

E-Fundamental Design of TMA Activity Module for the Arab Open University

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ABSTRACT: *The Arab Open University (AOU) uses Learning management system (LMS) Moodle for online course management based on pedagogical theory. This LMS presents a platform for many students and tutors assessments . Student performance has two forms of electronic assessment, summative assessment and formative assessment. Tutor Marking Assignments (TMAs) in AOU is an important formative assessment to be downloaded and uploaded to LMS but unfortunately handled in long mechanical cycles outside the LMS. LMS needs to be enhanced to handle the TMAs more efficiently . TMA activity module will be a significant contribution of correct TMAs grading and handling derived by the success of open learning models using e-learning methodologies such as online activities , search engines and the concept of data mining associative classifier*

Keywords: E-assessment, Online activities ,E-learning, TMA activity module, Open learning , Data mining associative classifier

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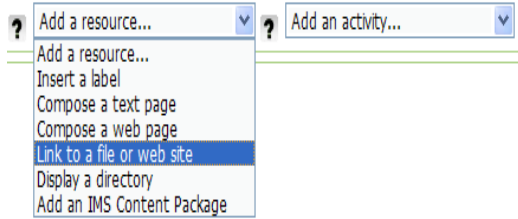
1. Introduction

1.1 Current TMAs system in Arab Open university

Assignments are formative assessments that are essential to evaluate students performance for any educational institution as it is a vital for an open learning educational institution as AOU. Tutor marking assignments (TMAs) , are handled in many steps , most of them can be described as mechanical steps such as uploading and downloading from LMS, despite of the fact that LMS should present an electronic platform to handle all students assessments .TMAs in the current AOU system are uploaded file/s with different formats taken the advantages Microsoft office supports to be posted on the associative course webpage inside the LMS . TMAs files should contain many important information about the material covered , guidelines how to answer questions , instructions in terms of plagiarism and cheating , and the cutoff dates that the assignments will be no longer accepted after .The process involves the staff tutor who is the course coordinator , tutors who teach the course and assessing the TMA ,students and the external Examiners from Open University – UK to evaluate the process of handling the TMAs.TMAs handling process is summarized as follows:

- Formatting the TMA, includes specifying the format of the TMA file using the Ms Office (MS word, PDF, Excel ...). The TMA file/s should contain all required information to build a mutual understanding with students in terms of rules and the process how to handle, solve and submit the TMA.
- Course Coordinator (Staff tutor) is responsible about posting this TMA file to the course webpage inside the LMS. This is usually done by assigning a link to upload the file. Such feature is supported by LMS shows in figure1.
- LMS supports an Assignment Activity module to upload one or more files with many flexible settings to determine the open date this assignment structure is available for students to upload their solutions and closing date to indicate that the

assignment structure will be no more to be uploaded . Many Other settings are available to help the course coordinator (Staff tutor) to control the TMA process but with many limitations . Figure 2. Shows a screen shot of creating and managing the assignment activity module .



(a) Adding a label to post the TMA file



(b) Using a flashing post to indicate the TMA file

Figure 1. Adding a link to upload TMA file/s and post it on course webpage inside LMS

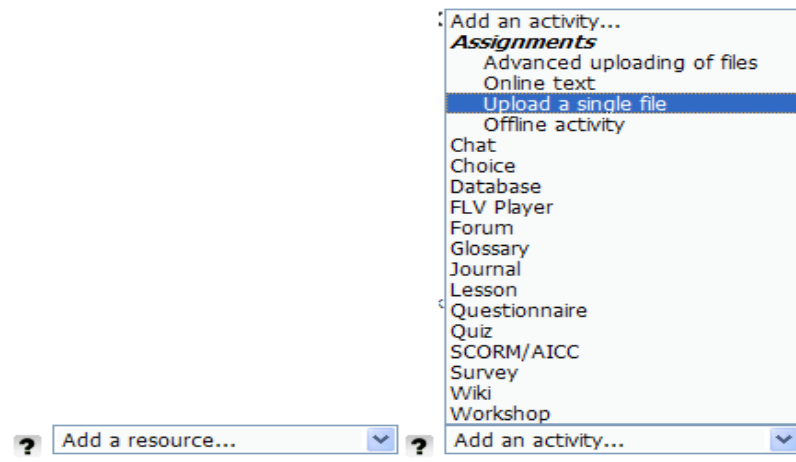
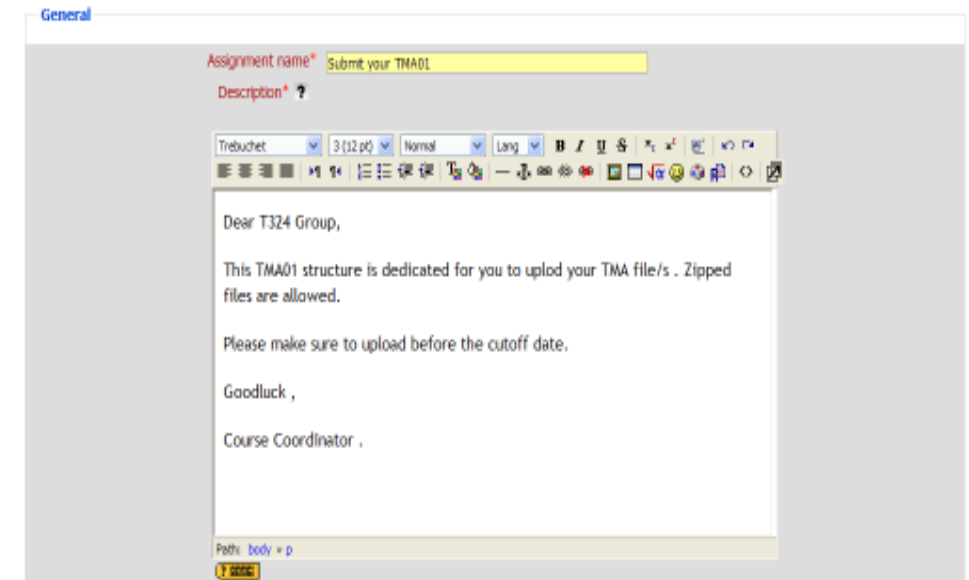


Figure 2. (a) Adding an assignment activity module

Updating: Assignment ?



(b) Name and describe the Assignment activity module

Grade ? 10

Available from 19 November 2010 22:15 Disable

Due date 3 December 2010 23:55 Disable

Prevent late submissions Yes

Upload a single file

Allow resubmitting ? Yes

Email alerts to teachers ? Yes

Maximum size 20MB

Common module settings

Group mode ? Separate groups

Visible Show

ID number ?

