BELTS)

BELTS Overview

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Part I. Introduction to BELTS

Chapter 1. About BELTS

The Basic E-Learning Tool Set (BELTS) has been developed by The Le@rning Federation (TLF) [http://www.thelearningfederation.edu.au] to demonstrate the distribution, management and use of online curriculum content and to aid investigation of requirements for e-learning environments by Australian and New Zealand school jurisdictions.

BELTS currently provides a limited set of tools, including:

- A content repository;
- Basic activity creation, using lessons;
- Basic group management, using classes;
- Content to curriculum outcomes matching (the curriculum organiser);
- Downloading of content from The Le@rning Federation's Exchange repository of online curriculum content;
- Content replication from one BELTS to another, and
- System administration.

Note

BELTS has currently not been developed as a fully featured learning management system. BELTS is, however, an open source project that can be further developed. The Le@rning Federation encourages Australian and New Zealand education jurisdictions, and others, to consider options for collaborating and contributing to the evolution of BELTS. For more information about the project and how you can participate visit the BELTS project web site [http://belts.sourceforge.net]

Chapter 2. About The Le@rning Federation

The Le@rning Federation [http://www.thelearningfederation.edu.au], is an initiative delivered on behalf of the Australian Education Systems Officials Committee (AESOC) by a joint venture of education.au limited [http://www.educationau.edu.au] and Curriculum Corporation [http://www.curriculum.edu.au]

In January 2001, as part of the Backing Australia's Ability: Innovation Action Plan [http://backingaus.innovation.gov.au] the Prime Minister announced funding of $34.1 million over 5 years to support the Initiative to:

- Develop a body of high-quality curriculum content, suitable to each State and Territory;
- Develop a framework which supports distributed access;
- In the long term, use the framework and content to stimulate further contribution to the pool of material.

In July 2001, all Australian States and Territories agreed to match the Commonwealth funds. Following this, New Zealand joined in the Initiative.

Part II. BELTS Concepts

Chapter 3. Content Delivery Model

The BELTS may be used as both a centralised and distributed model for content delivery. The centralised model involves a single BELTS system servicing a number of schools, which access content over a wide area network. The distributed model involves multiple BELTS systems deployed along the distribution chain, including at school level, and delivering content via the local area network.

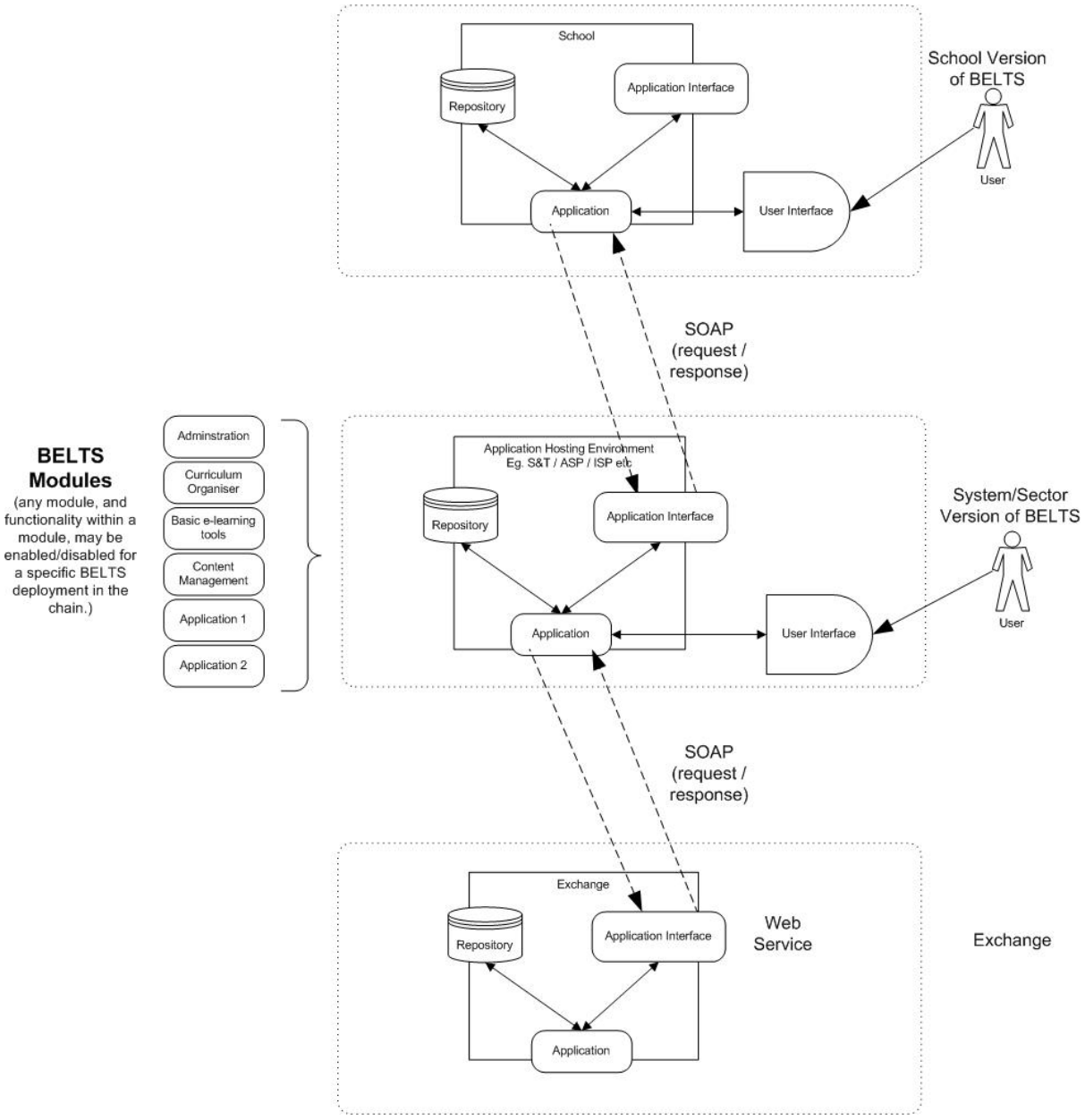

Figure 3.1. Content Delivery Model

The diagram illustrates a particular scenario where three systems are linked together in a content distribution chain illustrating how the BELTS can be used as a centralised system (the middle BELTS) and a distributed system (the top BELTS). The Exchange interfaces with a central BELTS deployment, which in turn interfaces with another BELTS deployment at a school. The BELTS will be capable of supporting a range of different distribution scenarios that are based on these concepts.

The central education system or sector BELTS system is hosted in an application hosting environment (not distinguishing between education systems and sectors, ASPs and ISPs in terms of functionality provided) and this environment is used to manage the discovery and distribution of content from the Exchange repository to a central BELTS repository. This requires interfaces between the Exchange and BELTS that allow the discovery and transfer of content.

The diagram also illustrates a BELTS system deployed at the school. In the school environment the BELTS system's responsibility is to manage the distribution of content from the central education system or sector BELTS repository to the school BELTS repository and enable basic e-learning tools to be available to teachers and students. This creates a chain of BELTS systems, which requires BELTS to have interfaces that allow inter-BELTS-repository communication and transfer of content.

It is feasible with this model that any number of BELTS systems may be “chained” together, creating a parent-child type relationship between BELTS systems deployed at different points in the distribution chain, and that the role of each BELTS deployment may differ. For example, in the diagram above, illustrating a distributed BELTS deployment, the central education system or sector's BELTS must enable the interface between the BELTS and the Exchange and the search and discovery tools, but not necessarily enable any e-learning tools. In contrast, the school's BELTS must enable the interface between the BELTS repositories and the basic e-learning tools. In a different scenario, a central BELTS system may be used by many schools that do not have their own BELTS deployment and thus enable both the discovery and download tools and the basic e-learning tools.

