



Education and Culture DG

Lifelong Learning Programme



DigiSkills: Network for the  
enhancement of digital  
competence skills

Nº. 531300-LLP-1-2012-1-GR-KA3-KA3NW

## *DigiSkills*

# **D3.1 Methodology on the Development of the DigiSkills Web 2.0 Community**

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<b>PARTNER:</b>	CTI
<b>Authors:</b>	Catherine Christodouloupoulou, Jeries Besharat (CTI)
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## Scope of the Document



DigiSkills is a transnational project which aims to serve as an accelerator of the sharing, adoption, usage and re-purposing of the already rich existing eLearning resources. One of its goals is to demonstrate the potential of eLearning resources to meet the educational and quality needs of SE, HE and AE communities, supported by DigiSkills Inventory. The DigiSkills Inventory is a social platform where teachers, students, parents and other community members will be able to discover, acquire, discuss and adapt eLearning resources on their topics of interest.

The purpose of this document is to describe the technical (**Part I**) and operational specifications (**Part II**) of the DigiSkills Inventory.

The target audience of this document includes the developers of the platform and the partners of the consortium.

## 1 PART A: Technical specifications

The current deliverable is the Use case Analysis of DigiSkills Inventory.

A **use case analysis** is the most common technique used to identify the requirements of a system (in our case with DigiSkills platform) and the information used to both define processes used and classes (which are a collection of actors and processes) which will be used both in the use case diagram and the overall use case in the development of DigiSkills Inventory. The use case analysis is the foundation upon which the platform will be built. The purpose of the current deliverable is to define a piece of behaviour of the platform *without revealing the internal structure* of the platform. The internal structure of the platform is the purpose of the DigiSkills Inventory technical specifications.

To this end, the current deliverable with the technical specifications is the first phase for the creation of the DigiSkills Inventory.

### *Definitions and Acronyms*

**Use Case:** A UML element for capturing the requirements of a system. Each Use Case Element represents a user's goal when interacting with the Platform.

**Actor:** A UML element representing someone or something outside the system that interacts with it. It is important to note that Actors represent “roles” not individuals. In our case we have three types of Actors: **Authenticated User (Core User)**, **Partner Moderator** and **Administrator**

**Use case template:** Each use case will be presented with the usage of a specific use case template with the following fields:

**Title:** The goal of the use case

**Description:** The context of the use case; an expanded version of the “Title” field.

**Primary Actor:** Someone or something outside the system that interacts with it to achieve the goal of this use case.

**Precondition:** The state the system is in before the first event in this use case.

**Postcondition:** The state the system is in after all the events in this use case have taken place.

**Main Success Scenario:** The flow of events from preconditions to postconditions, when nothing goes wrong

**Extensions:** All the other scenarios for this use case – including exceptions and error cases.



**Use Case Diagram:** A UML behaviour diagram that visually describes the functional requirements of a proposed system and shows the relationships between Actors and Use Cases.

Actor is represented as



Use case is represents as



Connection among use cases are represented with  (“use” means this use-case makes use of another use-case) and with  (“extends” means that this use-case is a specialization of another use case)

## 1.1 Use case analysis Actor: Core User -CU

Core user is the main Actor of the platform.

### List of use case for the Core User (CU)

<i>Use Case ID</i>	<i>Use case NAME</i>	<i>Main Actor</i>
1	Register to the platform	Core user -CU
2	Log in to the platform	Core user
3	Use the forum	Core user
4	Create a new forum topic	Core user
5	Use the blog	Core user
6	Create a new blog entry	Core user
7	Use the wiki	Core user
8	Create a new wiki page	Core user
9	Use Best Practices	Core user
10	Use my group	Core user
11	Invite a friend	Core user
12	Use social networking	Core user
13	Use “my account”	Core user
14	Use the search tool	Core user
15	Use the “message”	Core user

### Use case scenarios for the Core User (CU)

<b>ID:</b>	1
<b>Title:</b>	<b>Create an account for the platform</b>
<b>Description:</b>	CU has access to DigiSkills Inventory and creates an account and then chooses the language
<b>Primary Actor:</b>	Core user -CU
<b>Preconditions:</b>	n/a
<b>Postconditions:</b>	CU is registered to the platform
<b>Main Success Scenario:</b>	<ol style="list-style-type: none"> <li>1. CU accesses DigiSkills Inventory</li> <li>2. CU chooses the option “create account”</li> <li>3. Platform displays a tab in which CU has to give a “username” and his/her “e-mail address”</li> <li>4. CU fills the requested fields and press “create new account”</li> <li>5. Platform displays a message “A welcome message with further instructions has been sent to your e-mail address.”</li> <li>6. CU receives an email with a link and with instructions.</li> <li>7. CU clicks the link</li> <li>8. Platform displays a page with the following fields that CU has to fill:</li> </ol>



	<p>a) <b>Name</b></p> <p>b) <b>Language settings</b> (preferred language for site presentation)</p> <p>c) <b>Picture</b> (upload your picture)</p> <p>d) <b>City</b></p> <p>e) <b>Country</b></p> <p>f) <b>Password</b></p> <p>g) <b>Confirm password</b></p> <p>h) <b>Contact setting</b></p> <p>i) <b>Locale settings</b></p> <p>j) <b>Activity setting</b></p> <p>9. CU fills the required fields and press the SAVE button</p> <p>10. Platform displays a message that CU has logged in</p>
<b>Extensions:</b>	<p>3a CU will receive an error message “invalid username and/or password” followed by explanations and instructions</p> <p>---3a1CU will follow the instructions and repeats the registration process</p>

<b>ID:</b>	2
<b>Title:</b>	<b>Log in to the platform</b>
<b>Description:</b>	CU logs in to the platform
<b>Primary Actor:</b>	Core user -CU
<b>Preconditions:</b>	CU has created an account
<b>Postconditions:</b>	CU is logged in
<b>Main Success Scenario:</b>	<ol style="list-style-type: none"> <li>1. CU accesses DigiSkills Inventory</li> <li>2. CU gives his/her username and password</li> <li>3. Platform redirects CU to his/her preferred language page</li> </ol>
<b>Extensions:</b>	<p>2a CU will receive an error message “Sorry, unrecognized username or password”</p> <p>---2a1 CU will fill again his/her username and password or he/she requests a new password</p>

<b>ID:</b>	3
<b>Title:</b>	<b>Use the forum</b>
<b>Description:</b>	CU has access to DigiSkills Inventory and is able to see all forum topics and the last post
<b>Primary Actor:</b>	CU
<b>Preconditions:</b>	CU is logged into system
<b>Postconditions:</b>	CU participates to a topic discussion and /or creates a new topic
<b>Main Success Scenario:</b>	<ol style="list-style-type: none"> <li>1. CU accesses DigiSkills Inventory</li> <li>2. CU selects “forum” from the menu</li> <li>3. Platform displays a list with the <i>available forum, available</i></li> </ol>



	<p><i>topics, replies</i> and <i>last post</i> per topic</p> <ol style="list-style-type: none"> <li>4. CU choose the forums that prefers</li> <li>5. Platform displays a table with the topics, the posts and the previous posts</li> <li>6. CU navigates through all available topics and reads all available posts</li> </ol>
<b>Extensions:</b>	n/a

<b>ID:</b>	4
<b>Title:</b>	<b>Create a new forum topic</b>
<b>Description:</b>	CU starts a new discussion treat within forum
<b>Primary Actor:</b>	CU
<b>Preconditions:</b>	CU is logged into system
<b>Postconditions:</b>	CU has started a new discussion treat within forum
<b>Main Success Scenario:</b>	<ol style="list-style-type: none"> <li>1. CU chooses the option “add content”</li> <li>2. Platform displays a list with the offered categories</li> <li>3. CU chooses the category <i>forum</i></li> <li>4. Platform displays a form with the required fields that have to be filled</li> <li>5. CU fills the required fields             <ol style="list-style-type: none"> <li>a. He/she writes the <i>subject</i>,</li> <li>b. He/she chooses the <i>language</i></li> <li>c. He/she selects the <i>forum</i> in which the new topic will be appeared</li> <li>d. He/she writes in the <i>Body</i> text area</li> <li>e. He/she uploads a file (optional)</li> </ol> </li> <li>6. CU ticks the option “bookmark this”</li> <li>7. CU chooses preview</li> <li>8. Platform displays the preview version of the created forum</li> <li>9. CU press “save”</li> </ol>
<b>Extensions:</b>	n/a