Grade category Uncategorised

Save and return to course Save and display Cancel

(c) Assignment Activity module settings and options

Figure 2. Creating and setting an assignment activity module

- The data structure created by the assignment activity module supports data types that allow student first to upload their solutions which will be downloaded from the same structure by tutors and manually graded out of the LMS. Tutors using the Marking template guide and the answer key sent by email (out of LMS) from the course coordinator, start grading the TMAs and provide informative feedback to students about their answers in an attempt to enhance their future TMA submissions. The grade for each student is inserted manually to the LMS and the feedback file is also uploaded to the LMS. Figure 3. Helps to understand what is described above regarding the grading system.

The quality of such system is normally controlled and monitored by the course coordinator (staff tutor). While TMAs cutoff dates that no submissions are allowed after it, another cutoff date given to tutors to complete grading per each session they teach is actually determined by an email sent from the staff tutor, which is a mechanical step. Staff tutor is also requested to evaluate the grading system and the feedback each tutor by filling a separate evaluation monitoring file and feed the tutor back in an attempt to improve the quality of the formative feedback assessment processes. This step is also, a mechanical step the LMS as the LMS doesn't yet has the enhanced customized evaluation form for tutors that matches the AOU requirements. At the end of the semester, the Staff tutor is responsible for collecting TMA samples for External Examiners use another feedback cycle for quality assurance AOU is fully committed to. These samples should include Excellent, Average and Poor samples for each group per tutor per course. Given that, the staff tutor sometimes is a course coordinator for more than one course and the tutor teaches usually more than one course, therefore, the huge number of submitted TMAs to LMS including the above described TMAs/feedback cycle is a tremendous work for all parties.

2. TMA Activity module

The consuming mechanical cycles are what we are targeting. The proposed TMA activity module will mean for fully electronic generation, submission, monitoring, evaluation, classification using the concept of data mining and associative classifier, sampling, and instantly continuous archiving plus detailed customized reports of each TMA. Such complete integrated system will regulate grading and maintain a complete record for quality assurance purposes.

AOU-LMS> T324> Assignments> Submit your TMA01> Submissions Update this Assignment

See all course g

Separate groups: All participants

First name: All ABCDEFGHIJKLMNOPQRSTUVWXYZ
Surname: All ABCDEFGHIJKLMNOPQRSTUVWXYZ

First name / Surname	Grade	Comment	Last modified (Student)	Last modified (Teacher)	Status	Final grade
310798 Abdalrazag Al-Erui	8 / 10	<p>2. a,b,c are more text no needed </p>	310798.doc Friday, 3 December 2010, 11:16 PM	Friday, 14 January 2011, 10:10 PM	Update	
1081360 Abdulaziz Al-bawardi	9 / 10	<p>2. b, o are more text no needed </p>	1081360.doc Wednesday, 1 December 2010, 09:58 AM	Friday, 14 January 2011, 10:11 PM	Update	
10709163 Abdulaziz Aleneil	10 / 10		10709163.doc Thursday, 2 December 2010, 11:23 PM	Saturday, 11 December 2010, 12:47 AM	Update	10
50701135 Abdulhameed Kardi	9 / 10		50701135.doc Thursday, 2 December 2010, 10:04 PM	Monday, 13 December 2010, 12:44 AM	Update	
30601613 Abdulkareem Trabat	9 / 10		30601613.doc Thursday, 2 December 2010, 09:04 PM	Friday, 10 December 2010, 04:20 PM	Update	
10604246 Abdulah Al-Qtabi	10 / 10	<p>Very Good</p>	10604246.doc Thursday, 2 December 2010, 11:29 PM	Friday, 14 January 2011, 09:58 PM	Update	10

(a) Structure built by assignment activity module

Tareq Sulleman
Friday, 14 January 2011, 10:10 PM

Grade: 8 / 10
Final grade: 8.00

Upload a file (Max size: 20MB) Browse... 310798.doc

Rich text editor toolbar (Tribuchet, 1 (8 pt), Lang, Bold, Italic, Underline, Text color, Background color, Bulleted list, Numbered list, Indent, Outdent, Undo, Redo, Link, Unlink, Image, Table, Source code, Help, Print, Full screen, Exit)

2. a,b,c are more text no needed
3. a, f, ff refer to reduced level given in question
4. Definitions are not explained

Path:

Send notification emails

Save changes | Cancel | Save and show next | Next

310798 Abdalrazag Al-Erui
Friday, 3 December 2010, 11:16 PM (38 mins 57 secs early)

310798.doc

(b) Grading and feedback

Figure 3. Assignment structure including grading system and feedback files

TMA activity module will include the basic features of quiz activity module supported by LMS plus other features to avoid upload/download for TMAs and giving students, tutors, staff tutor and external examiners the required online space inside the LMS to adopt, acquire and work to meet the requirements along with supporting systems for automatic monitoring and evaluating. The new TMA activity module with all advantages and required customization to work for any education institution that uses the pedagogical model. Please keep in mind, this paper will use some screen shots from quiz activity module to present the new idea of TMA activity module. The design will present seven controlling and supporting systems as follows:

2.1 TMA Generation & submission system

This system creates and generates the TMA data structure as a container for the TMA questions broken into more than one phase that can be handled easily and separately. These questions will be previously created and saved using the question