As BELTS is a single system with multiple functional modules that comprise the total functionality, it is also feasible that other applications could be integrated with a BELTS system at any point in the distribution chain, and extend its functionality, represented as Application 1 and Application 2 in the diagram.

A core principle behind the system is that it supports open industry standards to enable the greatest opportunity for interoperability. A second principle is to provide an open source framework that enables other parties, such as education systems and sectors, to further build upon the framework and contribute to the development of an open source learning management system for the benefit of all education systems and sectors.

Chapter 4. Curriculum Organiser

4.1. Overview

The curriculum organiser is being developed by The Le@rning Federation as a tool for assisting teachers to locate online content relevant to learning outcomes. Essentially, the curriculum organiser matches learning outcomes and content by comparing metadata for learning outcomes with metadata for content.

A trial implementation of the curriculum organiser has been developed as a component of BELTS. When a teacher discovers content using BELTS the teacher can display learning outcomes that the content may help them work toward with a student, in conjunction with other classroom resources.

4.2. Structure of the curriculum organiser

The curriculum organiser consists of neutral vocabularies for each learning area. These neutral vocabularies are being incorporated into metadata describing TLF created content and are used to describe learning outcomes in Australian State and Territory and New Zealand curriculum frameworks.

The intention of the current BELTS implementation of the curriculum organiser is to match TLF content with Australian State and Territory and New Zealand outcomes and allow teachers to view the local outcomes that TLF content may help facilitate.

4.2.1. Neutral vocabulary and outcome descriptions

The curriculum organiser has two parts: a neutral vocabulary for each learning area, and a learning outcome description of each State and Territory outcome using that neutral vocabulary.

A small part of the neutral vocabulary for Mathematics is:

> 2D shapes, 3D objects, Accuracy, Addition, Algebra, Algebraic methods, Algorithms, Angles, Area, Arithmetic, Attributes, Automatic response, …

An example learning outcome description of a Victorian Mathematics outcome using this neutral vocabulary is:

Outcome Code	**Outcome Description**	**Neutral Description (neutral vocabulary terms)**	**Year levels**	**Skills/Process**
MDS 1.1	Estimate, compare, describe and measure length, area, capacity, volume and mass using informal units; estimate and measure length in cm and m	Measurement, Length, Mass, Informal units, Metric system, Capacity, Area, Volume	1, 2	Comprehension, Knowledge

Table 4.1. Example learning outcome description for a Victorian Mathematics outcome

4.2.2. Describing content

The Le@rning Federation describes content using terms from the neutral vocabulary. The neutral vocabulary terms are contained in the Content/Concept metadata element. For example, part of the metadata for an existing TLF content is:

Metadata Element	Value
General > Title	Alien Life Form
General > Description	Students play the role of an alien testing life on Plant Earth. They construct plants from parts to see which parts survive in different environments.
Educational > Audience > User Level	3, 4
Educational > Subject > Curriculum > Content/Concept	Biology, Climate, Environmental influences, Experiments, Habitat, Living things, Observation, Plants
Educational > Subject > Curriculum > Skills/Process	Analysis, Application, Comprehension, Knowledge

Table 4.2. Example content metadata

4.2.3. Matching local outcomes

When a teacher discovers content using BELTS the teacher can ask to display learning outcomes that the learning object may help facilitate. When this happens, the curriculum organiser dynamically matches local outcomes to the object and presents the outcomes to a user.

For example, if a teacher discovered the “Alien Life Form” object and chose to view related outcomes, BELTS might display:

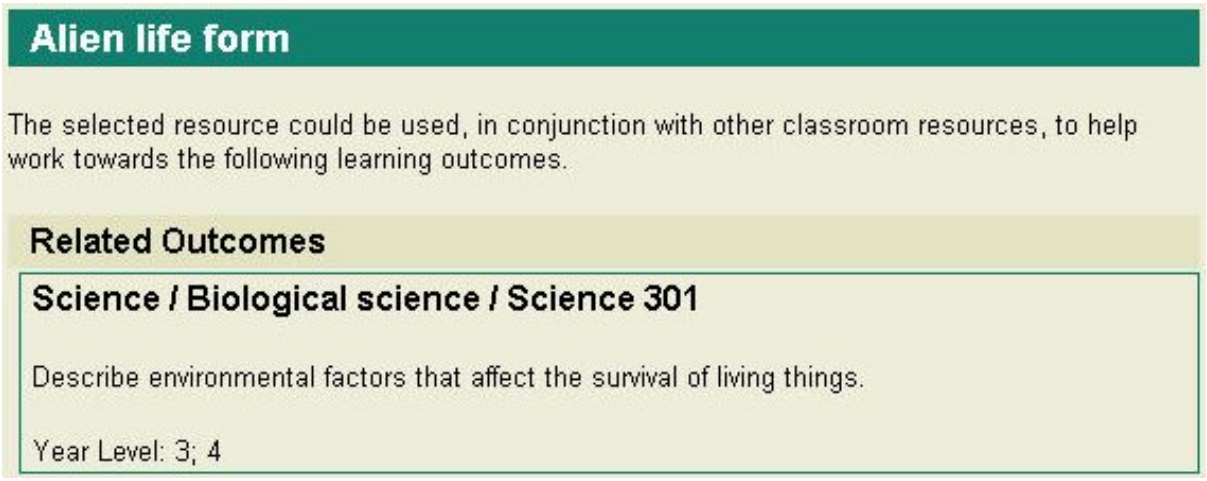

Figure 4.1. Related Outcomes for Content

The match between objects and outcomes occurs if any of the content/concept terms in the object’s metadata match a term in the outcome description. The year levels and skills/process must also overlap.

4.3. Using the curriculum organiser without BELTS

The curriculum organiser has been implemented in BELTS to facilitate evaluation and refinement of the approach. Each jurisdiction can, however, implement the curriculum organiser within their learning infrastructure.

To aid implementation of the curriculum organiser outside BELTS, TLF has produced XML encodings of each participating jurisdiction’s curriculum outcomes. These can be distributed to jurisdictions on request. Additionally, the code used to implement the curriculum organiser within BELTS is freely available under BELTS’ open source license.

Part III. How To Use BELTS

Chapter 5. Logging in to BELTS

There are two login types for BELTS: user login and lesson login.

5.1. User login

A user login requires having an individual username and password. After logging in, the role of the user (whether as a system administrator, content manager, school administrator, teacher or student) will determine what information can be accessed.

5.2. Lesson login

A lesson login requires a lesson ID and password for an active lesson. This is set-up when creating or editing a lesson. Note that “l=” must be entered in front of the lesson ID when logging in using this method. After logging in the user can only access the lesson.

Chapter 6. Setting up your System to use BELTS

The first step in a successful BELTS installation is deciding on how to set up your system to run BELTS. The following options are available:

- Set up a single BELTS server to serve your entire system
- Set up individual BELTS servers throughout your entire system
- Set up a hierarchy of BELTS servers, with a central server distributing content to downstream systems.

Depending on your requirements, any of the above options may be best for you.

6.1. Single BELTS Server for system

This setup is best suited to a system where you have a single location or a very fast system-wide network. It allows you to manage schools, students, classes lessons and content from a central point and reduces the administrative support required for the system.

Given that there are not many single-location systems or systems that have fast system-wide networks, it is expected that this setup will only be used for systems in the pilot phase.

6.2. Individual BELTS Servers at each Location

This setup is best suited to a system where you have schools that individually manage content downloaded from the Learning Exchange and do not require central control over the content used by each location. Each location is required to manage schools (probably a single school), students, classes lessons and content.