<b>ID:</b>	5
<b>Title:</b>	<b>Use the blog</b>
<b>Description:</b>	CU accesses the blog section
<b>Primary Actor:</b>	CU
<b>Preconditions:</b>	CU is logged into system
<b>Postconditions:</b>	CU is able to see all the blogposts
<b>Main Success Scenario:</b>	<ol style="list-style-type: none"> <li>1. CU has access to DigiSkills Inventory</li> <li>2. CU chooses the tad <b>Blogs</b></li> <li>3. Platform displays a list with the available blogs</li> </ol>



	<ol style="list-style-type: none"> <li>4. CU choose the blog that prefers</li> <li>5. CU chooses to upload a post to his/her selected blog</li> <li>6. Platform displays the section “<i>add new comment</i>”</li> <li>7. CU fills the section “<i>subject</i>”</li> <li>8. CU writes his/her comment</li> <li>9. CU press “<i>save</i>”</li> <li>10. Platform displays CU comment</li> </ol>
<b>Extensions:</b>	n/a

<b>ID:</b>	6
<b>Title:</b>	<b>Create a new blog</b>
<b>Description:</b>	CU get his/her personal blog
<b>Primary Actor:</b>	CU
<b>Preconditions:</b>	CU is logged into system
<b>Postconditions:</b>	CU has his/her personal blog
<b>Main Success Scenario:</b>	<ol style="list-style-type: none"> <li>1. CU has access to DigiSkills Inventory</li> <li>2. CU chooses the option “<i>add content</i>”</li> <li>3. Platform displays a list with the offered categories</li> <li>4. CU chooses the category <b>Blog entry</b></li> <li>5. Platform displays a form with the required fields that have to be filled</li> <li>6. CU fills the required fields (<i>title, image, body text, language, upload a file</i>)</li> <li>7. CU ticks the option “bookmark this</li> <li>8. CU chooses preview</li> <li>9. Platform displays the preview version of the created Blog</li> <li>10. CU press “save”</li> </ol>
<b>Extensions:</b>	n/a

<b>ID:</b>	7
<b>Title:</b>	<b>Use the wiki</b>
<b>Description:</b>	CU accesses the wiki section
<b>Primary Actor:</b>	CU
<b>Preconditions:</b>	CU is logged into system
<b>Postconditions:</b>	CU is able to see all the existing wikis
<b>Main Success Scenario:</b>	<ol style="list-style-type: none"> <li>1. CU has access to DigiSkills Inventory</li> <li>2. CU chooses the tab <b>Wiki</b></li> <li>3. Platform displays a list with the available wikis</li> <li>4. CU choose the wiki that prefers</li> <li>5. CU chooses to edit his/her selected wiki</li> </ol>
<b>Extensions:</b>	n/a

<b>ID:</b>	8
<b>Title:</b>	<b>Create a wiki page</b>
<b>Description:</b>	CU accesses the wiki pages section and creates a wiki page
<b>Primary Actor:</b>	CU
<b>Preconditions:</b>	CU is logged into system
<b>Postconditions:</b>	CU has created a wiki page
<b>Main Success Scenario:</b>	<ol style="list-style-type: none"> <li>1. CU has access to DigiSkills Inventory</li> <li>2. CU chooses the tab <b>Wiki pages</b></li> <li>3. Platform displays the start page of the wiki pages</li> <li>4. CU clicks on “<b>start new page</b>”</li> <li>5. Platform displays a screen with the requested fields</li> <li>6. CU enters a <b>title</b> to the wiki page <ol style="list-style-type: none"> <li>a. CU writes a <b>summary</b></li> <li>b. CU writes in the <b>Body section</b> the wiki content</li> <li>c. CU chooses the <b>language</b></li> <li>d. CU fills the <b>tag</b> field</li> </ol> </li> <li>7. CU chooses “preview”</li> <li>8. Platform displays the preview version of the created wiki page</li> <li>9. CU press “save”</li> </ol>
<b>Extensions:</b>	6a Platform displays a wrong message “A page with this name already exists.) ---6a1 CU changes the title of the wiki page and press “save”

<b>ID:</b>	9
<b>Title:</b>	<b>Use Best Practices</b>
<b>Description:</b>	CU accesses the Best Practices tab and views the available best practices
<b>Primary Actor:</b>	CU
<b>Preconditions:</b>	CU is logged into system
<b>Postconditions:</b>	CU navigates the Best Practices section
<b>Main Success Scenario:</b>	<ol style="list-style-type: none"> <li>1. CU has access to DigiSkills Inventory</li> <li>2. CU selects the tab “<b>Best Practices</b>”</li> <li>3. Platform displays a table with the available descriptions of best practices</li> <li>4. CU can select any best practice</li> <li>5. Platform displays the chosen best practice with its attributes</li> </ol>
<b>Extensions:</b>	n/a
<b>Extensions:</b>	n/a



<b>ID:</b>	10
<b>Title:</b>	<b>Use my Group</b>
<b>Description:</b>	CU can create groups and see all the public articles and best practices
<b>Primary Actor:</b>	CU
<b>Preconditions:</b>	CU is logged into system
<b>Postconditions:</b>	CU will has his/her own group (s)
<b>Main Success Scenario:</b>	<ol style="list-style-type: none"> <li>1. CU accesses the DigiSkills Inventory</li> <li>2. CU chooses the option “<b>add content</b>”</li> <li>3. Platform displays a list with the offered categories</li> <li>4. CU chooses the category <b>My Group</b></li> <li>5. Platform displays a form with the required fields that have to be filled entitle “<i>Create Group</i>”</li> <li>6. CU fills the required fields               <ol style="list-style-type: none"> <li>a. CU enters a <b>title</b> for the group</li> <li>b. CU writes in the <b>Body</b> field</li> <li>c. CU chooses the <b>language</b></li> </ol> </li> <li>7. CU chooses preview</li> <li>8. Platform displays the preview version of the created Group</li> <li>9. CU press “save”</li> <li>10. Platform send an e-mail to CU informing that he/she has created a group</li> <li>11. CU opens his Group</li> <li>12. Platform displays the initial page of the group with the following tabs “View”, “edit” “Group”</li> <li>13. CU selects the tab “View”</li> <li>14. Platform displays the content of the group, the related articles and the members of the group</li> <li>15. CU selects the tab “Edit”</li> <li>16. Platform displays the field that CU can edit (title, language, content)</li> <li>17. CU selects the tad “Group”</li> <li>18. Platform displays the options “Add people (Add group members)”, People (Manage the group members), Roles (View the group roles) Permissions (View the group permissions)</li> </ol>
<b>Extensions:</b>	n/a

<b>ID:</b>	11
<b>Title:</b>	<b>Invite a friend</b>
<b>Description:</b>	CU can invite another user as his/her friend
<b>Primary Actor:</b>	CU

<b>Preconditions:</b>	CU is logged into system
<b>Postconditions:</b>	CU has invited a friend
<b>Main Success Scenario:</b>	<ol style="list-style-type: none"> <li>1. CU has access to DigiSkills Inventory</li> <li>2. CU chooses the option “invite a friend”</li> <li>3. Platform displays a screen with the required fields that has to be filled by CU</li> <li>4. CU fills the required fields CU enters the <b>e-mail address</b> of the person he/she wants to invite CU writes a <b>message</b> CU press “<b>send invite in e-mail</b>”</li> <li>5. Platform displays a confirmation message</li> </ol>
<b>Extensions:</b>	n/a

<b>ID:</b>	12
<b>Title:</b>	<b>Use social networking</b>
<b>Description:</b>	CU can view his recent activities as well as the recent activities of his/her friends
<b>Primary Actor:</b>	CU
<b>Preconditions:</b>	CU is logged into system
<b>Postconditions:</b>	CU uses social networking
<b>Main Success Scenario:</b>	<ol style="list-style-type: none"> <li>1. CU has access to the DigiSkills Inventory</li> <li>2. CU chooses the tab “social networking”</li> <li>3. Platform displays the main social network page</li> <li>4. CU writes his/her messages and presses “share”</li> <li>5. CU sees his recent activities and the recent activities of his/her friends</li> </ol>
<b>Extensions:</b>	n/a