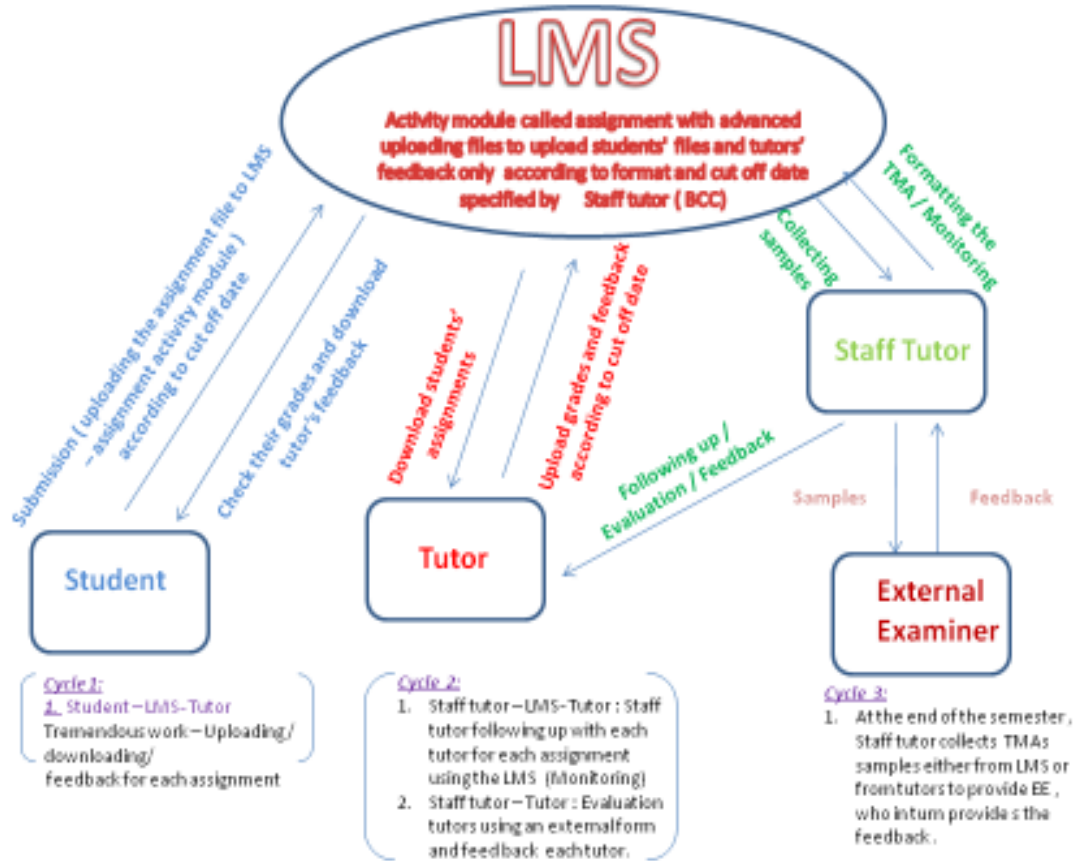


Figure 4. TMA handling in the current system

bank feature supported by the model itself and can be shared with different activities and different courses. This container will also have many settings and options to help working easily with the TMA and to submit by clicking on the submit button.

2.2 TMA Monitoring system

This system is designed to start monitoring once TMA activity module is created and TMA questions being available for students to solve and submit, and for tutors to grade and feedback. This system has the following designed and customized methodologies:

1) TMA Request:

- To students start solving TMA according to cut off date for submitting.
- To tutors to start grading according to cut off date for grading.

2) TMA Reminder:

- For students to remind them with cut off date
- For tutors to meet the cut off grading date)

3) TMA Notification:

- Notification to be sent to tutors when students submit their TMAs.
- Notification to be sent to Staff tutor When tutors finish grading and feedback is inserted.

2.3 TMA plagiarism system

This system will be designed to check plagiarism for text (students answers) per question for all students per course that includes [3]:

- Looking for plagiarism, collusion and copying from other sources
- Checking whether student are copying themselves
- Searching with whole answer text or sentences
- Searching source and translation collections
- Checking whether data in one answer is present in another answer
- Checking to see if all citations are present

2.4 TMA Grading and Grades Categorizing system

This part is responsible about alphabetically categorizing grades for each student to be A, B+, B, C+, C, D and F accordingly with statistics can be easily derived from the previous systems after grading is completed. Such classification can be designed by using the concept of data mining. The objective of classification is categorize grades of students by specifying rules and use the methodology associative classifier has to be integrated inside LMS and fed with data structure of students graded TMAs .

2.5 TMA Tutor Evaluation & Categorizing

This system is to have an automatic generation of evaluation report for each tutor filled by the Staff tutor. And being automatically categorized as follows

- A for excellent evaluation
- B for Good evaluation
- C Satisfactory Evaluation .
- E Needs improvement.

The concept of associative classifier in data mining can be also applied here and fed with tutors data structures and rules specified by staff tutor and external examiner to produce classified evaluation forms. Rules of associative classifier can be easily described an flexible form can be changed by the staff tutor to meet the requirement of Arab Open University.

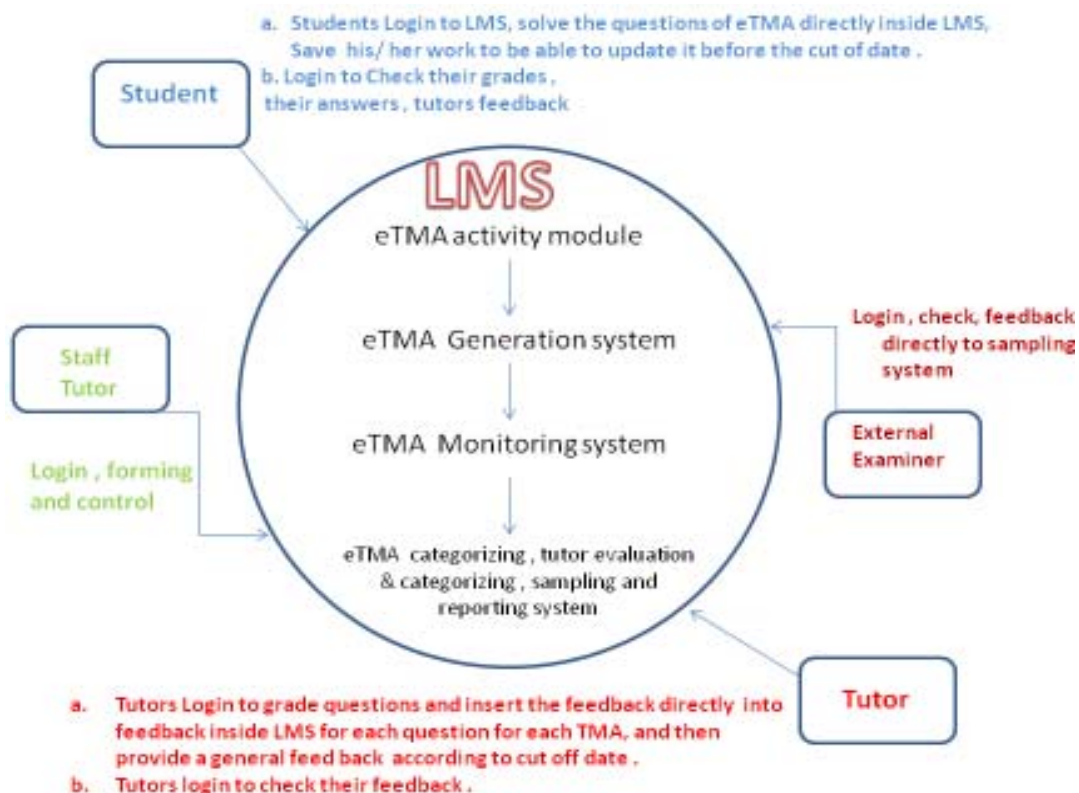


Figure 5. TMA activity module functionality

2.6 TMA Sampling system

Staff tutor is requested to collect samples of graded TMA every semester for quality assurance and to be evaluated from the external examiners . Utilizing the categorized grades and forms , sampling system will be provided with rules how to collect the samples of graded TMAs . The sampling it will automatically collect the samples for each group per course . Actually , it will be more flexible if the samples can be selected per group or per teacher . These samples can be gathered in one automatic generated folder inside the LMS , or on the server . By then External examiner can get a temporary LMS account to check samples and fill a form of their feedback (electronic form) .