6.3. Hierarchy of BELTS servers

This setup is best suited to a system where you want to manage the content available to schools or provide your own content to schools in your system.

In this setup, each location manages their own schools (probably a single school), students, classes and lessons. In addition, the location can choose whether to publish content that is provided by the central BELTS server.

Chapter 7. Setting up users

The user management structure is hierarchical, with the responsibility for managing users distributed across multiple roles. The following diagram illustrates this structure and the user management functions that may be performed by each role.

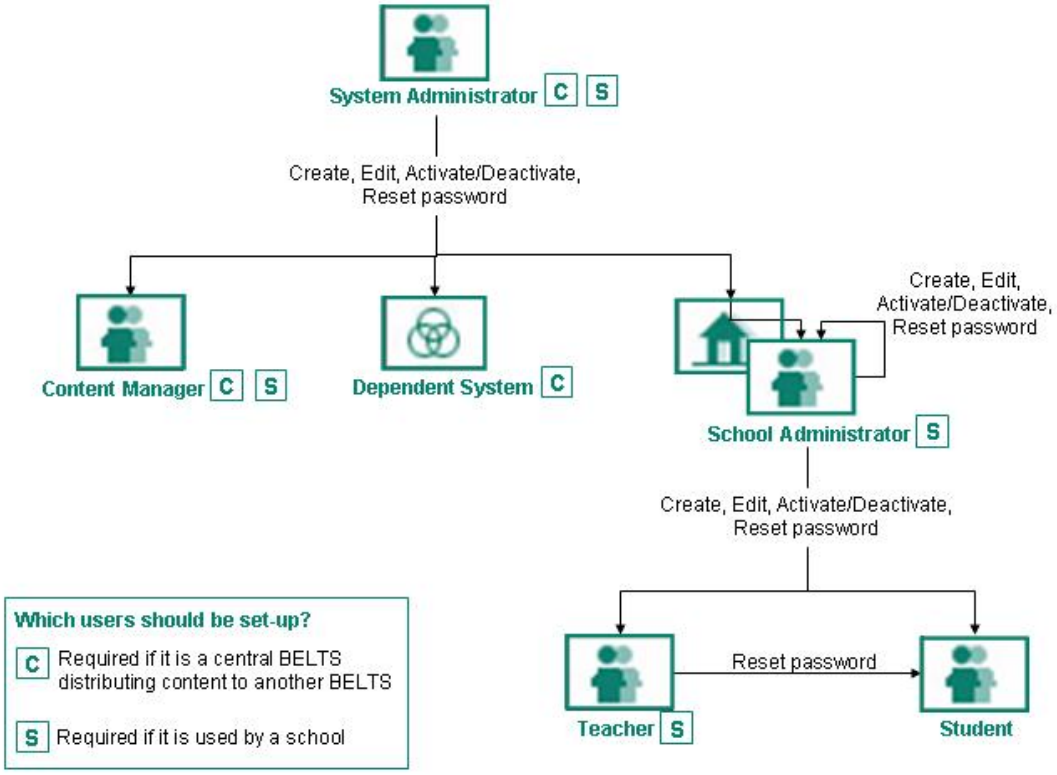

Figure 7.1. User Management Structure

The first step in user management is working out which users to set up. This is determined by the function of BELTS in the distribution chain, either as a central BELTS or as a school BELTS.

7.1. Central BELTS

When BELTS is used as a central system, it is used to import content from an upstream system (either The Le@rning Federation's Exchange or an upstream BELTS) and distribute it to downstream BELTS systems. The following user roles will be required:

- System administrator
- Content manager
- Dependent system

7.2. School BELTS

When BELTS is used by a school, it is used for preparing and presenting lessons to students. The following user

roles will be required:

- System administrator
- Content manager
- School administrator
- Teacher

Setting up students in a school BELTS is optional. The requirement to create students is determined by how students will use BELTS to access lessons; if students will use lesson logins to access BELTS' lessons, then students do not need to be created.

7.3. Types of roles and assigning roles to users

There are three types of roles in BELTS:

- System-wide roles. These are the System Administrator and Content Manager. The functions available to these roles apply across the entire BELTS system.
- School roles. These are the School Administrator, Teacher and Student. The functions available to these roles only apply within the school in which the user is created.
- Dependent system role. This is a special role as it is assigned to another BELTS system rather than a user, and it enables searching and downloading published content to another system.

Refer to BELTS Roles and Privileges [19] for a description of the functionality available to each role.

If a user requires access to functionality provided by different roles, so long as the roles are of the same type, multiple roles can be assigned to the user.

Chapter 8. Setting up a school

8.1. Setting up schools

BELTS may support multiple schools. A school must be created in BELTS before any of the school users (School Administrator, Teacher or Student) can access it. This is the case even if only one school will use BELTS.

When a school is created, the system requires that the first School Administrator be created. Although, the system will ask for a first name and family name, it is possible to create the School Administrator as a generic account by entering generic information into the fields. For example, provide a first name of “School” and a family name of “Administrator”.

After the school has been created, the School Administrator will be able to edit the details of the school and manage the school's users and classes.

8.2. Setting up school users

The school administrator will need to create all users who require individual logins to BELTS. The user roles are:

- School Administrator
- Teacher
- Student

Refer to **Setting up users [12]** for information about which school users are required.

8.3. Setting up classes

Setting up classes is optional; the first step is to decide whether either of the scenarios below are relevant to the way BELTS will be used by the school, as this will determine whether or not classes are required.

Scenario 1

Teachers wish to organise lessons under class headings When lessons are created, a teacher has a choice about whether or not to organise his or her lessons under a class heading so they are easier to browse and manage. If lessons are not organised this way, they will appear in a single list on the teacher’s lessons page.

If teachers wish to organise lessons under class headings, classes will need to be created. The teacher will need to be assigned to the classes they wish to use. In this scenario, there is no need to assign students to the class.

Scenario 2

Students will access lessons via an individual user login, rather than a lesson login. If it is determined for some reason that students will not use lesson logins to access lessons in BELTS, the only other option for them to access lessons is to be created as a Student. This student is then assigned to a class to which the lesson is also assigned. When the student logs into BELTS they will be able to view a list of lessons assigned to their class(es).

If this scenario is required, then classes will need to be created. Both the teacher AND students who require access to the class lessons will need to be assigned to the class.

Note

If you decide to use classes, please note that a class id is required to be unique within the BELTS

installation. It is advisable to define a naming convention that can be used for creating unique, but meaningful, class ids and publicise this to users who will be creating classes within your system.

Chapter 9. Preparing and presenting content to students

BELTS enables digital content to be sequenced together to create learning activities. The main functionality in BELTS for preparing and presenting content to students is through lessons. A lesson is an aggregation of content and instructions.

9.1. Preparing content for students

Teachers are able to include the following types of content in a lesson:

- Content, such as learning objects and resources, that are in the BELTS repository
- Files that exist on a local drive and may be uploaded into the BELTS lesson
- Web sites that can be accessed by a URL

An overview of the lesson may be written as well as individual instructions for each item of content in the lesson.

Refer to Create a lesson for details on how to set-up a lesson in BELTS.

It should be noted that if a teacher only wishes to present a single learning object to a group of students, it is feasible to simply display the learning object from the search or browse results page in BELTS rather than creating a lesson.

9.2. Giving students access to a lesson

In addition to preparing content for a lesson, the teacher must decide whether students will access the lesson using a lesson login or through the lesson being displayed on the students “Lessons” page:

- Lesson login. This involves specifying a lesson ID and password, which may be used to log directly into the lesson after it has been activated. The lesson ID is specified when the lesson is first created and it cannot be changed. The lesson password is specified when creating or editing a lesson and may be changed. Additionally, the lesson login must be enabled, which may be done when the lesson is created or edited.
- List lesson on students lesson list. This involves having the students set-up in the system, assigned to classes, and then assigning the lesson to the class.

