

(Translation)



**Announcement of Mahidol University**

**On the Adoption of Academic Works to Develop Learning in the Form of Online Lessons as a Qualification for Academic Ranks B.E. 2566 (2023)**

.....

It is deemed necessary to prescribe the definition, the forms, publications, and characteristics of academic works as a qualification for academic ranks of non-government official lecturers and special lecturers in addition to the Announcement of Mahidol University on the Definition, Forms, Publications, and Characteristics of Academic Works B.E. 2565 (2022) to be appropriate and consistent with the context of online learning at all levels of each organization and be used as practical guidelines for organizations at Mahidol University.

By virtue of the provisions in Article 14 of Mahidol University Regulations on Academic Ranks B.E. 2565 (2022), the President, as advised by the Academic Placement Committee, has issued the announcement below.

Article 1 This Announcement shall be the guidelines for the adoption of academic works to develop learning in the form of online lessons as a qualification for academic ranks.

Article 2 In this Announcement:

“Online lessons” refer to the lessons or courses published electronically as educational products. Online lessons are taught through a learning management system (LMS) characterized by: 1) electronic learning content, such as videos, graphics, infographics, PDFs, and PowerPoints; 2) two-way interaction and communication between learners and lecturers; and 3) online assessment.

Article 3 Online lessons used as a qualification for academic ranks must be published in the form of electronic educational products with descriptions of the learning innovation, instructions for use, and effects on learners. Online lessons must prescribe the definition, the forms, publications, and characteristics of academic works as a qualification for academic ranks of non-governmental official lecturers and special lecturers in addition to the Announcement of Mahidol University on the Definition, Forms, Publications, and Characteristics of Academic Works B.E. 2565 (2022), Group 2 Academic works in other natures, Item 2.2 Academic works for instructional development.

Article 4 To adopt academic works to develop learning in the form of online lessons to apply for academic ranks shall comply with Mahidol University Regulations on Academic Ranks B.E. 2565 (2022).

Article 5 Academic works for instructional development in the form of online lessons shall align with the guidelines in Appendix A attached to this Announcement.

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Article 6 Any issue arising from interpreting or following this Announcement shall be under the discretion of the President, who has the power to interpret and consider the issue. The President's interpretation and judgment are final.

This Announcement is effective henceforth.

Issued May 2023

(Professor Banchong Mahaisavariya, M.D.)

President of Mahidol University

(Translation)

## Appendix A

### **Guidelines for adopting academic works for instructional development in the form of online lessons to submit applications for academic ranks**

#### **Attached to the Announcement of Mahidol University on the Adoption of Academic Works to Develop learning in the Form of Online Lessons as a Qualification for Academic Ranks B.E. 2566 (2023)**

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Online lessons used to apply for academic ranks include:

1. Online lessons or courses on the learning management system (LMS).
2. Concept document for instructional development innovation in the format of online lessons.

#### **1. Definition of academic works for instructional development innovation**

The Announcement of Mahidol University on the Adoption of Academic Works to Develop learning in the Form of Online Lessons as a Qualification for Academic Ranks B.E. 2566 (2023) has prescribed the definition of academic works for instructional development innovation as academic works which could be conducted in the form of an experimental study or research and development aimed at promoting desirable characteristics or solving learning issues of learners. The components of academic works include three sections of explanation or evidence. The first component is the problem about teaching and learning. The second component encompasses concepts, theories, rationale, or dogma that the lecturer uses to design instructional innovation to develop learners or solve problems. Such innovation may be a new form or a new way of teaching or a newly developed invention or obviously adapted from the original, such as a new lesson, new activity, or new instructional techniques, or the media used in teaching. The third component describes the process and results of applying that innovation to learners in real situations. It must show results in developing learners to have desirable characteristics, with evidence supporting that there has been a change in learners in the desired direction, contributing to learning for both learners and teachers.

##### Guidelines according to the definition

The application for an academic rank shall comply with the definition of academic works for instructional development as follows:

##### (1) Problems about learning and teaching

The applicant for an academic rank must analyze general problems of teaching and learning and the needs for developing online lessons to solve such problems in traditional teaching. The nature of the problems may vary, depending on the context of each subject. The concept document might contain the following topics:

- Analysis of general problems in traditional teaching management
- Needs analysis for developing online lessons
- Target group analysis
- Analysis of preparedness for learning management (internal factors)
- Analysis of applying the learning output for use or serving social needs

(Translation)

(2) Concepts, theories, rationale, or dogma that the lecturer used to design learning innovation to promote learners or solve problems. Such innovation may be a new form or a new way of teaching or a newly developed invention or obviously adapted from the original, such as a new lesson, new activity, or new instructional techniques, or the media used in teaching.