2.7 TMA Report system

This system is supposed to generate a customized report and statistics about TMAs in details given the output of each previous system.

3. TMA activity module functionality

The functionality of the proposed system can be explained by figure 5.

3.1 TMA Generation & submission system

Open Source Course Management System , Arab open university uses is an a Virtual Learning Environment (VLE). AOU uses LMS as a platform to deliver content to students and assess learning using assignments or quizzes which based on pedagogical model which has many features to deliver different concepts . TMA module will have a similar idea of conducting an online activity will be available for specific time till the cutoff date that after TMA won't be available for students to attempt . The generations steps of this activity module should no differ from other activity modules supported by LMS in terms of flexibility. We have the following theoretical steps to generate this activity module .

3.1.1 Ability to be created as an activity module

Flexibility and fully integration with LMS to be listed with activity modules and be created by adding a new activity module type TMA.

3.1.2 TMA settings

- Name setting : Specifying the name of this TMA is an essential , the following format can be used Course name TMA Semester Year.

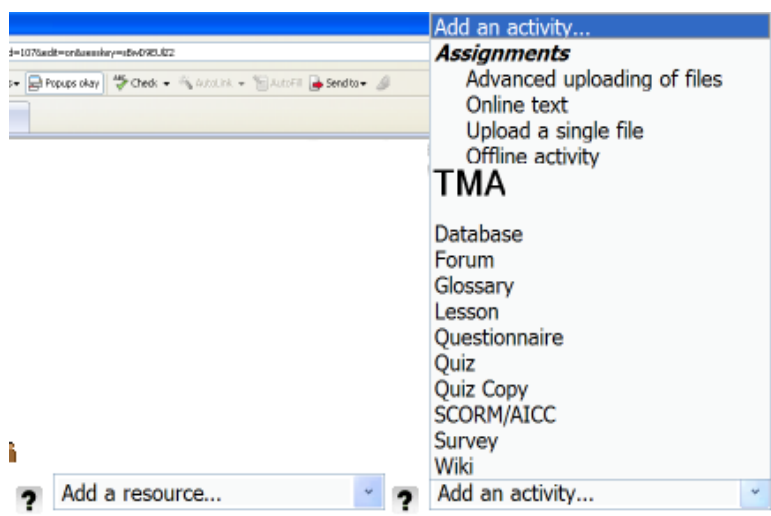


Figure 6. Creating a TMA activity module

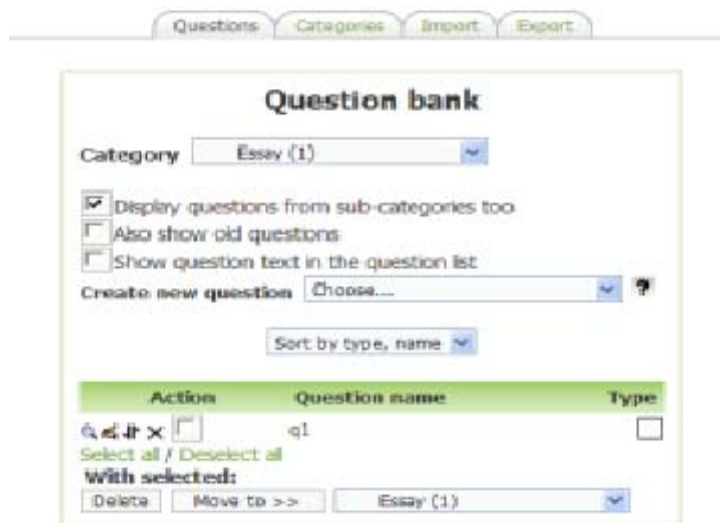
- Description setting : every module has a built in free online text using the HTML editor or any editor your model may use This free space is allocated for the Staff tutor to introduce the TMA procedure , points to be considered while working on this TMA , most likely the cutoff date. Warning about the Plagiarism and cheating which are general guidelines . Also , settings for displaying , which means how many questions can be displayed in one page . Such setting will organize the TMA with a friendly interface. This is easily done by just specifying a number of questions in question to be displayed setting field.

- Enabling and closing setting : This will be used to specify the period of time this TMA will be available.
 - Enabling : The date this TMA is being available to students and tutors.
 - Closing : which is the cut Off date , and it has actually two concepts : First setting is cutoff date for students to submit their TMAs. And the second one Cutoff date for tutors to submit grades and feedback.
 - Feedback settings :Settings off feedback : feedback is the heart of the TMA, should be classified in more than one feedback as we have many roles to apply .
 - First we have the answer key for each questions , which is the guideline for tutors to guide them how to grade the particular question. This part is easily to be hidden from students and even tutors by changing TMA settings to show or Hide.
 - Second : Tutor’s informative feedback for each question to explain to students if there were any marks had been deducted
 - General feedback : Tutors should provide a general feedback for the whole work and some guideline for students to improve their performance during the course work and other assessments.
 - -An advanced feedback can be also a recorded feedback for each question.
- Variety of other settings such as : allow late submissions, number of allowed attempts which in our case should be one and every time the student is logged to TMA, his attempt should be built on the previous one to save student work from the last access and alteration . These previous settings are built in and supported by the LMS. New settings can be programmed and added to support the new system such as monitoring settings ,sampling and categorizing as well
- Once the TMA activity module is created and basic settings are determined as above, questions should be created and inserted into TMA body . This is what we will discuss next.