In order for students to be able to access the lesson, either through a lesson login or from their own lesson list, the lesson must be set to status Active.

Chapter 10. How to share lessons with other teachers

Although there is no dedicated functionality in BELTS to share lessons with other teachers, using class assignment for lessons achieves the same outcome. The following steps should be followed:

1. Create a class. Assign only those teachers to the class who will to be given access to the lesson.
2. Assign the class to the lesson. This will enable the teachers in the class to view, but not edit, the lesson. In order for the other teachers to use the lesson with their students, they will need the lesson login and the lesson will need to be activated. One suggestion is to include the lesson login information in the teacher's notes field, as this field is displayed to the other teachers.

Part IV. BELTS Roles

Chapter 11. BELTS Roles and Privileges

The actions each user can perform and the features he or she can access are controlled by his or her role and the privileges defined for that role within BELTS.

Existing roles available in BELTS include:

- System Administrator [20]
- Content Manager [22]
- School Administrator [24]
- Teacher [26]
- Student [28]
- Lesson [30]

Chapter 12. System Administrator

This chapter provides a brief overview of the BELTS functions available to System Administrators.

12.1. The System Administrator Role

The System Administrator is responsible for the overall maintenance of the BELTS system, including:

- management of users not associated with schools
- creation and management of schools
- creation and management of dependent systems

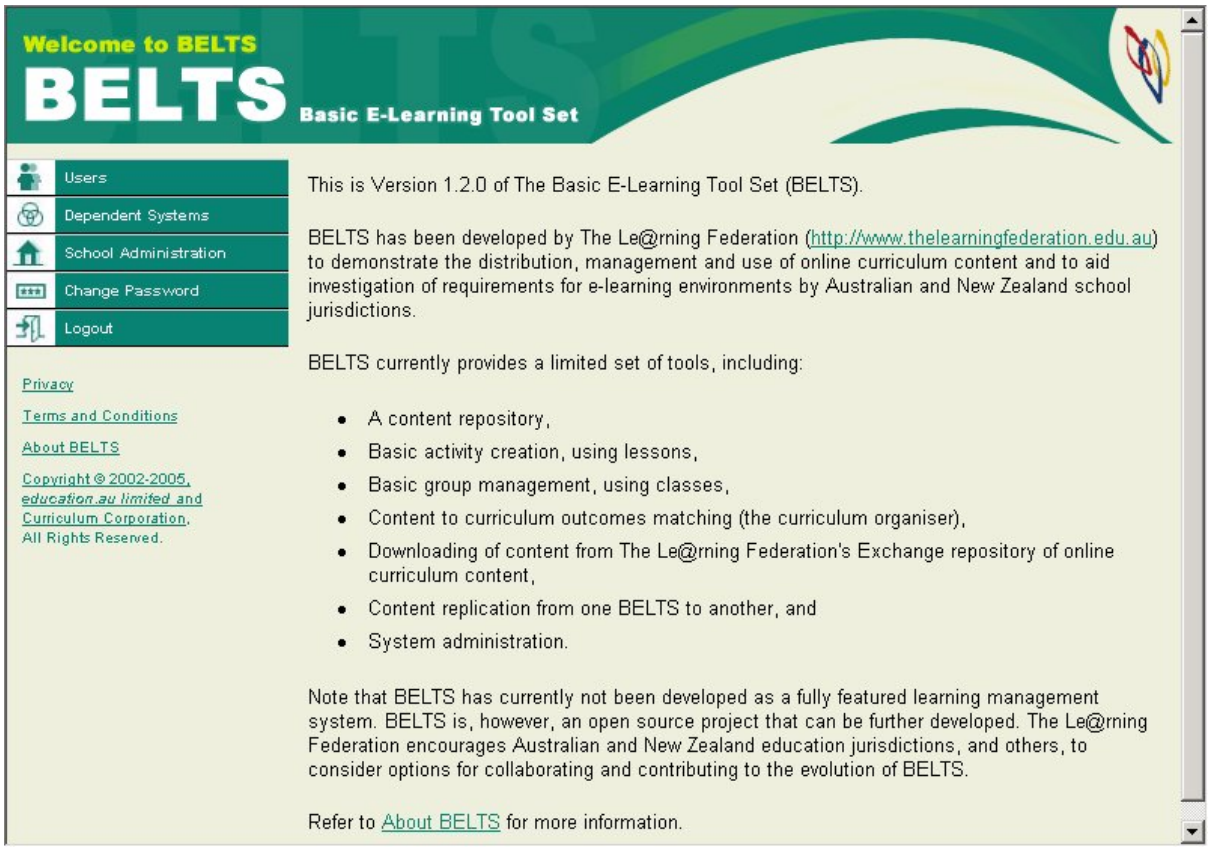

Figure 12.1. System Administrator Main Screen

12.1.1. Common Functions

Common functions available to the System Administrator include:

- Login to BELTS [32]
- Logout from BELTS [32]
- Change Password [32]

12.1.2. User Management Functions

User management functions available to the System Administrator include:

- List Active Users [35] (View the list of active Content Managers and System Administrators)
- List Inactive Users [35] (View the list of inactive Content Managers and System Administrators)
- Create a User [36] (Create a Content Manager or System Administrator)
- Edit User [36] (Edit the details for a Content Manager or System Administrator)
- Activate Users [36] (Activate a Content Manager or System Administrator)
- Deactivate Users [36] (Deactivate a Content Manager or System Administrator)
- Reset a Users Password [36] (Reset the password for a Content Manager or System Administrator)
- Send an Email to a User [36] (Send an email to a Content Manager or System Administrator)

12.1.3. School Management Functions

School management functions available to the System Administrator include:

- List Active Schools [35]
- List Archived Schools [35]
- Create a School [35] (Create a School and its associated School Administrator)
- Edit a School [35]
- Archive a School [35]
- Reinstate a School [35]

12.1.4. Dependent System Management Functions

Dependent system management functions available to the System Administrator include:

- List Active Dependent Systems [32]
- List Inactive Dependent Systems [32]
- Create a Dependent System [33]
- Edit a Dependent System [33]
- Activate a Dependent System [33]
- Deactivate a Dependent System [33]

Chapter 13. Content Manager

This chapter provides a brief overview of the BELTS functions available to Content Managers.

13.1. The Content Manager Role

The Content Manager is responsible for managing content in the BELTS system:

- download of content available in repositories
- publication of content for use in lessons within schools and by dependent systems
- uploading of local content for use in lessons within schools and by dependent systems