An applicant for an academic rank must identify the concepts, principles, or theories related to the course content and the design of online lessons to demonstrate that the online lessons that the applicant develops on the learning management system (LMS) can be used to promote learners or solve problems according to the problem analysis and needs analysis for developing online lessons. The concept document may contain the following topics:

- Design principles of online lessons
- Educational theories

(3) The process and results of applying that innovation to learners in real situations. It must show results in developing learners to have desirable characteristics, with supporting evidence that there has been a change in learners in the desired direction, contributing to learning for both learners and teachers.

The applicant for an academic rank must demonstrate the process and output of the developed online lessons in the actual learning management with post-learning assessment to show that learners achieve the expected learning outcomes. During online learning activities, different kinds of support should be provided to learners (if any, the supporting data should be presented) to enable learners to complete the course. When online learning is complete, the lecturer shall make a report of online learning, which may cover the number of learners, academic achievement, satisfaction, benefits, recommendations, problems, and obstacles. All these are the evidence confirming positive changes in learners and contributing to learning for both learners and the lecturer. The concept document may contain the following topics:

- Instructions on how to use online lessons on the MUX system or other learning management system (LMS) that the applicant of the academic rank chooses to use.
- Learning process and knowledge assessment
- Results of developing learners to have desirable characteristics (learning results report)

## **2. The form of academic works for instructional development (in case of adopting online lessons as workload for applying for academic ranks)**

Academic works as educational products in the form of lessons, activities, or learning media with descriptions of the concepts for development and results of implementing with learners may be prepared as documents or electronic media (according to the Announcement of Mahidol University on the Definition, Forms, Publications, and Characteristics of Academic Works B.E. 2565 [2022]).

The applicant for academic rank must have academic contribution as online lessons or online courses taught on Mahidol University Extension (MUX) or other learning management system (LMS) of the organization that the

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applicant chooses to use. The applicant is also required to prepare a concept document for developing online learning innovation to explain the concepts of developing online lessons or online courses that are comprehensive and consistent with the definition of academic works for instructional development.

### 3. Publications of academic works for instructional development

Academic works may be published in the form of online educational products with descriptions of the development concept of learning innovation, instructions for use, and effects on learners (according to the Announcement of Mahidol University on the Definition, Forms, Publications, and Characteristics of Academic Works B.E. 2565 [2022]).

The applicant for academic rank is required to publish online lessons or online courses on a learning management system (LMS), or publish online lessons or online courses on Mahidol University Extension (MUx) or other learning management system (LMS) of the organization that the applicant chooses to use. Publishing on a learning management system (LMS) must include course descriptions that cover the scope of the content, instructions for learning, and learning outcomes of the course as shown in the example below.

The screenshot shows a course page on the Mahidol University Extension website. At the top, there is a navigation bar with the MU logo and menu items: หน้าหลัก, หลักสูตรของจีน, ศึกษา, คณะ, ตรวจสอบใบประกาศนียบัตร, ประกาศความเป็นส่วนตัว. The main heading is 'การออกแบบการเรียนการสอนสำหรับเรียนออนไลน์ (Instructional Design for Online Learning)' with the course code 'MU-CP'. Below the heading is a search bar and a blue 'ดูหลักสูตร' button. To the right is a course image with the title 'Instructional Design for Online Learning' and the subtitle 'การออกแบบการเรียนการสอนสำหรับเรียนออนไลน์'. Below the image is a table with social media icons and course details:

|   |                   |             |
|---|-------------------|-------------|
| 📺 | วิดีโอ            | 0001        |
| 📅 | สิ้นสุด           | 1 พ.ย. 2020 |
| 📄 | ความพยายามทั้งหมด | 0200        |

Below the table is a 'คำอธิบายรายวิชา' section with a yellow arrow icon. The text describes the importance of online learning and the role of instructional design. Below that is a 'Course Description' section with a yellow arrow icon, providing a more detailed overview of the course content and its goals.