<b>ID:</b>	13
<b>Title:</b>	<b>Use my account</b>
<b>Description:</b>	CU can edit his/her account, view a summary of his/her actions in the platform, view his/her bookmarks, his/her relationships with other platform’ members, his/her subscriptions and his/her activity
<b>Primary Actor:</b>	CU
<b>Preconditions:</b>	CU is logged into system
<b>Postconditions:</b>	CU has viewed and modifies several parameters of his account
<b>Main Success Scenario:</b>	<ol style="list-style-type: none"> <li>1. CU has access to the DigiSkills Inventory</li> <li>2. CU chooses the option “<b>my account</b>”</li> <li>3. Platform displays the initial page with the following tabs: “<b>View</b>”, “<b>Bookmarks</b>”, “<b>Edit</b>”, “<b>Relationships</b>”,</li> </ol>



*“Subscriptions”, “Activity from all groups”, “User activity”, “User relations activity”*

4. CU chooses the tab **“View”**
5. Platform displays:
  - a. A field entitled “messages” with the button “share”
  - b. A list with CU’s comments
  - c. A summary of CU **actions** (follow, Groups audience)
  - d. A summary of CU **history** ( view recent blog entries)
6. CU chooses the tab **“bookmark”**
7. Platform displays a field entitled a list with the bookmarked blogs and forum of CU with the following information
  - a. **Type**
  - b. **Title**
  - c. **Author**
  - d. **Replies**
  - e. **Last pos**
8. CU chooses the tab “Edit”
9. Platform displays a screen with the fields that CU can edit:
  - a. **Name**
  - b. **Language settings**
  - c. **CU picture**
  - d. **City**
  - e. **Country**
  - f. **Password**
  - g. **e-mail address**
  - h. **Contact settings**
  - i. **Private messages**
  - j. **Local settings**
  - k. **Activity settings**
10. CU chooses the tab **“Relationships”**
11. Platform displays a list with:
  - a. CU’s current relationships
  - b. CU’s received requests
  - c. CU’s friends requests
  - d. CU’s friends
12. CU chooses the tab “Subscriptions”
13. Platform displays a screen with:

overview, pages/thread, types of material  
Settings (auto- subscribe, Preferences, visibility of controls)
14. CU chooses the tab “Activity from all groups”
15. Platform displays a screen with a summary of the activity of CU; group members
16. CU chooses the tab “User activity”
17. Platform displays a screen with a summary of CU activity
18. CU chooses the tab “User relations activity”
19. Platform displays a screen with a summary of the activities of CU’s relationship

<b>Extensions:</b>	n/a
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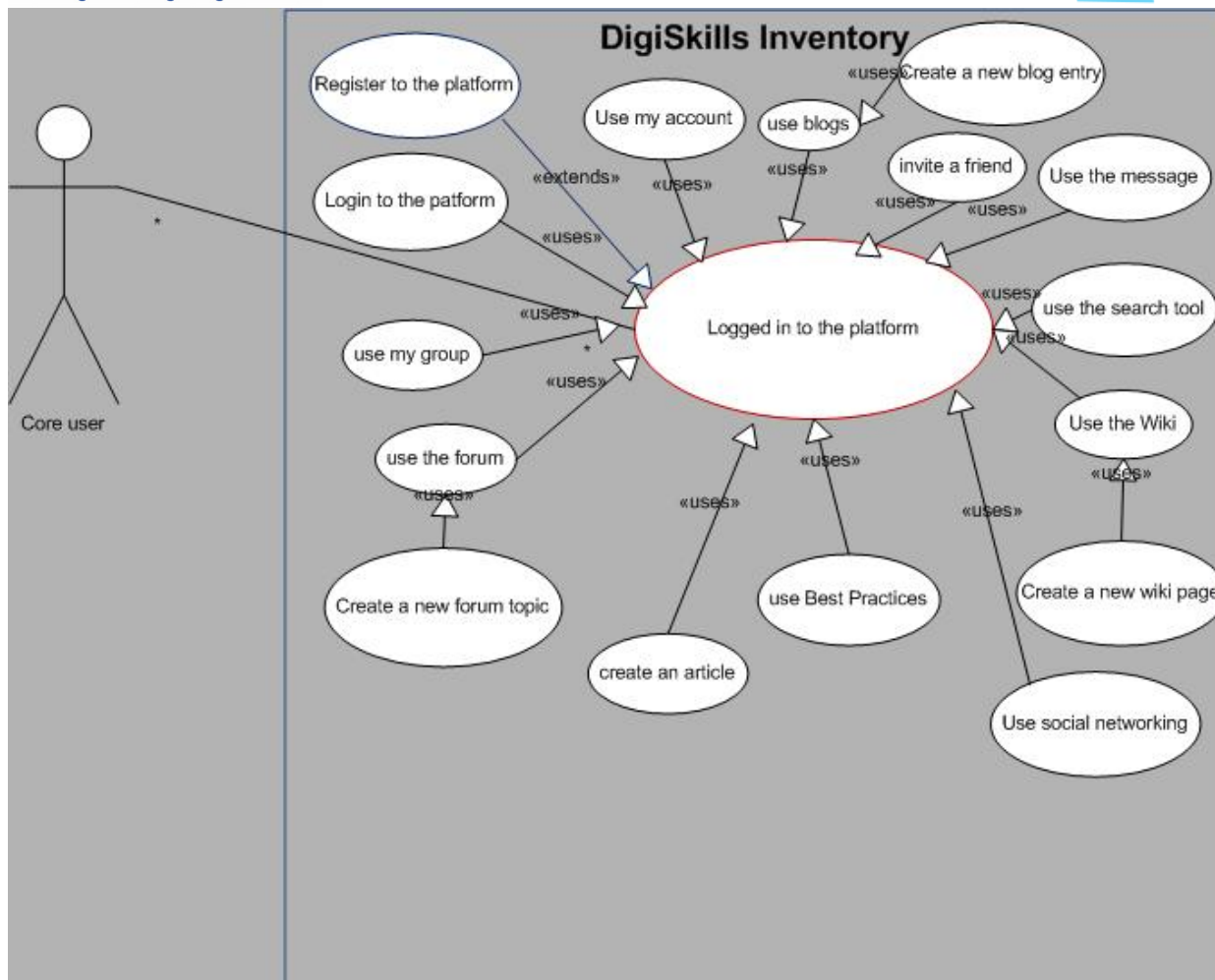
<b>ID:</b>	14
<b>Title:</b>	<b>Use the search tool</b>
<b>Description:</b>	CU can search for any related information through the search application
<b>Primary Actor:</b>	CU
<b>Preconditions:</b>	CU is logged into system
<b>Postconditions:</b>	CU has search needed information
<b>Main Success Scenario:</b>	<ol style="list-style-type: none"> <li>1. CU has access to the DigiSkills Inventory</li> <li>2. There will be various filters for searching. Indicative filters i.e.:             <ol style="list-style-type: none"> <li>2a. Keywords</li> <li>2b. Any word</li> <li>2c. Any phrase</li> <li>2d. Without including specific word/s</li> <li>2e. Based on the type of content                 <ul style="list-style-type: none"> <li>○ Best practice</li> <li>○ Forum</li> <li>○ Blog</li> <li>○ Wiki</li> </ul> </li> <li>2f. Based on the language</li> </ol> </li> <li>3. Platform displays the results of searching</li> </ol>
<b>Extensions:</b>	n/a

<b>ID:</b>	15
<b>Title:</b>	<b>Use the “message”</b>
<b>Description:</b>	CU accesses the platform and send messages to others platform users
<b>Primary Actor:</b>	CU
<b>Preconditions:</b>	CU is logged into system
<b>Postconditions:</b>	CU participates to a topic discussion and /or creates a new topic
<b>Main Success Scenario:</b>	<ol style="list-style-type: none"> <li>1. CU accesses the platform</li> <li>2. CU selects “<i>message</i>” from the menu</li> <li>3. Platform displays a list with the messages CU has sent (subject, participants, last update)</li> <li>4. CU chooses the option “write new message”</li> <li>5. Platform displays a screen with the fields that have to be filled by CU</li> <li>6. CU fills the required fields:             <ol style="list-style-type: none"> <li>a. CU enters the <b>name</b> of the platform member</li> </ol> </li> </ol>

	<ul style="list-style-type: none"> <li>b. CU writes the <b>subject</b> of the message</li> <li>c. CU write the <b>message</b></li> </ul> <ul style="list-style-type: none"> <li>7. CU presses the “send message” button</li> <li>8. Platform displays a confirmation message</li> </ul>
<b>Extensions:</b>	<ul style="list-style-type: none"> <li>7a Platform displays an error message “please give a valid user”</li> <li>---7a1 CU has to correct the name and to give a name of a platform registered user</li> </ul>

### Use case Diagram for the Core User (CU)





## 1.2 Use case analysis Actor: Partner Moderator- PM

Partner Moderator reacts to the platform in the same way with Core User but Partner Moderatos has one additional uses case.