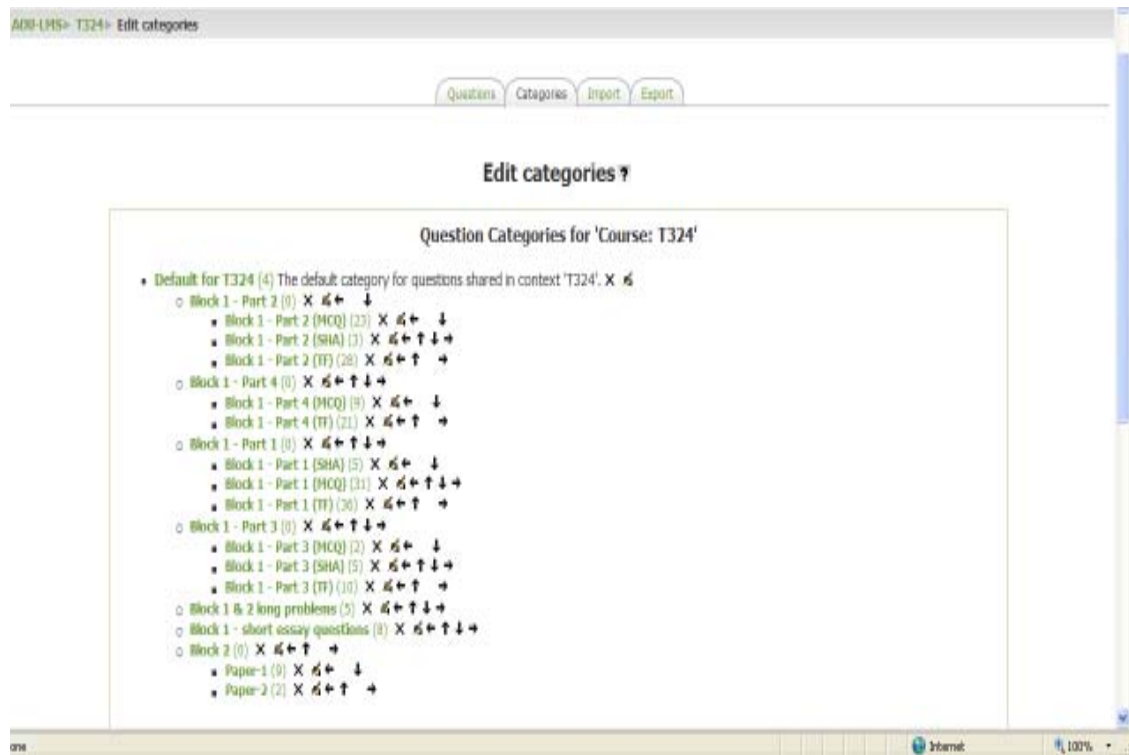
3.1.3 Creating questions for TMA activity module

3.1.3.1 Question bank

Questions should be created first before adding them to the TMA body . Moodle supports many different types of questions that kept and saved in a categorized question bank which is a built in feature in the Moodle Unfortunately , this question bank is limit for quiz use, therefore , for TMA we need to have a customized question bank to help create and add questions to the TMA body. The supposed question bank will be not that different from the one already supported by LMS, with all required options and flexibility such as categories , preview questions , add/delete and update questions . Categories are very important to help organize the question bank and easily maintain it .Category can be by the material covered and also by question type . Questions help to break down the block of problems TMA is covering into small problems can be handledeasily and separately . Categories can be containers for shared questions between courses or other activities such quizzes or test-yourself . The follow screen shots for quiz question bank, the question bank we are talking about will be similar idea.



(a) Question bank



(b) Categories help to organize questions

Figure 7. Question bank and the ability to organize it using categories

3.1.3.2 Question types [2]

Many questions types are already supported by the question bank built in the LMS. We are going to give brief description of the most important ones as follows :

1- Multiple choice and True/false

2- Short answer : Students answer this question by typing a word or phrase. You need to provide a list of acceptable answers. This list can be increased by using the item analysis option as students sometimes do acceptable typo errors .

3- Numerical : This is a short-answer question that accepts a numerical value instead of a word.

4- Matching : This is a standard two-column matching question.

5- Random short-answer matching: The sub questions for the matching exercise are randomly drawn from short answer questions in the category.

6- Description: This is for embedding some text in the quiz. (It's not a question type.) It can be used to give mid-quiz instructions. This kind of questions can be used to formulate instructions how to use the TMA and what to take into considerations while working on TMA. This kind of questions , will be displayed at the beginning of the TMA every time the student want to work on it .

7- Calculated: This is a mathematical equation with placeholders for values that will be pulled randomly from a dataset when a student takes the quiz.

8- Essay: This is a question requiring a paragraph of text. Students are not assigned a grade until the tutor review and manually grade the question. This type of questions are supported with an HTML editor has different kind of tools and plugins that makes there is no different from any other Microsoft office applications. Even the drawing tool is available in moodel Version 2 with a TinyMCE editor that easy to be integrated with the painting tool .

9 - Embedded answers (Cloze) : This is a question with multiple question types embedded within it, such as multiple choice, short answers, and numerical.

Using variety of questions will present the TMA is different new look from the regular assignment we know. The advantage of some types being graded by computer will save time and effort, while the ability of being overridden and add comments is still available.

These questions can be prepared out of LMS instead of creating them one by one , in special text file according to special format then the file can be imported to LMS , exported as well .