## About the course

**Course title (Thai):** การออกแบบการเรียนการสอนสำหรับบทเรียนออนไลน์

**Course title (English):** Instructional design for online learning

**Faculty/organization of the developer:** Educational Technology Group, Educational Management Division

**Total online learning hours:** 9 hours

**Hours for learning each week or each time:** 1-3 hours/week

**Level of content:** Basic

**Format of learning:** Self-paced

**Language used as medium of instruction:** Thai

**Subtitle:** Yes

**This course is suitable for:**

1. Instructors who wish to apply the knowledge for designing and developing online lessons or online courses.
2. Speakers, coaches, tutors who wish to apply the knowledge for designing and developing short online training programs.
3. Educational staff, such as educational technologists, educators, or audio-visualists, who wish to apply the knowledge to help design and develop online lessons, courses, or training programs.

**Qualifications or requirements:** Basic knowledge of English reading comprehension

**Learning objectives (LOs)**

- LO1: To understand the principles of instructional design using ADDIE Model.
- LO2: To understand the meaning of educational theories related to instructional design for online learning.
- LO3: To be able to choose tools for organizing learning activities suitable for a specific educational theory.
- LO4: To be able to use suitable tools in LMS for learning activities and assessment.

**The policy for assessment, scoring criteria, passing/failing, and certificate (if any)**

Learners will receive an electronic certificate when they pass all tests with the assessment scores over 60%.

## Recommended learning activities

In this lesson, you will learn about instructional design process using the Addie Model

Activities this week include:

### 1. Introduction

- Introduction video of the course and learning objectives 12345

### 2. Instructional design process (ADDIE Model)

- Introduction video about instructional design and read more from the articles below:
  - <https://www.td.org/talent-development-glossary-terms/what-is-instructional-design>
  - <https://www.instructionaldesigncentral.com/whatisinstructionaldesign>
  - <https://www.instructionaldesigncentral.com/instructionaldesigntemplates>
- Lecturing video on ADDIE Model – ADDIE model (Analysis, Design, Development, Implementation, Evaluation)
- Interview video on a case study of need analysis from Mahidol University MOOC
- Interview video with a media production crew regarding the process of instructional media production and development for the course
- Interview video with the IT team regarding the operation of the LMS process and support systems of online learning
- Read more from the articles below:
  - <https://www.instructionaldesign.org/models/addie/>
  - <https://educationaltechnology.net/the-addie-model-instructional-design/>
  - <https://www.slideshare.net/eshikachattopadhyay/building-along-addie>

### 3. Lesson summary

- Summary video of the lesson on ADDIE Model
- Summary infographic of the lesson

### 4. Post-test quiz

- A multiple-choice quiz with 12 questions

#### 4. The number of hours of online lessons

Online lessons eligible to be used in applying for academic rank in Group 2 Academic Works of other natures (academic works for instructional development) shall have a minimum duration of online learning of 5 hours (refer to the condition for funding online lesson development of Mahidol University).

#### 5. The academic rank of assistant professor

The applicant may use an online lesson as an academic work of other natures (academic works for instructional development) to apply for the academic rank of assistant professor (refer to Mahidol University Regulations on Academic Ranks B.E. 2564 [2021]).

At least one research work and **one item of academic work of other natures** with a condition that academic work must be of **a quality level of B or better**.

**The characteristic of a quality level of B** (*the online lesson can be used for a particular group of learners and other groups*)

1. The design concept of instructional innovation is to be a creative work adapted from existing concepts or a new concept.

2. There is solid evidence that the developed study leads to learning or desirable characteristics of learners.

Article 25 The applicant of the academic rank of assistant professor must present his or her academic work with a quality level of "B" or better, which shall fit one of the following requirements:

- (1) At least two research works
- (2) At least one research work and at least one item of academic work of other natures
- (3) At least one research work and at least one textbook or book
- (4) At least one research work and at least one review article

*Mahidol University Regulations on Academic Ranks B.E. 2565 (2022)*



## 6. The academic rank of associate professor

The applicant may use one online lesson as an academic work of other natures (academic works for instructional development) to apply for the academic rank of associate professor (*refer to Mahidol University Regulations on Academic Ranks B.E. 2565 [2022]*).

At least one research work and at least one item of academic work of other natures, and **at least one academic work of other natures** and at least one academic article or a textbook or book, with a condition that academic work must be of **a quality level of B or better**.