### List of use case for the Partner Moderator (PM)

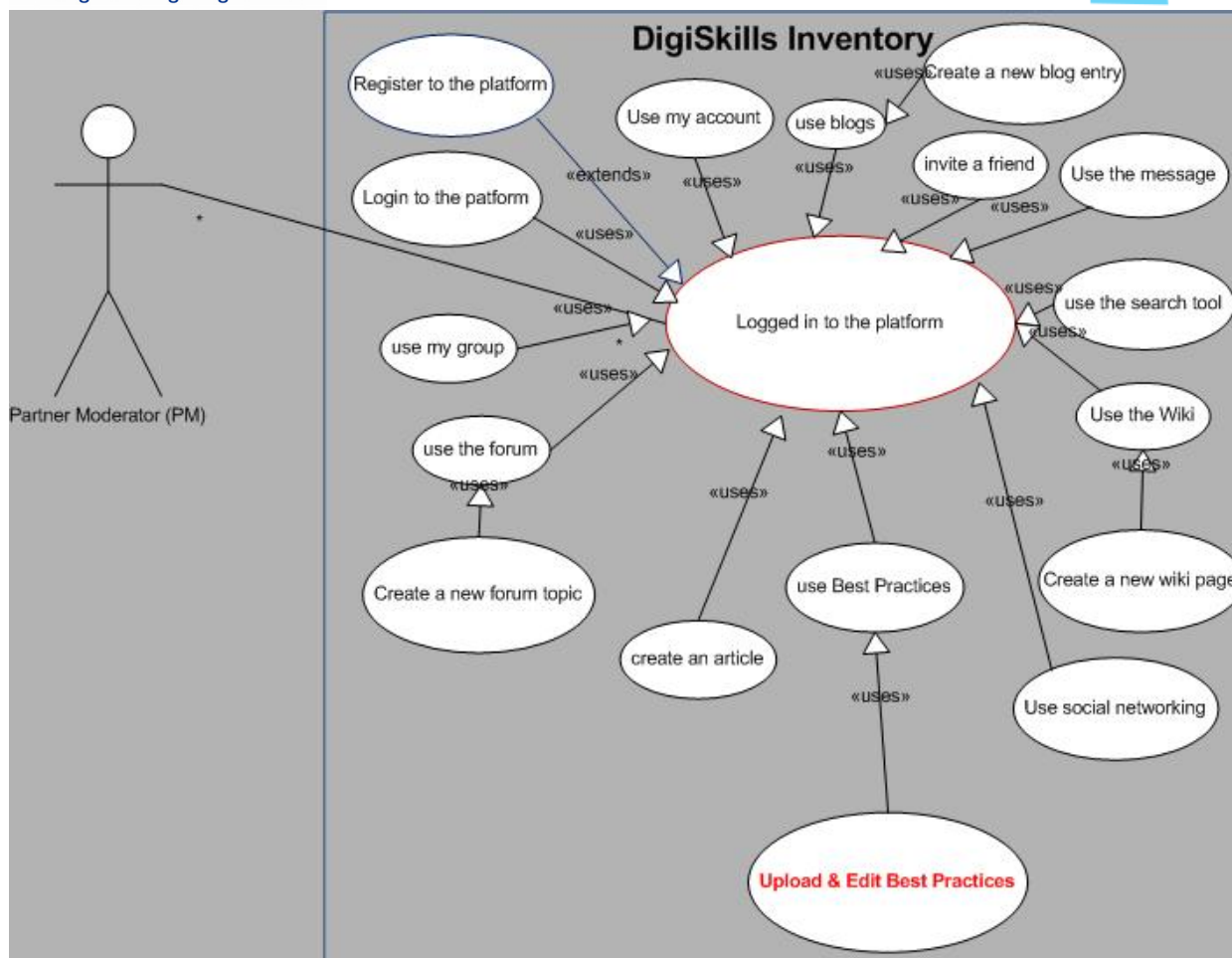
Use Case ID	Use case NAME	Main Actor
16	Upload and Edit the Best Practices	Partner Moderator -PM

### Use case scenarios for the Partner Moderator (PM)

<b>ID:</b>	Use case 16
<b>Title:</b>	Upload and Edit the Best Practices
<b>Description:</b>	PM accesses the Best Practice tab, upload new best practice and edit

	the available best practices
<b>Primary Actor:</b>	PM
<b>Preconditions:</b>	PM is logged into the DigiSkills Inventory (as PM)
<b>Postconditions:</b>	PM has edited the uploaded best practices
<b>Main Success Scenario:</b>	<ol style="list-style-type: none"> <li>1. PM selects the tab “<b>Best Practices</b>”</li> <li>2. Platform displays a table with the available best practices</li> <li>3. CU selects the option “Upload a Best Practice”</li> <li>4. Platform displays a screen with the requested fields</li> <li>5. CU fills the requested fields (as arisen from WP2 template-necessary and optional fields for uploading a BP based on LOM):</li> <li>6. CU writes the title of the best practice</li> <li>7. CU fills the author of the best practice</li> <li>8. CU writes keywords relative with the best practice</li> <li>9. CU uploads an image (optional)</li> <li>10. CU attaches a file(optional)</li> <li>11. CU uploads a video (optional)</li> <li>12. Etc (depends on the LOM and Dublin Core attributes)</li> <li>13. CU chooses “preview”</li> <li>14. Platform displays the preview version of the created best practice</li> <li>15. CU press “Save”</li> <li>16. PM selects an existing best practice</li> <li>17. Platform displays a screen with the selected Best Practice with two tabs “View” &amp; “Edit”</li> <li>18. PM selects the tab “Edit”</li> <li>19. Platform displays a screen with the fields that PM can edit:</li> <li>20. Title</li> <li>21. Language</li> <li>22. Body (edit summary)</li> <li>23. PM edits the fields he/she wants</li> <li>24. PM chooses “preview”</li> <li>25. Platform displays the preview version of the edited Best Practice</li> <li>26. PM press the “save” button</li> </ol>
<b>Extensions:</b>	n/a

**Use case diagram for the Partner Moderator (PM)**



### 1.3 Use case analysis Actor: Administrator- AD

Administrator has full access to the platform in relation with the uses cases of the pre-mentioned Actors Administrator has three additional use cases in term of Partner Moderator

#### List of use case for the Administrator (AD)

Use Case ID	Use case NAME	Main Actor
17	Create basic pages	Administrator
18	Create FAQ	Administrator
19	Create forum categories	Administrator

#### Use case scenarios for the Administrator (AD)

<b>ID:</b>	Use case 17
<b>Title:</b>	Create basic pages
<b>Description:</b>	Administrator – AD adds basic pages with static content in the platform
<b>Primary Actor:</b>	AD