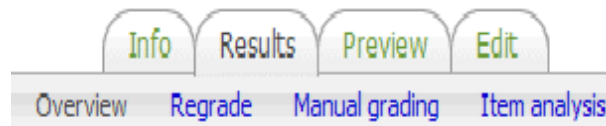


Figure 8. Ability to overview the question , regarded , and manual grading

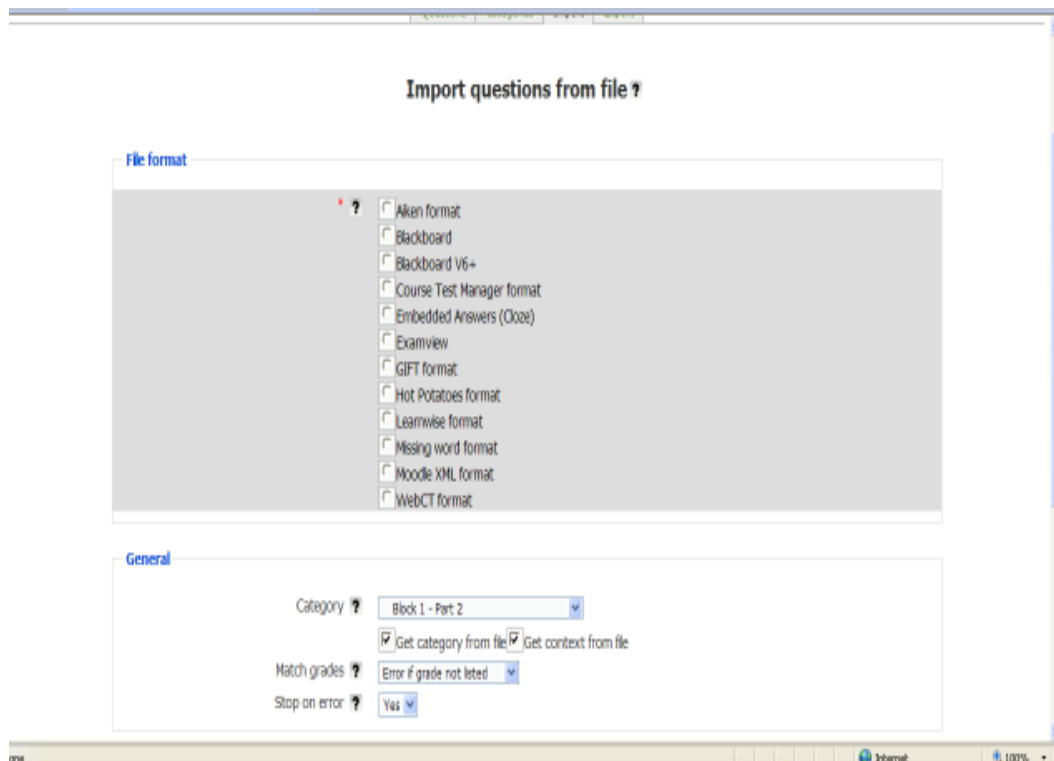
The following figure will give theoretical view of added questions inside the TMA activity module

3.1.3.3 Solving & Submitting the TMA

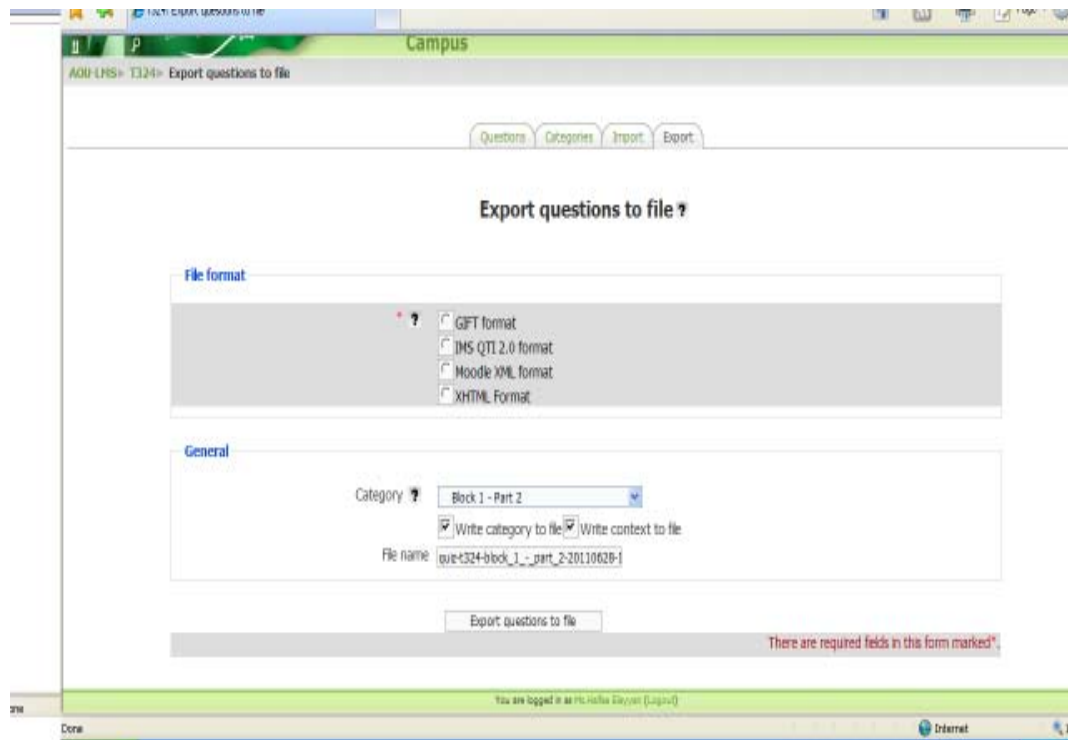
As it was explained before the TMA will be displayed using a friendly well organized framework for students specifying all instructions and ways how to handle it . The students will be able to access the TMA whenever they want before the cut off date . The student will be able to freely use the editor and answer the questions , save their work for further modification . Saving is done by clicking on save bottom or by once the window of this TMA is closed. Also, it can be develop be instant saving every time the student modify his TMA. Before the cutoff date , all students are requested to submit all their work and finish by pressing a bottom shown at the end of the TMA. The system of TMA is well provided with archiving system , which make it possible for tutors and supervisors to follow up with students work while they are currently working on their TMAs . This option will help to direct the associative group discussion forum, the tutor is running on LMS to cover all topics students may feel confused about.

3.1.3.4 Saving the answer key inside the TMA

The purpose of this is to agree on marking standards in order to guarantee consistency, especially as marking essay



(a) Importing questions into LMS



(b) Exporting questions out of LMs Figure

Figure 9. Importing and exporting questions

questions is a subjective process. This answer key can be saved inside the feedback field associated to each question TMA. Tutors can use these answer keys to guide them how to handle student's answers . This feedback will be shown only to tutors , once monitoring system request start grading from tutors after all students submitted their works .

3.1.3.5 Previewing the TMA

The TMA is easily to be previewed that shows questions as it appears to students in a friendly framework . This gives a chance to enhance it and do some alteration to make it more organized and well formed to students .TMA can be viewed and split into may pages as the staff tutor needs . Displaying into pages will help to view the TMA is an organized and well formed framework instead of scrolling down to display the questions . This is can be easily achieved using displayed setting described above.The following screen shots will shows that attempts of the TMA along with different kinds of information recorded to the system about each

3.2 TMA Monitoring system

This system is designed to monitor the TMA activity once it is created and questions are inserted into this TMA . It has three important functions :

3.2.1 TMA Request

This method starts working once the TMA is created and questions are inserted and well organized and viewed . It is meant to send requests for students and tutors informing them about the TMA being ready to start their work into ways

- To students enrolled in this course to start solving TMA according to cut off date for submitting.
- To tutors to start grading according to cut off date specified to submit grades and Feedback.