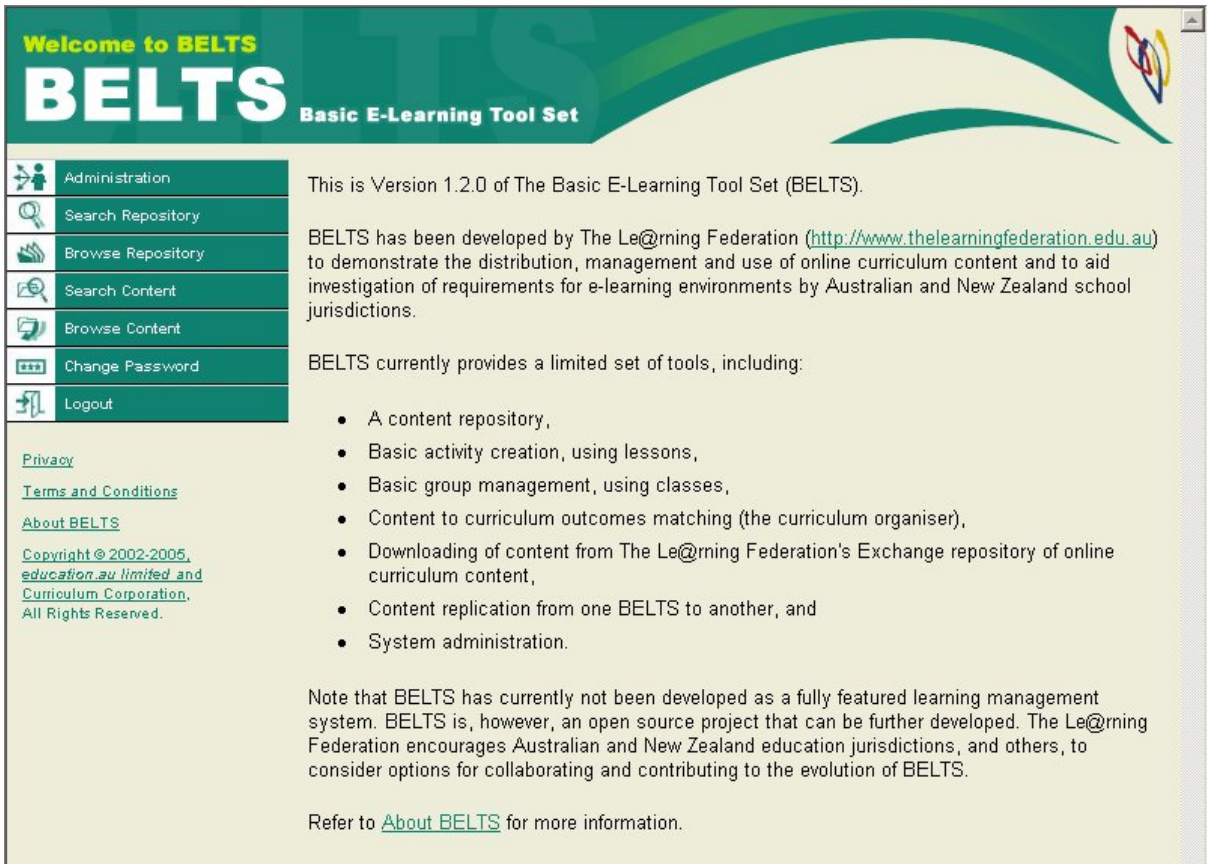

Figure 13.1. Content Manager Main Screen

13.1.1. Common Functions

Common functions available to the Content Manager include:

- Login to BELTS [32]
- Logout from BELTS [32]
- Change Password [32]

13.1.2. Repository Management Functions

Repository management functions available to the Content Manager include:

- Browse Repository [34]
- Search Repository [34]
- Download Content from Repository [34]

13.1.3. Content Management Functions

Content management functions available to the Content Manager include:

- Browse Content [34]
- Search Content [34]
- View Content [34]
- Download Content [34]
- Publish Content [35]
- Unpublish Content [35]
- Delete Content [35]
- Upload Local Content [35]

13.1.4. Content Administration Functions

Content Administration functions available to the Content Manager include:

- Retrieve updates from a content provider [33]
- Regenerate XML Cache [33]
- Browse the XML Cache [33]

Chapter 14. School Administrator

This chapter provides a brief overview of the BELTS functions available to School Administrators.

14.1. The School Administrator Role

The School Administrator is responsible for the overall maintenance of the BELTS system for a School, including:

- management of users associated with the school
- management of the school details

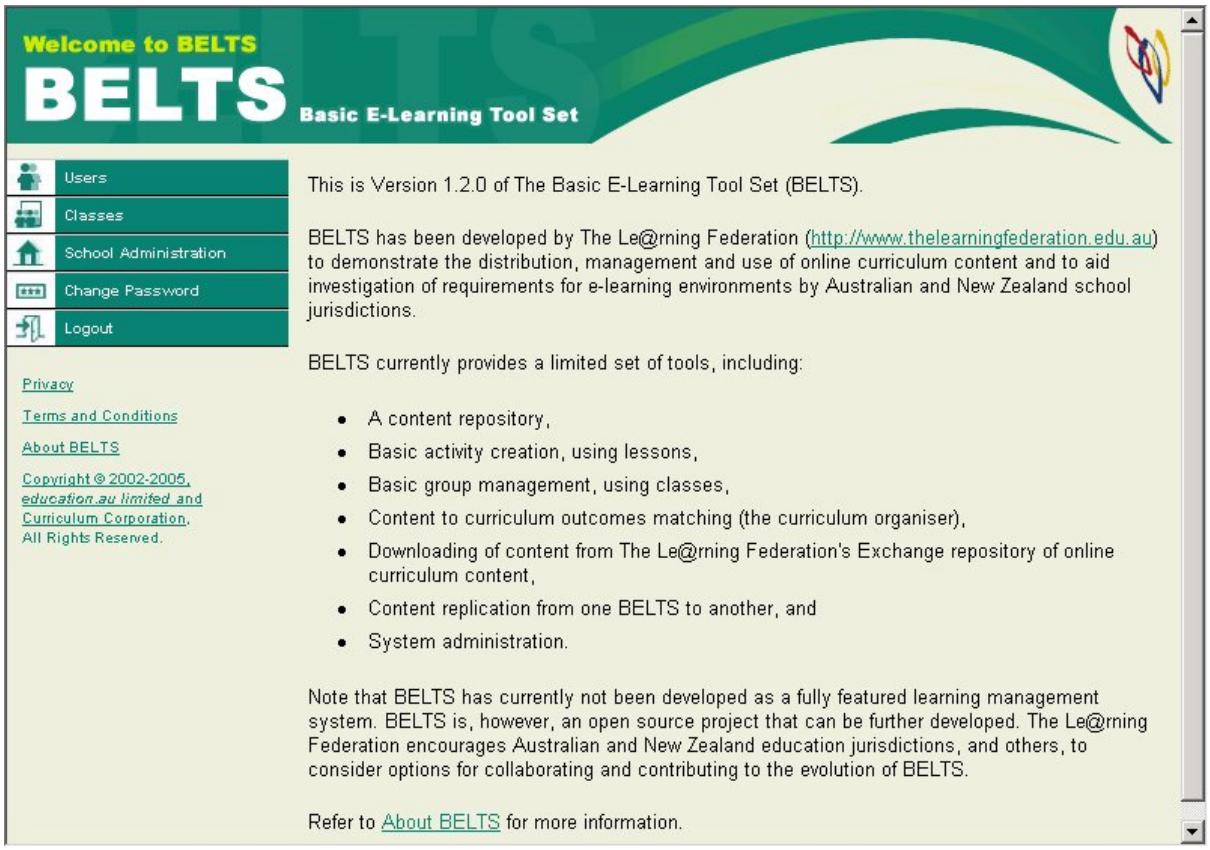

Figure 14.1. School Administrator Screen

14.1.1. Common Functions

Common functions available to the School Administrator include:

- Login to BELTS [32]
- Logout from BELTS [32]
- Change Password [32]

14.1.2. User Management Functions

User management functions available to the School Administrator include:

- List Active Users [35] (View the list of active School Users)
- List Inactive Users [35] (View the list of inactive School Users)
- Create a User [36] (Create a School User)
- Edit User [36] (Edit the details for a School User)
- Activate Users [36] (Activate a School User)
- Deactivate Users [36] (Deactivate a School User)
- Reset a Users Password [36] (Reset the password for a School User)
- Send an Email to a User [36] (Send an email to a School User)

14.1.3. Class Management Functions

Class management functions available to the School Administrator include:

- List Active Classes [32]
- List Archived Classes [32]
- Create a Class [32]
- Edit a Class [32]
- Search for Classes [32]
- Activate a Class [32]
- Deactivate a Class [32]

14.1.4. School Management Functions

School management functions available to the School Administrator include:

- Edit a School [35]

Chapter 15. Teacher

This chapter provides a brief overview of the BELTS functions available to Teachers.