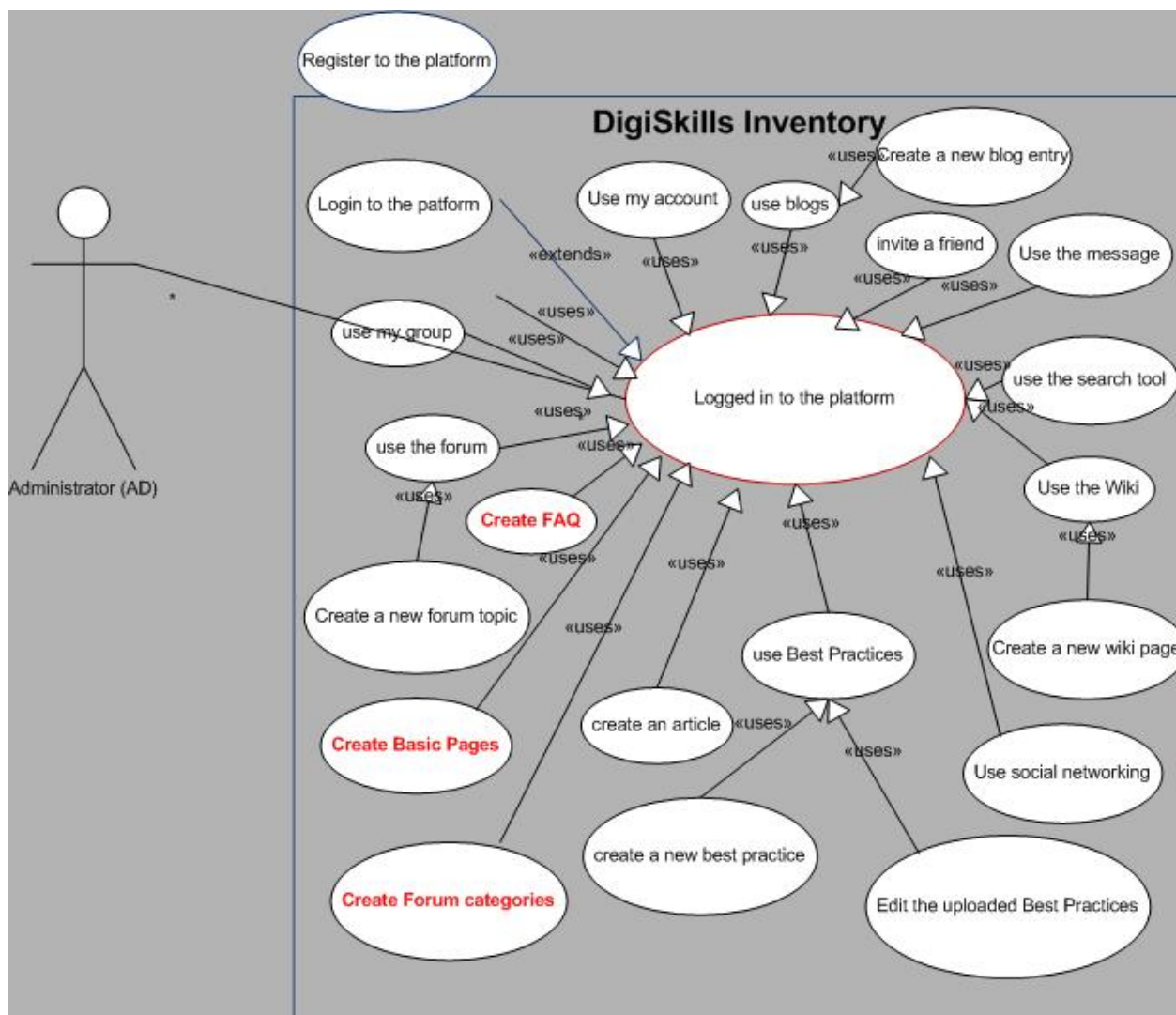
<b>Preconditions:</b>	AD is logged into DigiSkills Inventory
<b>Postconditions:</b>	AD has created a static content page to the platform
<b>Main Success Scenario:</b>	<ol style="list-style-type: none"> <li>1. AD chooses the option “Add content”</li> <li>2. Platform displays a list with the offered categories</li> <li>3. AD chooses the category “Basic Pages”</li> <li>4. Platform displays a form with the required fields that have to be filled :               <ol style="list-style-type: none"> <li>a. <b>Title</b></li> <li>b. <b>Body text</b></li> <li>c. <b>Language</b></li> <li>d. <b>Provide a menu link</b></li> </ol> </li> <li>5. AD fills the required fields (title, body text, language) and ticks the option “provide a menu link”</li> <li>6. AD chooses preview</li> <li>7. Platform displays the preview version of the created basic page</li> <li>8. AD press “save”</li> </ol>
<b>Extensions:</b>	n/a

<b>ID:</b>	Use case 18
<b>Title:</b>	Add questions and their answers to the section FAQ
<b>Description:</b>	AD adds a question with its answer to the section Frequently Asked Questions (FAQ)
<b>Primary Actor:</b>	AD
<b>Preconditions:</b>	AD is logged into DigiSkills Inventory
<b>Postconditions:</b>	AD has posted an question and its answer to the section FAQ
<b>Main Success Scenario:</b>	<ol style="list-style-type: none"> <li>1. AD chooses the option “Add content”</li> <li>2. Platform displays a list with the offered categories</li> <li>3. AD chooses the category FAQ</li> <li>4. Platform displays a form with the required fields that have to be filled               <ol style="list-style-type: none"> <li>a. <b>Question</b></li> <li>b. <b>Question details</b></li> <li>c. <b>Body text</b></li> <li>d. <b>Choose language</b></li> </ol> </li> <li>5. AD fills the required fields</li> <li>6. AD chooses “preview”</li> <li>7. Platform displays the preview version of the created FAQ</li> <li>8. AD press “save”</li> </ol>
<b>Extensions:</b>	n/a

<b>ID:</b>	Use case 19
<b>Title:</b>	Create forum categories

<b>Description:</b>	AD adds a new forum to the “Forum” section
<b>Primary Actor:</b>	AD
<b>Preconditions:</b>	AD is logged into DigiSkills Inventory
<b>Postconditions:</b>	AD has added a new forum to the “Forum” section
<b>Main Success Scenario:</b>	<ol style="list-style-type: none"> <li>1. AD chooses the option “structure” (available only to AD)</li> <li>2. Platform displays a list with the offered categories</li> <li>3. AD chooses the category “Forum”</li> <li>4. Platform displays a form with the required fields that have to be filled <ol style="list-style-type: none"> <li>a. <b>Forum name</b></li> <li>b. <b>Description</b> (Description and guidelines for discussions within this forum)</li> <li>c. <b>Placement of the Forum</b> (at the top (root) level, or inside another container or forum.)</li> </ol> </li> <li>5. AD fills the required fields</li> <li>6. AD chooses “preview”</li> <li>7. Platform displays the preview version of the created forum</li> <li>8. AD press “save”</li> </ol>
<b>Extensions:</b>	n/a

**Use case diagram for the Administrator (AD)**



## 2 PART B: Operational Specifications

The DigiSkills Inventory will be implemented in order to allow users to register to it and interact. Users will be connected to the platform and will be allowed to develop relationships, sending friendship requests and exchange messages.

The platform will allow registered users to create their own material, articles and share it to the others authenticated users. Also, users will have the ability to connect with other social networks like Facebook and Twitter without leaving the platform and share their material in these social networks too.

Users can create their own group which will moderate. Groups can be small communities as only accepted members of the group will have access to it.

### *Definitions, Acronyms*

Drupal CMS            Drupal Content Management System

Module                Extend and customize platform functionality

### 2.1 DigiSkills Inventory

DigiSkills Inventory is a social networking platform through which users from different countries will be able to create accounts and then communicate with each other.

On the platform there will be several roles that will have different permissions. Three of the basic roles will be the

- authenticated users (or core users),
- partners' moderators and
- administrators

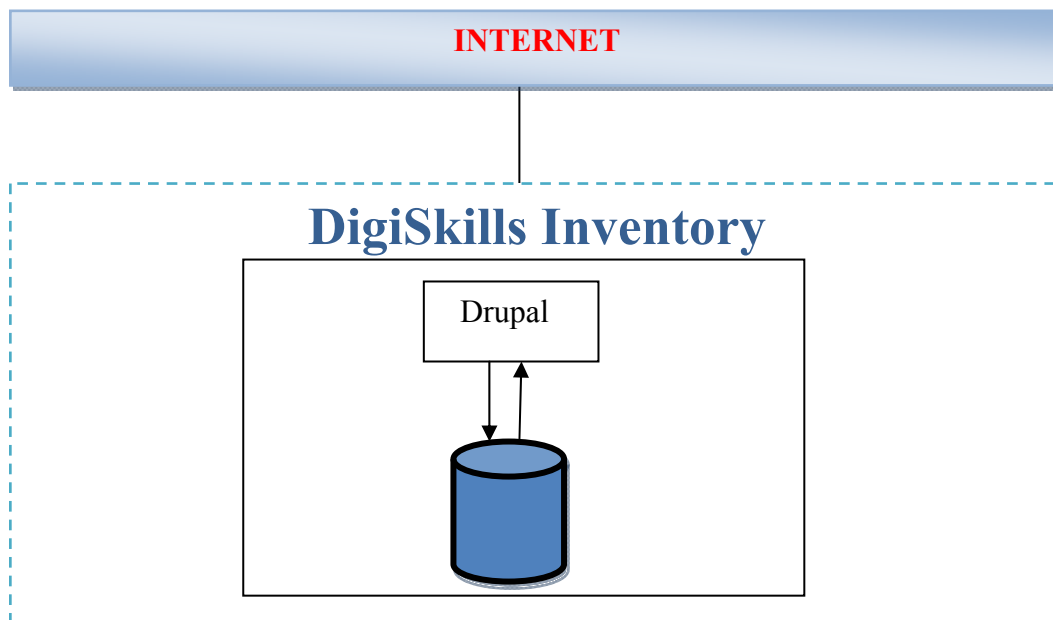
The *authenticated users*, is the role with the fewer permissions while the *administrators* will have all the permissions to administer the platform and manage the user generated content. *Partner Moderator* is a role which lies between the two previous and will have permissions that will allow him to manage specific content of the platform.