**The characteristic of a quality level of B** (*the online lesson can be used for a particular group of learners and other groups*)

1. The design concept of instructional innovation is to be a creative work adapted from existing concepts or a new concept.

2. There is solid evidence that the developed study leads to learning or desirable characteristics of learners.

Article 33 The applicant of the academic rank of associate professor must present his or her academic work according to one of the following requirements:

(1) Academic work with a quality level of "B" or better

(1.1) One of the following types of academic work

(1.1.1) At least two research works

(1.1.2) At least one research work and at least one item of academic work of other natures

(1.2) At least one review article and at least one textbook or book

In case of at least one research work in Items (1.1.1) – (1.1.2) and at least one review article, the applicant must be the first author or the corresponding author.

In case of a textbook or book, the applicant must contribute at least 50 percent.

*Mahidol University Regulations on Academic Ranks B.E. 2565 (2022)*

## 7. The academic rank of professor

The applicant may use one online lesson as an academic work of other natures (academic works for instructional development) to apply for the academic rank of professor (*refer to Mahidol University Regulations on Academic Ranks B.E. 2565 [2022]*).

*The first approach:* At least one research work is published in an academic journal in an internationally accredited database as specified by the Higher Education Institution Officials Commission and **at least five academic works of other natures are published at the international level**, and at least one textbook or book, with a condition that academic work must be of **a quality level of A or better**.

*The second approach:* At least one research work is published in an academic journal in an internationally accredited database as specified by the Higher Education Institution Officials Commission and **at least five academic works of other natures are published at the international level, with at least two of which having a quality level of A+ and three others having a quality level of A or better**.

### The characteristics of a quality level of A

1. It has the same characteristics as Level B; and
2. There is solid evidence that the study is applicable to and can develop other groups of learners; and
3. The academic work is published in an academic journal related to instructional development with impact factors.

### The characteristics of a quality level of A+

1. It has the same characteristics as Level A; and
2. The academic work has been awarded or praised for the development of teaching/education or invention at the national and/or international level.

(Online lessons used to apply for the academic rank of professor with a quality level of A must be applicable to other groups of learners and published / the quality level of A+, the work must be awarded.)

(1) *The first approach:* The academic work with a quality level of “A” or better, including:

(1.1) Academic works that fit one of the following:

(1.1.1) At least five research works are published in academic journals listed in internationally accredited databases as specified by the Higher Education Institution Officials Commission.

(1.1.2) At least one research work is published in an academic journal listed in an internationally accredited database as specified by the Higher Education Institution Officials Commission and **at least five academic works of other natures are published at the international level**.

(1.2) At least one textbook or book

At least one academic article and at least one textbook or book

In case of at least two research works in Items (1.1.1) – (1.1.2), the applicant must be the first author or the corresponding author.

In case of a textbook or book, the applicant must contribute at least 50 percent.

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(2) *The second approach:* Academic works that fit one of the following:

(2.1) At least five research works are published in academic journals listed in internationally accredited databases as specified by the Higher Education Institution Officials Commission with at least two of which having a quality of “A+” and at least three of which having a quality of “A” or better.

(2.2) At least one research work is published in an academic journal listed in an internationally accredited database as specified by the Higher Education Institution Officials Commission and at least five academic works of other natures are published at the international level with at least two of which having a quality of “A+” and at least three of which having a quality of “A” or better.

(2.3) At least ten research works are published in academic journals listed in internationally accredited databases as specified by the Higher Education Institution Officials Commission with a quality of “A” or better.

In case of academic works in Items (2.1) – (2.2) at least two of them having a quality level of “A+” and at least one of them having a quality level of “A” or better, the applicant must be the first author or the corresponding author.

*Mahidol University Regulations on Academic Ranks B.E. 2565 (2022)*

#### 8. The number of learners

| <b>The number of online learners for applying for academic rank of assistant professor or associate professor<br/>(Quality Level B)</b>                           | <b>The number of online learners for applying for the academic rank of professor<br/>(Quality Level A)</b>  |
|---|---|
| In case of online lessons for the University students only, the number of learners shall comply with the principles stated in the course specifications or TQF 3. | In case of online lessons for the University students only, online lessons must be distributed to other groups of learners with the number of other groups of learners greater than or equal to the main target learners stated in the course specifications or TQF 3.  |
| In case of Massive Open Online Courses (MOOC), a minimum number is 250 registrants (refer to the conditions for funding online lessons of Mahidol University).    | In case of Massive Open Online Courses (MOOC), the number of the main target learners stated in the course specifications is at least 250 registrants (refer to the conditions for funding online lessons of Mahidol University). The number of other groups of learners shall be greater than or equal to the main target learners (in total at least 500 learners). |

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## 9. Definition of other groups of online learners

Other groups of learners refer to other target groups apart from the main target group (as stated in the concept document for instructional development of online lessons in the item of target group analysis).