15.1. The Teacher Role

The Teacher has the following functions in the BELTS system:

- management of classes with which they are involved
- management of lessons for provision to class members
- ability to reset passwords for students

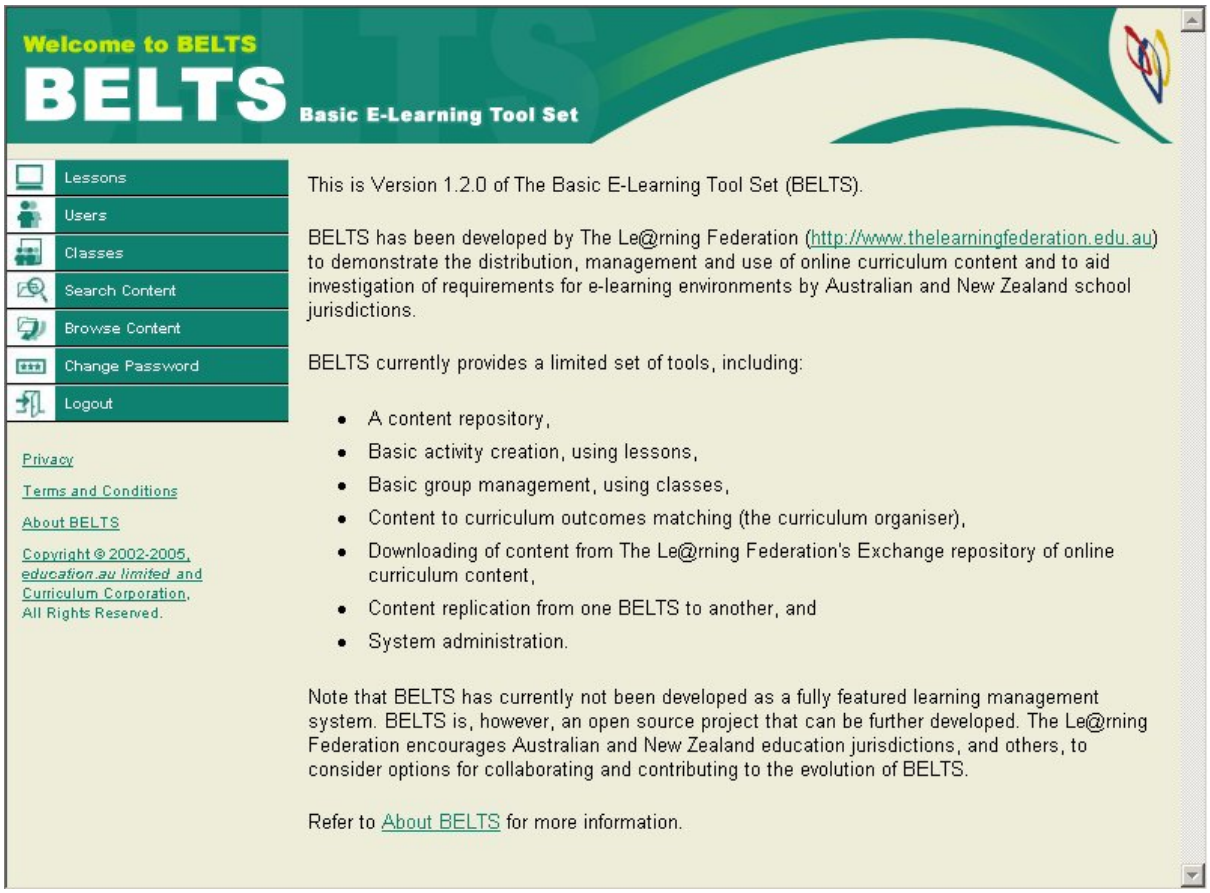

Figure 15.1. Teacher Main Screen

15.1.1. Common Functions

Common functions available to the Teacher include:

- Login to BELTS [32]
- Logout from BELTS [32]
- Change Password [32]

15.1.2. User Management Functions

User management functions available to the Teacher include:

- List Active Users [35] (View the list of active Students)
- Reset a Users Password [36] (Reset the password for a Student)
- Send an Email to a User [36] (Send an email to a Teacher or Student)

15.1.3. Content Management Functions

Content management functions available to the Teacher include:

- Browse Content [34]
- Search Content [34]
- View Content [34]
- Download Content [34]
- Add Content to a Lesson [35]
- Create a New Lesson For Content [35]

15.1.4. Lesson Management Functions

Lesson management functions available to the Teacher include:

- List Available Lessons [33]
- Create a Lesson [33]
- Edit a Lesson [33]
- Remove a Lesson [34]
- Activate a Lesson [34]
- Deactivate a Lesson [34]
- View a Lesson [34]

15.1.5. Class Management Functions

Class management functions available to the Teacher include:

- List Active Classes [32]
- List Archived Classes [32]
- Create a Class [32]
- Edit a Class [32]
- Search for Classes [32]
- Activate a Class [32]
- Deactivate a Class [32]

Chapter 16. Student

This chapter provides a brief overview of the BELTS functions available to Students.

16.1. The Student Role

The Student has the following functions in the BELTS system:

- the ability to view lessons

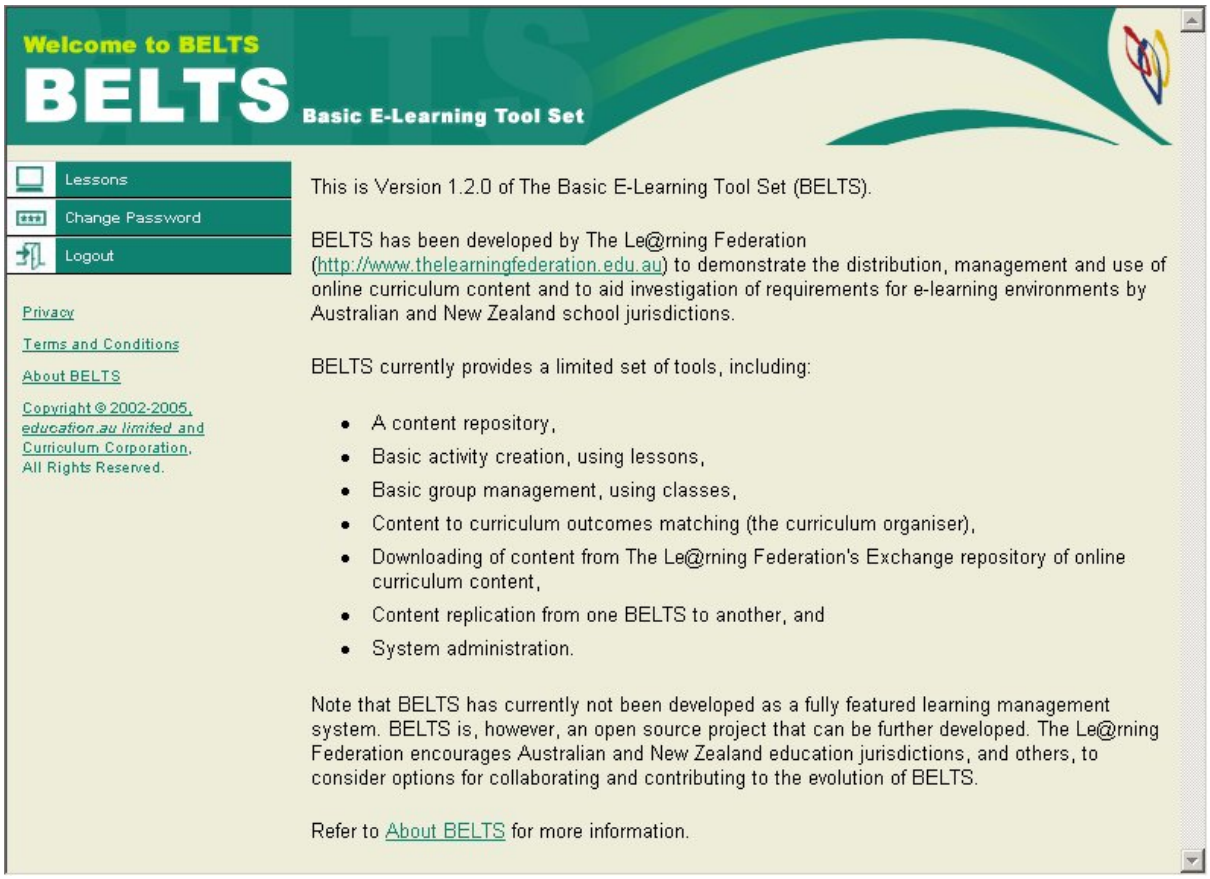

Figure 16.1. Student Main Screen

16.1.1. Common Functions

Common functions available to the Student include:

- Login to BELTS [32]
- Logout from BELTS [32]
- Change Password [32]

16.1.2. Lesson Management Functions

Lesson management functions available to the Student include:

- List Available Lessons [33]
- View a Lesson [34]

Chapter 17. Lesson

This chapter provides a brief overview of the BELTS functions available to Lessons.

17.1. The Lesson Role

The Lesson login provides a mechanism for teachers to allow students to view lessons without the need to assign them to classes.

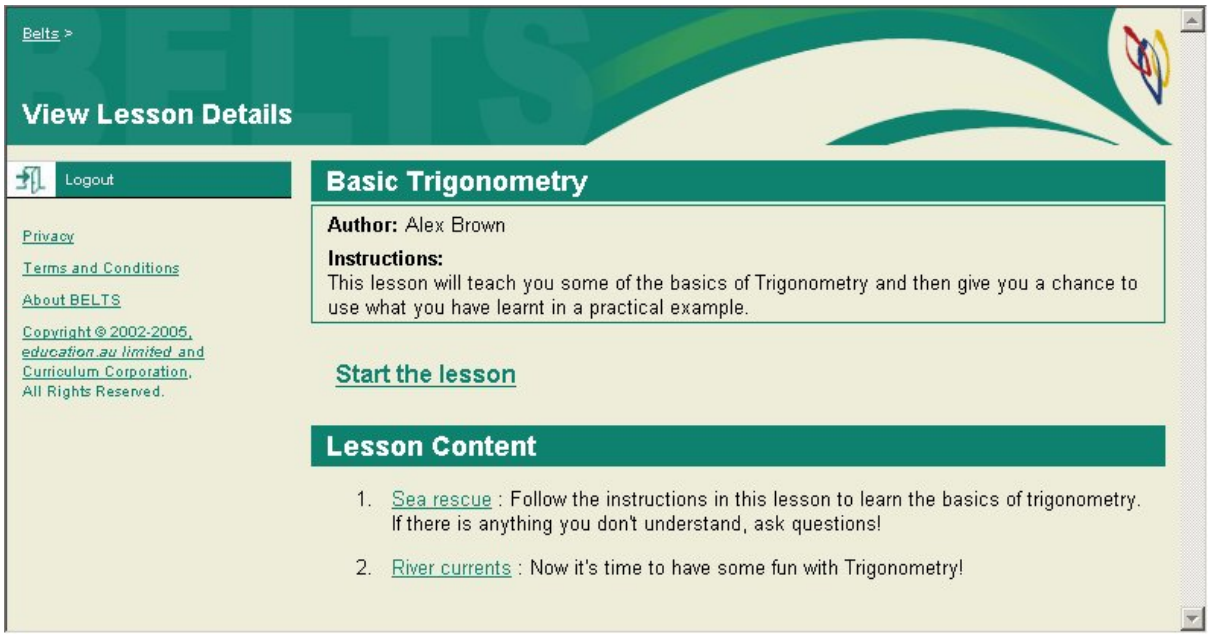

Figure 17.1. Lesson Login Main Screen

17.1.1. Common Functions

Common functions available to the Lesson include:

- Login to BELTS [32]
- Logout from BELTS [32]

17.1.2. Lesson Functions

Lesson functions available to the Lesson include:

- View a Lesson [34]

Part V. BELTS Functions

Chapter 18. BELTS Function Summary

BELTS activities are broken down into a number of functional areas, as listed below.

18.1. Common Functions

Login to BELTS
: In order to use BELTS, you must login. In order to login, you must supply a valid username and password. You should have received an email from your BELTS system when you were registered by your administrator. If you do not have a username and password, please contact your BELTS administrator.

Logout from BELTS
: Logging out of BELTS removes any information about your session in the browser. In order to logout of BELTS, you need to have logged in using the Login to BELTS [32] function.

Change Password
: This function allows you to change your BELTS password.

18.2. Class Management Functions

List Active Classes
: This function allows you to obtain a list of the active classes defined within your system

List Archived Classes
: This function allows you to list the archived classes in your system

Create a Class
: This function allows you to create a new class.

Search for Classes
: This function allows you to search for a class in a list of classes

Edit a Class
: Edit the details for a class. This allows you to update the class name as well as add students or teachers to the class

Activate a Class
: Activating a class makes it and its lessons available for use in the system. This function allows you to activate one or more classes

Deactivate a Class
: Deactivating a class makes it and its lessons unavailable. This function allows you to deactivate one or more classes

18.3. Dependent System Management Functions

List Active Dependent Systems
: This function is used to display the list of active dependent systems.

List Inactive Dependent Systems
: This function is used to display the list of inactive dependent systems.

Create a Dependent System
: Before a dependent system can access content, it needs to be registered with the system. This function is used to create the dependent system and assign it a password.

Edit a Dependent System
: This function is used to edit the details of a dependent system

Search for Dependent Systems
: This function allows the user to search for a particular dependent system and is useful in cases where there are a large number of dependent systems setup.

Activate a Dependent System
: This functions is used to activate a dependent system and allow it to access published content.

Deactivate a Dependent System
: Deactivating a dependent system prevents it from accessing content on this system. This function is used to deactivate one or more dependent systems.

Reset the Password for a Dependent System
: This function is used to reset the password for a dependent system. When the password is updated, an email is sent to the dependent system advising the new password.

Send Email to a Dependent System
: This function allows the user to send an email to the email address associated with a dependent system.

18.4. Content Administration Functions

Browse the XML Cache
: This function is provided to give a BELTS user the opportunity to explore the various XML documents stored for content within the system. This functionality is not required for normal use of BELTS, but may be useful for people wishing to develop further functionality on top of BELTS.

Regenerate XML Cache
: This function is provided as a problem-solving aid in BELTS. It serves to manually regenerate the XML cache created for content as they are made known to the system and may be used if, for some reason, the XML cache is corrupted or out of date.

Retrieve updates from a content provider
: This function allows a BELTS content manager to manually request the latest updates from a content provider, rather than waiting for the next scheduled update. This function is useful, for example, if it is known that new content has been made available upstream and it is desired to access it straight away.

18.5. Lesson Management Functions

List Available Lessons
: The Lesson list provide you with a list of the lessons available to you.