### 2.2 Technical Specifications

#### 2.2.1 System Interface



DigiSkills Inventory is a stand-alone platform that can be installed on a server.



DigiSkills Inventory will be implemented using Drupal. Drupal is an open source content management system. Current version of Drupal is 7.17. For the purpose of this project and the main functionality of the platform, the following modules will be installed:

Statuses. Contains functions and provides the basic features to develop a Social Network.

FAQ. Enables users to create questions and answers section.

User Relationships. It enables users to connect with each other by sending requests and creating relationships (such as friends).

Media. Users will be able to upload and share multimedia content such as videos and music.

Organic Groups. Provides the basic functionality for creating, organizing and moderating groups.

Heartbeat. Logs and displays recent user activity on the platform. Useful for the social network functionality.

Subscriptions. Provides the option to the users to select for which content to be notified by email when created to the platform.

Drupal Chat. Provides instant messaging functionality between users.

Wikitools. Useful for the better functioning of Wiki content.

Messages. Enable users to send private messages to each other.

Invite. Users can invite others or their friend by email to become DigiSkills users.

## 2.2.2 User Interface

DigiSkills Inventory detects user's native language and shows the interface and the content of the platform. The interface according to the role of the user and his permissions will provide different options. Interface will also be provided for the administration of the database.



### 2.2.3 Hardware Interface

The platform will be available on any personal computer that has internet access.

### 2.2.4 Software Interface

For better functioning of the platform, a Server environment must be setup. The environment must include Apache, MySQL, and PHP. These are needed in order DigiSkills Inventory can operate. It will also need to be installed Java 6 environment for the operation of the platform Lams.

#### **Server Environment:**

- Ubuntu Server 12.04
- PHP 5.3.2+
- MySQL Server 5.5.8
- Drupal 7.17
- Java 6

### 2.2.5 Communication Interface

The DigiSkills Inventory communicates with the Server via TCP / IP connection.

### 2.2.6 Memory limitations

There are no specific limitations regarding the memory usage.

## 2.3 *DigiSkills Inventory functionalities*

The platform will provide two different menus. The basic menu where all users can use in order to navigate to the main functionalities and the secondary menu where users can use to navigate to secondary functionalities and personalized pages such as the user's profile page.

Specifically, the main menu consists of the following items:

**Home:** This is the front page of the platform. This page will display updated content every time something new is created.

**Wiki pages:** The wiki section of the platform where users can read existing content and create new pages.

**Blogs:** The Blogs menu item will show a list of the users' blogs articles.

**Social Network:** Users can have statuses and update them so their friends can see what they are up to. By navigating to the social network section users can interact with their friends or make new ones.

**Forums:** This section provides discussion in many topics. Users can ask questions and get information depending on the matter they have.

**Best Practices:** Best Practices is the section where users can have access to the practices that will be uploaded. This section provides a list with fields (necessary and optional) that should be filled in order to upload a best practice. The fields will be defined according to learning resources standards like IEEE Learning Object Metadata (LOM) and Dublin Core (DC).

Title	Updated
<a href="#">Best Practice #1</a>	5 days 2 hours
<a href="#">Best Practice #2</a>	1 week 3 days
<a href="#">Best Practice #3</a>	1 week 3 days
<a href="#">Best Practice #4</a>	5 days 2 hours
<a href="#">Best Practice #5</a>	6 days 2 hours

## Content create links

- [Best Practice](#)

**Figure 2 Create new Best Practice**

The User menu will provide the following links:

**My Account:** Users can view or edit their profile in this page.

**Add content:** In order to create new content as described below.

**Invite a friend:** Users can send mail notifications to others and invite them to register to the platform.

**Messages:** This section shows the messages users exchange with each other. Users can send new messages or browse their inbox. These messages are private for each user.

**My Groups:** Users can view a list with the groups they have created and they are members, so they can navigate to them quickly.

**Log out:** Disconnects user from the platform.

The main functions of the system will allow users to register and sign in to the platform, exchange messages public or private with other users, create and share new content, distribute best practices in the platform. In order to do these actions the user should use any of the known Internet browser software.

The functions of the platform are presented below:

### 2.4 User account

The user will register to the platform by filling his personal details in the registration form that will be provided.

## User account

[Create new account](#) [Log in](#) [Request new password](#)

**Username \***  
  
Spaces are allowed; punctuation is not allowed except for periods, hyphens, apostrophes, and underscores.

**E-mail address \***  
  
A valid e-mail address. All e-mails from the system will be sent to this address. The e-mail address is not made public and will only be used if you wish to receive a new password or wish to receive certain news or notifications by e-mail.

**Locale settings**  
Your time zone setting will be automatically detected if possible. Confirm the selection and click save.

**Time zone**  
  
Select the desired local time and time zone. Dates and times throughout this site will be displayed using this time zone.

**Skype ID**

**Gender**

**Birthday**

**Icq number**

**AOL Instant Messenger**

**Yahoo Messenger**

**Figure 3 Create new user**

The users then will receive an email confirmation from the platform which will inform them that the registration process is successful. The users will have the ability to sign in and start using the platform.

#### USER LOGIN

Username \*

Password \*

- [Create new account](#)
- [Request new password](#)

[Log in](#)

Figure 4 Sign in to the platform

## 2.5 Add content

To create a new content, users will be provided with options as hyperlinks and they can choose the type of the new content they want to create. The options will be under the user menu. System administrators can choose what types of content the user are permitted to create.

# Add content

### Article

Use *articles* for time-sensitive content like news, press releases or blog posts.

### Blog entry

Use for multi-user blogs. Every user gets a personal blog.

### Forum topic

A *forum topic* starts a new discussion thread within a forum.

### Group

This is the Group content type

### Wiki Page

This is the Wiki content type.

Figure 5 Create content type

### 2.5.1 Content types

Depending on the permissions of each role different content types will be allowed to be created. Below we describe the content types each of the three roles will be permitted to create.

## 2.6 *Authenticated Users (Core users)*

For the purpose of this project, users who belong to the authenticated user role will be able to create the following content types.

### 2.6.1 Forum topic

The user in any forum may create new topics and polls. All conversations are organized in threads. Users also may upload files as attachment in any post, accessible to any user of the platform. To create a new topic, users must navigate to the Forums section of the platform and select a forum. They can create a new topic by clicking the new topic button.