This is can be done by having the polymorphism having one method name , but different arguments that can be invoked depending on the dates specified by staff tutor .

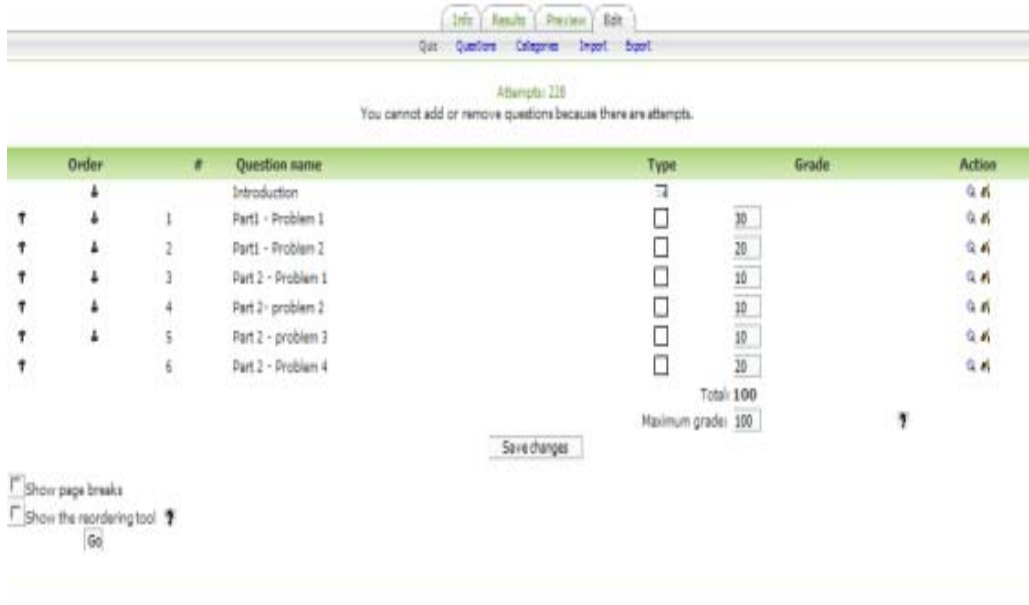


Figure 10. Shows how questions are added to the TMA activity module and grades are assigned to each part

First name / Surname	Started on	Completed	Time taken	Grade/100	#1	#2	#3	#4	#5	#6
20911699 Esraa Murad	15 December 2010, 03:39 PM	17 December 2010, 07:25 PM	2 days 3 hours	75	26/30	18/20	8/10	10/10	6/10	7/20

Figure 11. shows an attempt on TMA.

3.2.2 TMA Reminder

Staff tutor has a tremendous responsibility to keep reminding students and tutors about cutoff dates to avoid late submissions and plenty if there any . This method can programmed using also the polymorphism have one name with different arguments depending a discernment counter the cutoff date specified for students or students . This reminder will be reminding students and tutors as follows :

- For students to remind them with cutoff date before the cutoff date to avoid missing to submit their TMAs
- For tutors to meet the cut of grading date.

Numbers of reminders sent can be easily specified by Staff tutor using the TMA special reminder setting .

3.2.3 TMA Notification

Once students are done with their TMAs solving and submitting according to the cutoff date , the notification system will notify tutors about their group submissions . As well as , this system is responsible about notifying the staff tutor when each tutor finish submitting grades and feedbacks to LMS.

- When students submit their TMAs .
- When tutors finish grading inserting their feedback.

3.3 TMA plagiarism system

TMA plagiarism system will be a built in feature in TMA module. The system will consist of search engine for TMA comparison per questions . The system will be applied on TMAs before grading starts , so once the tutor starts grading , he

/she will get a list of copied TMAs or plagiarism cases with percentages of similarity . The search engine will also access the web to look for similar texts .This will help to assure quality of grading system and apply university rule on these cases .

3.4 TMA Grading & grade Categorizing system

3.4.1 Grading system

The tutor will be grading each question after viewing the inserted answer key. The interface of this grading system will be similar to the quiz grading system . The TMA activity module will be responsible about automatic calculation for all questions out of the specified total grade for the whole TMA that will be also automatically saved and shown in the TMA activity module for each attempt. TMA Grading system includes the following steps :

- Each tutor will login to the TMA module located in LMS after receiving the request from monitoring system to start grading
- Each tutor will check the percentage of plagiarism given to each TMA.
- The tutor will select the group , then start grade question per question for all students per group . Given that some of these questions might be corrected by computer .
- Each question will appear , followed by student' answer , answer key and an empty text supported by an editor used for feedback from tutor to student regarding the answer . There is a small grade box ,at the bottom of this text body where the tutor is supposed to insert the grade out of specified grade for the question . Quiz grading system can be used here as close concept of the proposed one.
- The tutor is requested to click save bottom which responsible to record the grade into the database .
- After all questions are graded , the system automatically will do the calculation for the total for all questions per attempt . Grading system will consider the Plagiarism percentage to be deducted from the total . The total will be saved into database and will be shown for the student.

3.4.2 Grade categorizing system

This system is responsible for alphabetically categorizing grades for each student to be A, B+, B, C+, C, D and F accordingly with statistics can be easily derived from the previous systems after grading is complete. The categories can be defined by the system directly after grades are submitted to LMS. For Example , if the total grade of the TMA is 100 . Students who achieved between 97-100 are considered A, students between 90-97 are B+ and so on . Categorizing will take into consideration all grades for all students enrolled in one course regardless of their sessions , so it can't start before all tutors are done with grading . The Alphabet character will be shown next to the grade .

3.5 TMA Tutor evaluation & categorizing

This system is to have an automatic generation of evaluation report for each tutor filled by the Tutor Staff. And being categorizes as follows :

- A for excellent evaluation
- B for Good evaluation
- C Satisfactory Evaluation
- E Needs improvement.

The evaluation form is easily described an flexible form can be changed by the staff tutor to meet the requirement of Arab Open University. We have here a proposed sample form.