Create a Lesson
: This function allows you to create a lesson. Once created, you can add items to the lesson and assign it to one or more classes.

Edit a Lesson
: This function allows you to edit the contents of a lesson, including its name, the classes it is assigned to and the items that make up the lesson.

Remove a Lesson
: When a lesson is no longer required, it may be removed from the system. This function allows you to remove lessons.

Activate a Lesson
: Activating a lesson makes it available for use by others, either by membership in classes the lesson is assigned to, or by a lesson login. This function allows you to activate a lesson.

Deactivate a Lesson
: Deactivating a lesson makes it unavailable for use by others. This function allows you to deactivate a lesson.

View a Lesson
: This function allows you to view a lesson in its entirety or the individual items in a lesson.

18.6. Repository Management Functions

Browse Repository
: Browsing the repository allows you to scan through all of the learning objects in order to find one that fits your requirements.

Search Repository
: Searching the repository is a good way to find content to match your specific needs, without having to browse through pages of learning objects. This function provides you with a powerful search facility to find the learning objects you are interested in.

Download Content from Repository
: Once content is located in the repository, it needs to be copied into the local store. This function downloads the object from the repository into the local store.

18.7. Content Management Functions

Browse Content
: This function allows you to browse through content to find one suitable for a lesson

Search Content
: Searching content helps you to find something to match your specific needs, without having to browse through many pages. This function provides you with a powerful search facility to find the learning objects you are interested in.

View Content Details
: This function allows you to view detailed information about the content, including information contained in management, educational, technical and rights management metadata held by the object

View Content
: This function allows you to view content. This provides a way for you to determine whether the content meets your needs.

View Related Outcomes
: This function allows you to view the related outcomes for content.

Download Content
: This function allows you to download content to your local machine for viewing outside of the BELTS environment, or for viewing offline.

Publish Content
: Publishing content makes it available for use in lessons. This function handles publishing of content.

Unpublish Content
: Unpublishing content makes it unavailable for use in lessons. This function handles unpublishing of content.

Delete Content
: This function handles deleting content from the local store. Once content is deleted, it is no longer available for use in lessons and must be downloaded again from the repository.

Add Content to a Lesson
: This function is used to add content to an existing lesson.

Create a New Lesson For Content
: This function is used to create a new lesson and add content to it.

Upload Local Content
: This function is used to upload locally developed content to the local BELTS server for use in lessons. Content added in this way must be valid IMS packages.

18.8. School Management Functions

List Active Schools
: This function allows you to view a list of the active schools for your system.

List Archived Schools
: This function allows you to view a list of the archived schools for your system.

Create a School
: This function allows you to create a new school.

Edit a School
: This function allows you to change the details for a school.

Search for Schools
: This function allows you to search for a school in a list of classes

Reinstate a School
: Reinstating a school makes it available again for users to login and create and view lessons. This function allows you to reinstate a school.

Archive a School
: Archiving a school makes it unavailable for users to login and create and view lessons. This function allows you to archive a school.

18.9. User Management Functions

List Active Users
: This function is used to display the list of active users in the system.

List Inactive Users
: This function is used to display the list of inactive users.

Create a User
: Before anyone can access content, they need to be registered with the system. This function is used to create a user.

Edit User
: This function is used to edit the details of a user.

Search for Users
: This function allows you to search for a particular user and is useful in cases where there are a large number of users in the system.

Activate Users
: This functions is used to activate a user and give the user access to the system.

Deactivate Users
: Deactivating users prevents them from accessing content on this system. This function is used to deactivate one or more users.

Reset a Users Password
: This function is used to reset the password for a user. When the password is updated, an email is sent to the user advising the new password.

Send an Email to a User
: This function allows you to send an email to the email address associated with a user.

Glossary

Active	A state that indicates a user, school, dependent system, class or lesson is available in the system.
Activate	The act of making a user, school, dependent system, class or lesson active.
Archive	The act of making a user, school, dependent system or class archived or inactive.
Archived	A state that indicates a user, school, dependent system or class is no longer required.
BELTS	Basic E-Learning Tool Set. A simple set of tools developed to demonstrate the distribution, management and use of learning objects and to aid investigation of requirements for e-learning environments by Australian and New Zealand jurisdictions.
Class	An organising mechanism used for grouping lessons and/or students and teachers.
Content	A physical or digital asset (work or material) intended for communication. Content can be static, dynamic or scripted instructions. Content covers learning objects, resources, files and metadata.
Content Manager	The user role that enables searching and. downloading content from a parent repository and managing the availability of the content to teachers.
Curriculum Organiser	A tool for assisting teachers to locate online content relevant to learning outcomes. The tool is a list of neutral vocabulary terms, used to describe learning objects, which is mapped to the learning outcomes used within a specific jurisdiction.
Deactivate	The act of making a lesson inactive, so that it is no longer available to students.
Discovery	The act of utilising tools and services to search for and retrieve digital assets from (various) sources (e.g. object repositories, databases, metadata search engines).
Element	A fundamental unit of description used by Metadata. Sometimes referred to as a “field” or “attribute”.
File	An actual and identified digital file.
Filter	To select and display items from a list or search according to specified criteria.

Function

A discreet part of the software that enables a user goal to be carried out, such as “Create a User”.

Inactive

A state that indicates a lesson is no longer available for students to access.

Item

A generic description that encompasses files, learning objects, resources and URLs that can be added to a lesson.

Jurisdiction

School education system (State/Territory) or sector (Independent/Catholic) including all Australian States and Territories and New Zealand.

Dependent System

A downstream system in the content distribution chain that will require access to the BELTS repository. This may be another BELTS system.

Exchange

The name of The Le@rning Federation's content system. It provides the central content management facility within which curriculum content can be submitted, stored, managed and distributed. It is the content repository from where all TLF content will be distributed to jurisdictions.

Learning management system (LMS)

An application that is used for managing the organisation of digital content for presentation to students, provide supporting community tools and may include management of student results.

Learning object

A multimedia learning experience related to a particular educational purpose. Learning objects contain files, organisations, metadata, and other learning objects. The files and sub-ordinate learning objects are used to create the multimedia learning experience. An organisation specifies a navigation path through the learning object. A learning object may have many organisations, and hence many possible navigation paths. Metadata is structured information about the learning object supporting management, description of educational purpose, technical interoperability, digital rights management and accessibility.

Learning outcome

A specific learning objective identified within a jurisdiction’s curriculum framework.

Lesson

A sequence of content and instructions that can be used as part of a learning activity.

LORAX

Learning Object Repository Access and eXchange. The SOAP specification that may be used for searching and downloading learning objects and resources from the Exchange.

Metadata

Metadata is structured information about learning objects and files supporting management, description of educational purpose, technical interoperability, digital rights management and accessibility.

Privilege

A permission that allows a user to perform a specific function in the system.

Repository

A distributed and heterogeneous database of content/metadata that supports

	open information retrieval protocols.
Resource	An actual and identified physical or digital file (referenced in Items as part of learning objects or as individual items) that may be used in a learning activity
Role	A set of functions that can be performed by a user within the system.
School Administrator	The user role that enables managing school details and creating and managing users and classes within the school.
SOAP	Simple Object Access Protocol. This is a platform independent protocol for accessing services, objects and servers.
Student	The user role that enables viewing lessons prepared by teachers.
System	The implemented BELTS software, hardware, and infrastructure.
Teacher	The user role that enables discovering and preparing content (using lessons) for presentation to students.
The Le@rning Federation	An initiative of State and Federal governments of Australia and the New Zealand government to develop online curriculum content for Australian and New Zealand schools. This initiative is managed by a joint venture between **education.au limited** and Curriculum Corporation.
User	Any authorised party using the system.

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