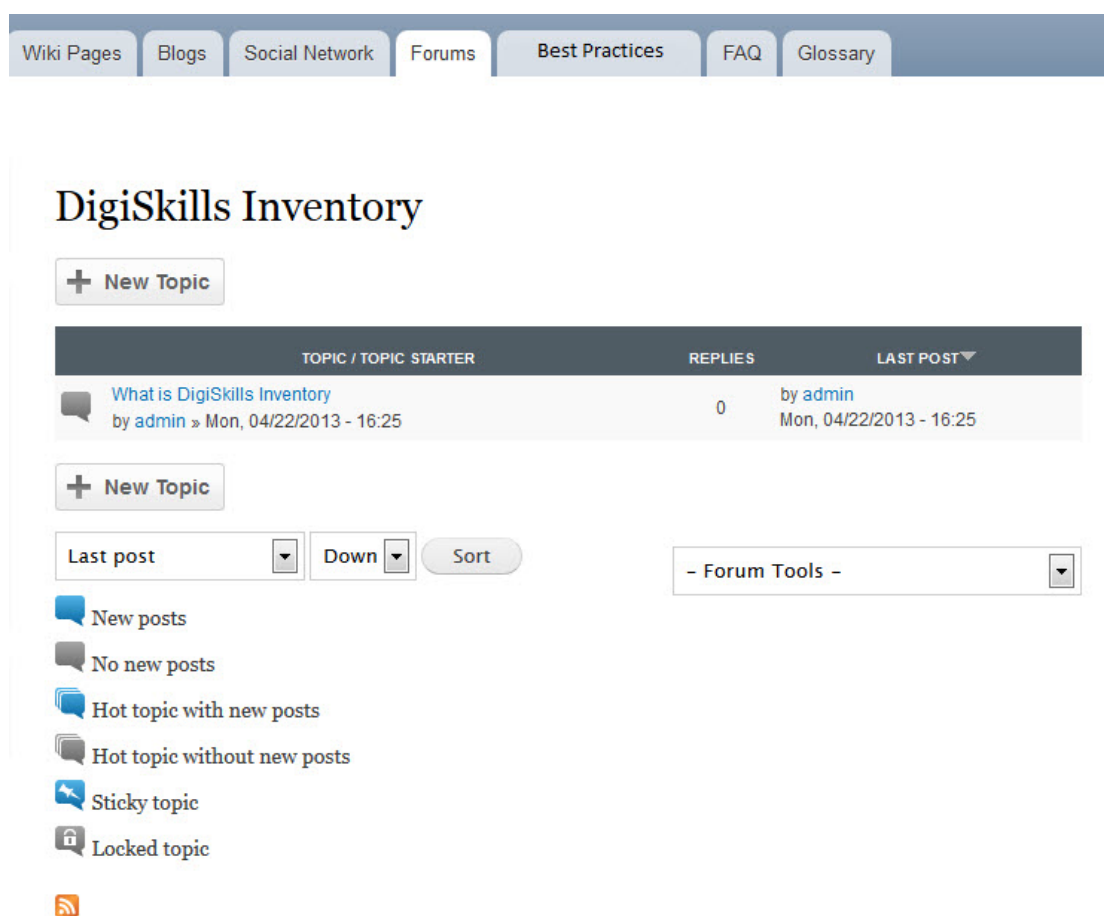


Figure 6 Create new forum topic










### 2.6.2 Wiki Page

The wiki application provides a collection of web pages designed to enable any user of the platform to contribute or modify content, in a collaborative environment.

## Create Wiki Page

**Title \***

  
**Body (Edit summary)**

**B** *I* U          H1 H2 H3 X

Initial content

---

[Disable rich-text](#)

**Text format**  [More information about text format](#)

- Web page addresses and e-mail addresses turn into links automatically.
- Freelinking helps you easily create HTML links. Links take the form of `[[indicator:target|Title]]`. E default (no indicator): Link to a page by internal URL.
- Allowed HTML tags: `<a>` `<em>` `<strong>` `<cite>` `<blockquote>` `<code>` `<ul>` `<ol>` `<li>` `<dl>` `<dt>` `<dd>`
- Lines and paragraphs break automatically.

**Language**

Language neutral

**Tags**

Figure 7 Create new Wiki page

### 2.6.3 Blog entry

Any user may create blog entries, view other users' entries and make comments to other posts. He can be notified about new posts. Users can upload multimedia content (such as video, image) in their posts.

## Create Blog entry

**Title \***

  
**Image**

Files must be less than **300 MB**.  
Allowed file types: **png gif jpg jpeg**.

**Body (Edit summary)**

**B** *I* U **☰** **☷** **☶** **☵** **X<sub>2</sub>** **X<sup>2</sup>** **↶** **↷** **☰** **☷** **☶** **☵** **H1 H2 H3** **X**

Initial content

Figure 8 Create new Blog entry

### 2.6.4 Group

Users can create groups and/or request membership. They can have a list of groups that they are member of and create articles in those groups. Users will be notified for any new content. Groups can be private or public and the content of each group can be private or public too.

## Create Group

Title \*

Group

Determine if this is an OG group.

Body (Edit summary)

**B** *I* S U         $X_2$   $x^2$                    H1 H2 H3    

Initial content

[Disable rich-text](#)

Text format

Filtered HTML 

[More information about text format](#)

- Web page addresses and e-mail addresses turn into links automatically.
- Freelinking helps you easily create HTML links. Links take the form of `[[indicator:target|Title]].` default (no indicator): Link to a page by internal URL.
- Allowed HTML tags: `<a>` `<em>` `<strong>` `<cite>` `<blockquote>` `<code>` `<ul>` `<ol>` `<li>` `<dl>` `<dt>` `<dd>`
- Lines and paragraphs break automatically.

Group visibility \*

- Public - accessible to all site users
- Private - accessible only to group members

**Figure 9 Create new Group**

### 2.6.5 Article

Users can write articles and post them in groups. Articles can be private or public. Private article will only be visible to users that are members of the specific group while public articles are visible to everyone. An article can have multimedia content such as videos or images and files.



## Create Article

**Title \***

**Tags**

Enter a comma-separated list of words to describe your content.

**Body (Edit summary)**

**B** ***I*** ~~**S**~~ **U**    **☰** **☷** **☶** **☵** **☲** **☱**    **x<sub>1</sub>** **x<sub>2</sub>**    **↶** **↷**    **☰** **☷** **☶** **☵** **☲** **☱**    **H1** **H2** **H3**    **X**

Initial content

[Disable rich-text](#)

**Text format** Filtered HTML ▾ [More information about text format](#)

- Web page addresses and e-mail addresses turn into links automatically.
- Freelinking helps you easily create HTML links. Links take the form of `[[indicator:target|Title]].` default (no indicator): Link to a page by internal URL.
- Allowed HTML tags: `<a>` `<em>` `<strong>` `<cite>` `<blockquote>` `<code>` `<ul>` `<ol>` `<li>` `<dl>` `<dt>` `<dd>`
- Lines and paragraphs break automatically.

**Image**

Figure 10 Create new Article

### 2.6.6 Best Practice

Any user can see Best Practices. To do so, they must be logged in and select the tab “Best Practice” and then choose “view”. The platform will display all the existing content of the selected Best Practice.

## 2.7 Partner moderator

Users of this role will have all the functionalities of the core users and in addition will be allowed to create the above content types and manage the following:

### 2.7.1 Best Practices

**Best Practices:** Moderators can upload and edit best practices. In order to upload a best practice they have to fill necessary and optional fields (metadata) in a given form. They will be also able to rate a best practice or make comment on it. They can update the content of a best practice too. To do so, they must be logged in and navigate to the best practice they want to edit. The platform

will display three additional tabs that users cannot see. As the image below shows these tabs will be “View” and “Edit”. The view tab just displays the content, the edit tab is for editing the content i.e. updating its content or adding new.



LANGUAGE	SOURCE LANGUAGE	TRANSLATION	STATUS	OPERATIONS
English	(original content)	<a href="#">view</a>	Published	<a href="#">edit</a>
Greek	n/a	n/a	Not translated	<a href="#">add</a>
Spanish	n/a	n/a	Not translated	<a href="#">add</a>

**Figure 11 View of Best Practices**

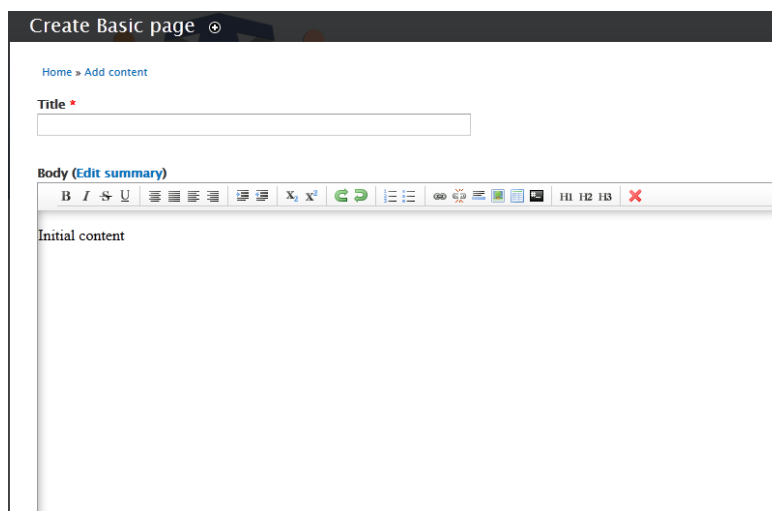
**Modify the Best Practices:** Moderators can make edit the best practices.

## 2.8 Administrator

The administrator can create all the types described above and those described below.

### 2.8.1 Basic Page

This content type is used to create static content such as an about as page. To create a new basic page, the administrator navigates to the add content from the administration toolbar and selects the basic page item.