3.6 TMA Sampling system

Arab open university is committed to present samples of students continuous course works to the external examiners OUUK for quality assurance . For the current running system , Staff tutor is responsible about selecting manually these samples from LMS or ask each tutor to provide his/her samples . This submitted sample is for a marked Excellent, average and poor TMAs along with the feedback per tutor per course . Each sample should be associated with its marking template containing the feedback .This is a mechanical process with a tremendous overload . The new design of TMA sampling system is an automatic and random selecting system for samples directly from the LMS for graded and categorized TMAs . This does

ARAB OPEN UNIVERSITY TUTOR'S EVALAUTION FORM					
Semester :		Tutor Name:			
Year :		Course :			
<u>TMA's Monitoring Evaluation form for tutor's grading</u>					
<i>Over all evaluation</i>					
A	Excellent	B	Good	C	satisfactory
				E	Needs improvement
<i>Assessment of Tutor's Grading</i>					
Inconsistent		Severe		Fair	
Lenient					
Reviewing the TMA and answer key to reporting any inconvenience, if there is .		Y	Anticipating students' demands and questions .		Y
Grading according to the answer key and guidelines provided by the staff tutor.		N	Committed to the cut off date submitting grades and feedback.		Y
Following standards and regulations of AOU regarding cheating and plagiarism.		Y	Following up with students progress of TMA		Y
Taking advantage of previous evaluation to enhance the performance.		Y	Providing valuable suggestions and feedback about TMA		Y
General comments :					
<u>Feedback Monitoring Evaluation Form:</u>					
<i>Over all evaluation</i>					
A	Excellent	B	Good	C	satisfactory
				E	Needs improvement
<i>Assessment of Tutor's Comments</i>					
Comments Summary From			Comments Script		
Unsatisfactory	Satisfactory	Unavailable	Unsatisfactory	Satisfactory	Unavailable
Correcting factual errors		Y	Explaining awarded grades		Y
Reference to course materials		N	Suggesting ways of improving future TMAs.		Y
Noting and explaining irrelevance		Y	Exhibiting helpful tone/attitude		Y
Making clear constructive comments		Y	Commenting on Student's arguments/structure		Y
General comments :					
<u>Tutors Activity Report on LMS :</u>					
A	Excellent	B	Good	C	satisfactory
				E	Needs improvement
Frequent logs to LMS		Y	Updated with announcements and posts on LMS		Y
Participating in LMS activities		N	Following up with students' activities		Y
Frequent communication with students		Y	Volunteering to enhance the progress by providing supplementary materials for the offered course .		Y
Participating in group discussion forums.		N	Active agent , anticipating and helping with students' demands and queries		Y
General comments :					

Figure 12. Proposed Evaluation form for tutors

mean that the sampling system is fed with a data structure consists of , course name , group number , student's IDs , TMA attempts , total grade and category of this grade (A, B+, B, C+,C , D and F (for no submissions or for cheating cases). The sampling system will access all groups to select samples from each . The output for this system will be a nested folders structure inside the download center inside the LMS . The nested structure of the folders can be described as the following figure.

3.7 TMA Reporting system

This system is supposed to generate a customized reports and statistics about TMAs in details. This is done by using the results of the previous described systems that creates, notifies, reminds , categorizes , and evaluates students , tutors, staff tutors . Also, special reports is designed for the eternal examiners use to fill the final report or forward feedback to the staff tutor . These reports will help for sure to evaluate TMA module as whole integrated system . The reporting system will be provided with a friendly interface to easily set the generated report.

4. Related Work

During the last two semester we used in AOU the quiz theme to present our Tutor Marking Assignment . Documentation and paper had been written and applied to the ICITeS'2011 . Tutor Making assignment in a quiz theme paper has been accepted and will be presented in the conference April 10 – 12 , 2011. Also, monitoring system explained by [1] can be added easily to our TMA activity module.

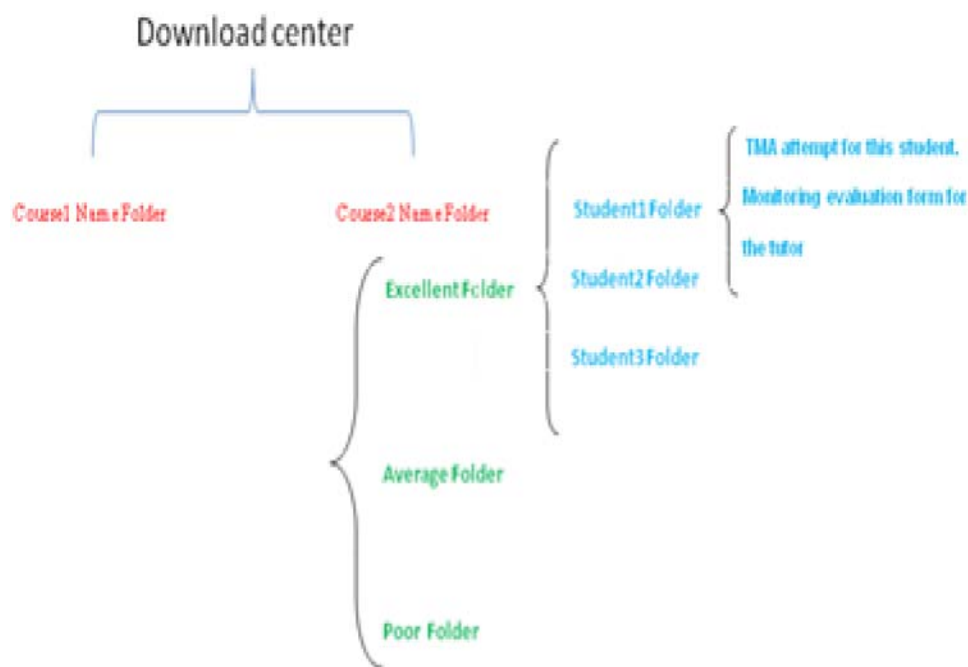


Figure 13. Sampling system nested folders

5. Conclusion

Assignments (TMAs) are one of the most important course assessments for any educational institution . TMA activity module will be a perfect built in solution with model AOU and many other organizations use for educational purposes, TMA activity module will also provide tools and options for general statistics and instant follow up with students performance that make it easier to overcome difficulties students may face during the semester . The activity module also can be enhanced in the near future to have system responsible to start a discussion forum automatically once the TMA activity module is created and questions are inserted into the body of TMA . The discussion will be broken down into problems for each question in the TMA and relate each part to the course material covered . This activity module will be a good reason to release a new version of the Moodle that works for any educational institution uses this Moodle for educational purposes.

References

- [1] Essentials of the e-TMA System for the Arab Open University. Abdel-Elah Al-Ayyoub, Arab Open University
- [2] Moodle , [www. Moodle.org](http://www.Moodle.org)
- [3] Copycatch software , main website