### **Target group analysis**

(For the criteria level of A according to the criteria requirements of Kor Phor Or 64.) Other target groups should be analyzed to make available solid evidence that the academic work can be used to develop other groups of learners.

#### Main target groups

Lecturers/educational support personnel, such as educational technologists, or educators, or audio-visualists at Mahidol University who wish to use the knowledge in designing and developing online lessons/courses, online training programs.

#### Other target groups

1. Teachers/lecturers/educational support personnel, such as educational technologists, educators, or audio-visualists of other educational institutions
2. Speakers/coaches/tutors who wish to use the knowledge in designing and developing short online courses
3. Other professionals interested in educational business and online education
4. Students studying in education-related fields

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**10. Example of concept document for instructional development for online lessons**

**Concept document for instructional development for online lessons**

**On Instructional design for online learning**

**As a supporting qualification in application for the academic rank of.....**

**Presenter**

.....

**Faculty ..... Mahidol University**

**Date .....**

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## Chapter 1 Background of the Course

### Title of the course

การออกแบบการเรียนการสอนสำหรับบทเรียนออนไลน์

Instructional Design for Online Learning

### Main lecturer and co-lecturers

1. The main lecturer ..... contributing to the work by XX percent, including:
  - Composing and preparing all of the contents
  - Designing the lessons and learning activities
  - Obtaining case studies, designing interviews, and conducting interviews with case studies
  - Preparing quizzes, answers, and feedback
  - Lecturing on .....
  - Obtaining references and additional sources of learning
  - Verifying accuracy of the lessons
2. Co-lecturer ..... contributing to the work by XX percent, including:
  - Lecturing on .....
  - Assisting in obtaining references and additional sources of learning
3. Co-lecturer ..... contributing to the work by XX percent, including
  - Lecturing on .....
  - Assisting in obtaining references and additional sources of learning
  - Coordination

### Course description

Today, online learning has played a role and gained much popularity in the field of education. Mahidol University aims at developing online learning that is suitable for the current social conditions, learners, and technological changes in the digital era. A high-quality online course should start from a good design by the lecturer. Instructional design will help the lecturer to design the course systematically, analyze the target groups, choose the teaching approaches, media, and activities, as well as suitable evaluation and assessment techniques that serve the needs of learners. Ultimately, the instruction will achieve its objectives successfully.

## **Chapter 2 Concepts of Development**

### **2.1 Problem conditions**

#### **2.1.1 Analysis of general problems in traditional instruction**

Traditional instruction has constraints of time, place, and differences among individuals. Online learning can address these issues. In addition, online learning can enhance learners in various ways, such as knowledge sharing, interest-based learning, and no economic, spatial, and demographic constraints. Online learning can narrow the gap of education and promote learning based on learners' interests (Rafiq, Hashim, Yunun & Pazilah, 2019). In the modern world, knowledge is changing rapidly, forcing human beings to always keep pace with new information. Access to new knowledge is, therefore, crucial and desirable for people today. The existing methods of learning, training, and learning resources have limitations of time, place, publication, and personal differences. These are obstacles to new knowledge that each individual needs for their different purposes (Burns, 2020). In the meantime, technology keeps moving forward. Therefore, how knowledge is transferred to learners has developed to keep pace with technology. Online learning is an innovation of learning through which knowledge is transferred on the Internet, and learners can easily access anywhere and anytime. As a result, learners can access knowledge with ease at the time of their convenience. With online learning, people can develop learning based on their proficiencies. Online learning management can eliminate the restrictions of time of learners, individual differences (Aljaraideh, 2019) while distributing academic knowledge to interested individuals extensively and quickly.