Create Basic page

Home > Add content

Title \*

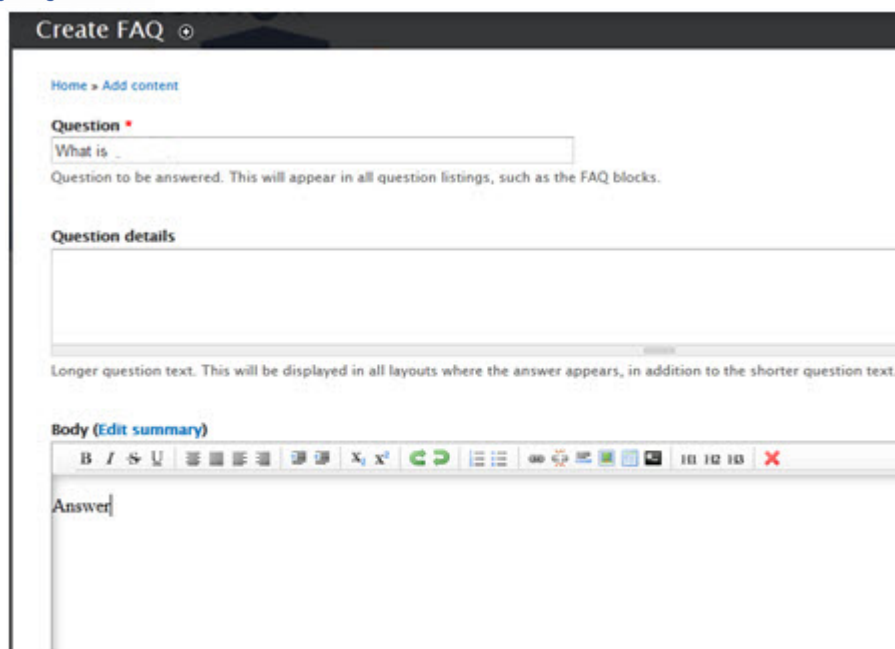
Body (Edit summary)

Initial content

**Figure 112 Create basic page**

### 2.8.2 FAQ

The Frequently Asked Questions content type provides a FAQ page where users can get information for the platform. To create a FAQ page, the administrator navigates to the content menu from the administration toolbar. Selects add content and FAQ.

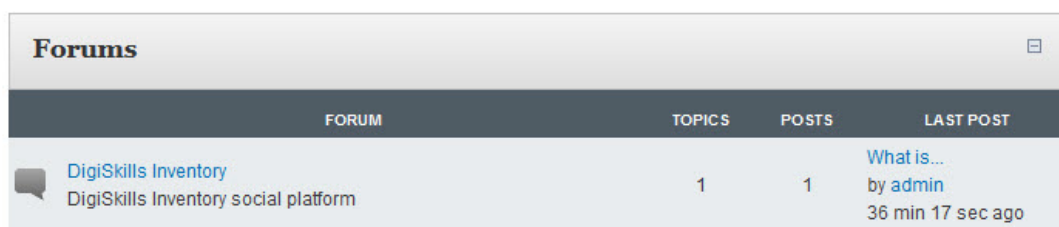



**Figure 123 Create a FAQ page**

### 2.8.3 Forum

Administrators can create discussion forums. Users can use the forums to create topics. To create a forum the administrator selects from the administration toolbar the Structure menu and the Forum submenu. Finally, he/she clicks on the add forum to create the new forum.

## Forums



Forums			
FORUM	TOPICS	POSTS	LAST POST
 DigiSkills Inventory DigiSkills Inventory social platform	1	1	<a href="#">What is...</a> by admin 36 min 17 sec ago

**Figure 134 Create new Forum**

### 2.8.4 Upload new Best Practice

The administrator can update the existing best practices or add a new one. Every Best Practice will have some necessary fields to be completed such as title, author, date, keywords etc and some others which will be optional. These attributes will be based on LOM and Dublin Core and the more representative and necessary of them will be the DigiSkills set of attributes for best practices.

The Administrator is the only role that can manage everything that is published in the platform. Specifically he/she can:

- Create and delete accounts
- Send mass messages

- Edit content
- Create new Forums
- Create FAQ pages
- Change the appearance of the platform
- Change the interface
- Add new roles and edit the existing ones
- Change permissions depending the role
- Edit the structure of the platform by adding or removing components
- Add, edit, update and uninstall modules.
- Configure the platform and the enabled modules
- View status reports for errors and maintain the platform
- Flush all caches.

The administrator can see an extra toolbar at the top of the platform that gives him access to manage and administer the platform.

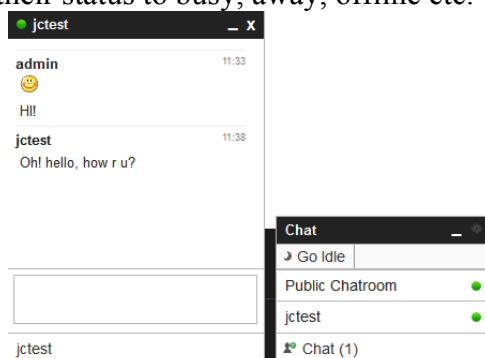


**Figure 15 Administration toolbar**

## 2.9 General Functionalities

### 2.9.1 Instant Messaging

In instant messaging users can exchange messages in real time and have a conversation. The user enters the application and appears online in order to notify other users that he can accept messages. Users can change their status to busy, away, offline etc.



**Figure 146 instant messaging**

### 2.9.2 Folksonomy tools

The user can contribute in collaborative/social tagging by creating tag cloud. The tag cloud is a visual depiction of user-generated tags, or simply the word content of a site, used typically to describe the content of web sites. Tags are usually single words and are typically listed alphabetically, and the importance of a tag is shown with font size.

The tag cloud application can interact with wiki, blog, articles, e learning and forum applications and it's different depending on user's language.

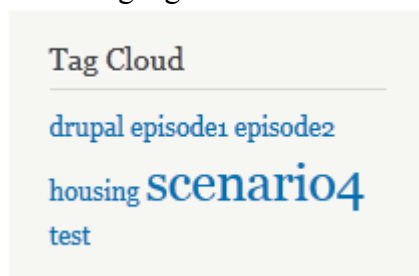


Figure 157 Tag cloud

### 2.9.3 Video Sharing

The video sharing application enables users to upload videos in any format and share them with others. Videos can be viewed on line through a graphical interface, while, users can make comments. Users can upload a video from their personal computers or from online sources such as YouTube.

### 2.9.4 Messages

This functionality enables users to send private messages to each other. It is useful for community oriented platforms such as DigiSkills Inventory. Messages link appear under user menu. By navigating to messages section users can view their inbox and send new messages to one or more users simultaneously by separating usernames with comas.

## Messages



Figure 168 Messages

### 2.9.5 Search

The search engine application provides an interface where the user can search for specific information. The user enters a number of keywords and the application returns as a result a list of links to the related content in the platform. Users also have the ability to use the advanced search feature of the platform. The filters for searching will be for example the following:

- Author
- Category

- Description
- Type

## Search

Content Files Users

### Author

### Category

- Any -

### Description

### Type

- Any -

Name	Alt Text	Author	Category	Description	Type
<a href="#">Drupal Video Setup Using Media and Media Youtube Module</a>					Video
<a href="#">Moodle Presentation [Version 2.0, HD]</a>			Social and civic competences	TEST	Video
<a href="#">WwClv5KCbeE.jpg</a>					Image
<a href="#">dru.png</a>					Image
<a href="#">Pittura-Painting3.JPG</a>	TEST				Image
<a href="#">medium_Pittura-Painting3.JPG</a>	pallete				Image
<a href="#">medium_Desert.jpg</a>					Image

Figure 20 Advanced search

## 2.10 User

The users of the platform are not required to have programming skills or know the software engineering process in order to use it.

### 2.10.1 Preconditions

The Platform should force the user to sign in, in order to have access to the functionalities that are described. Only logged in users can create content types, use the advanced search and read private content.

## *Annex*

- *An Introduction to Use Case Modeling* – Conferences, [www.conferences.embarcadero.com/](http://www.conferences.embarcadero.com/)
- Enterprise Architect <http://www.sparxsystems.com> Practical Session 2 Series: La Trobe University Practical Sessions <http://www.latrobe.edu.au>
- Writing Use Case Scenarios for Model Driven Development, Series: Quick Start Guide <http://www.sparxsystems.com>
- IEEE Std. 830-1993: IEEE recommended practice for software requirements specifications
- <http://www.math.uaa.alaska.edu/~afkjm/cs401/IEEE830.pdf>
-