#### **2.1.2 Analysis of course problems that require development**

The lecturer analyzes the problem conditions of the course that require development from which learners can adapt the knowledge to work and develop their performance in their organization (upskill–reskill) of the current society. New knowledge is emerging quickly. Online learning has stepped in to play a part and has become widely popular in the education sector. Educational institutions at all levels are aiming to develop online courses that are suitable for the current social conditions, different groups of learners, and technological changes in the digital era, to address limitations in the world. However, educational personnel still lack experience of online learning management in terms of instructional design, presentation techniques, teaching technology, and interaction engagement. Therefore, it is important to enhance the basic knowledge and understanding of educational personnel.



## **2.2 Concepts, theories, and principles of online lesson design**

### **2.2.1 Design principles of online learning**

Development of online learning is based on the design principles of ADDIE Model (Budoya, Kissaka & Mtebe, 2019), by following these procedures:

1. Analysis: The course designer analyzes the context of social changes and needs according to technological advancements, future trends of education, preparedness of the organization, and literature review to determine the scope of the content and the learning objectives of the lesson as shown in Analysis 01 (Annex A).

2. Design: The course designer composes and designs the lessons based on educational theories in all areas, including teaching and evaluation methods, the choice of media and knowledge transfer tools, content of the knowledge, and learning activities suitable for the determined learning objectives as shown in Analysis 02 (Annex B).

3. Development: This stage aims at producing learning media according to the design steps. The media production work involves the following:

- Lecturing and interviewing in the instructional video on 35 topics.
- Preparing three sets of quiz and answers, totally 28 items.
- Preparing interaction data to provide feedback of learning development (3 sets).
- Preparing additional sources of data on 22 topics.

4. Implementation: The course designer shall verify the content accuracy for publishing after uploading the learning media on MUX.

5. Evaluation: The course designer shall perform the evaluation of the course quality by experts in content and media (2 experts). The evaluation results of the two areas show that the course is complete and suitable and should pass the evaluation, as shown in the document (Annex C).

### **2.2.2 Concepts and theories**

The course design for the course titled "Instructional Design for Online Learning" employs the educational theories and concepts of using the media as described in each learning topics as follows:

#### **2.2.2.1 Topic 1 includes:**

##### Title of the topic

Introduction and ADDIE Model

##### Learning objectives of the topic

(LO1) Learning objectives of instructional design using the ADDIE Model

##### Instructional methods and relevant educational theories

The level of learning of this topic focuses on the understanding of needs analysis, which is a critical stage for learners to understand at the beginning. Therefore, behaviorism theory (Skinner, 1988) is adopted to transfer the theoretical content knowledge through lectures to transfer knowledge to learners through storytelling and discussion.

Processes of the ADDIE Model are divided into different clips for each topic to help learners understand easily and prevent them from getting fatigued from receiving too much information according to the cognitive theory of learning (Bruner, 2006). Case studies are added to show examples of needs analysis from experienced personnel in order to obtain opinions from actual experiences, make it easier to remember, understand, apply, and follow up in self-learning (Dale, 1969). Additional reading materials are distributed to support understanding for learners who love reading to promote self-learning from useful sources of information according to the theory of Zone of Proximal Development (Vygotsky, 1978). A pretest will be administered for learners to be aware of their existing knowledge before learning and a post-test administered to analyze and review knowledge. Learners will receive feedback for their development, understanding, and thinking.

Media / activities

- Introduction video of the lesson (3.44 minutes)
- Pretest (10 items)
- Reading materials regarding the definition and importance of instructional design
- Video on instructional design (4.09 minutes)
- Video on ADDIE Model (7.04 minutes)
- Reading material on ADDIE Model
- Video on Analysis (5.49 minutes)
- Reading material on Analysis

## **Chapter 3 Instructions for Use and Learning Process**

### **3.1 Instructions of using online lessons through the MUx system**

#### **3.1.1 Access to MOOC for the general public**

- Go to the menu "Log in"
- The general public can access the system by clicking the SIGN IN button and entering email and password.
- Students and staff of Mahidol University can access the system by clicking the MU LOGIN and log in with the university's email address.

#### **3.1.2 How to search for courses**

- Go to "Course Search" menu
- Enter a course number
- Enter the course title or keyword and press SEARCH
- Or select the course from the faculty based on the learning format and literacy interested through filter on the website

#### **3.1.3 How to view enrolled courses**

- Go to the menu "My Courses"
- When logged in, learners using the general public account will see only MOOC courses open to any interested individual without restrictions.
- Learners logged in with Mahidol University students and staff through MU LOGIN can see all MOOC courses and Small Private Online Course (SPOC) for Mahidol University students.
- At the page showing courses, if the courses are still open for registration, learners will see the ENROLL button on the first page of the course.
- Enrolled courses will display on the MY COURSES page. Learners can access by clicking the MY COURSES menu at the top of the webpage.

### **3.2 Learning process and knowledge assessment**

This topic shows the role of learners in detail for each step (the outcomes, activities [interactions], tools, and quizzes).

The stage of designing the learning process for this course determines learners to learn independently and review the knowledge for each topic in order to avoid overload of information on each topic. The process of learning for each topic is as follows:

3.2.1 On the topic of introduction and ADDIE Model, learners learn independently as follows:

1. Watch the lecture video on course introduction.
2. Do the pretest (15 items of multi-choice questions).
3. Read the learning material (infographic) on the topics of definition and importance of instructional design.
4. Watch the lecture video on ADDIE Model.
5. Read additional material on the topic of ADDIE Model from external sources.
6. Read the learning material (infographic) on the topic on ADDIE Model.
7. Watch the lecture video on Needs Analysis.
8. Read additional material on the topic of Needs Analysis from external sources.
9. Watch the video of the first case study: Interview with experienced personnel on Needs Analysis.
10. Watch the video of the second case study: Interview with experienced personnel on Needs Analysis.
11. Watch the video of the third case study: Interview with experienced personnel on Needs Analysis.
12. Watch the lecture video on Design.
13. Read additional material on Development.
14. Watch the lecture video on Development.
15. Watch the video of the case study: Interview with experienced personnel on Development.

### 3.3 Results of developing learners to have desirable characteristics

#### 3.3.1 Statistical data on using online lessons

The number of enrolled learners = xxx persons.

The number of learners who complete the course = xxx persons.

#### 3.3.2 The result of post-learning opinion survey

#### Part 1: Demographic information of the questionnaire respondents

| Data   | Number<br>(persons) | Percent |
|--|---------------------|---------|
| <b>1.1 Sex</b>                                   |                     |         |
| Female   | xxx                 | xxx     |
| Male   | xxx                 | xxx     |
| Total  | xxx                 | xxx     |
| <b>1.2 Age</b>                                   |                     |         |
| Lower than 20                                    | xxx                 | xxx     |
| 21-40 years old                                  | xxx                 | xxx     |
| 41-60 years old                                  | xxx                 | xxx     |
| 60 and above                                     | xxx                 | xxx     |
| <b>Total</b>                                     | xxx                 | xxx     |
| <b>1.3 Highest education level</b>               |                     |         |
| Lower than a bachelor's degree                   | xxx                 | xxx     |
| Bachelor's degree or equivalent                  | xxx                 | xxx     |
| Master's degree or equivalent                    | xxx                 | xxx     |
| Higher than master's degree                      | xxx                 | xxx     |
| <b>Total</b>                                     | xxx                 | xxx     |
| <b>1.4 Current status</b>                        |                     |         |
| High school / university students                | xxx                 | xxx     |
| In school and working / running private business | xxx                 | xxx     |
| Working / running private business               | xxx                 | xxx     |
| Unemployed                                       | xxx                 | xxx     |
| Total  | xxx                 | xxx     |

(Translation)

Part 2: Satisfaction with online learning through the MUx system

| Satisfaction topics   | N   | Satisfaction level (%) |      |          |     |        |
|---|-----|------------------------|------|----------|-----|--------|
|   |     | Highest                | High | Moderate | Low | Lowest |
| You can search for content easily and the content serves your needs.    | xxx | xxx                    | xxx  | xxx      | xxx | xxx    |
| Difficulty level of this lesson matches your background knowledge.      | xxx | xxx                    | xxx  | xxx      | xxx | xxx    |
| Content presentation is easy and interesting.                           | xxx | xxx                    | xxx  | xxx      | xxx | xxx    |
| You gain enough support and suggestions for using the system.           | xxx | xxx                    | xxx  | xxx      | xxx | xxx    |
| The course serves your needs.   | xxx | xxx                    | xxx  | xxx      | xxx | xxx    |
| You can apply the knowledge from this course to your work immediately.  | xxx | xxx                    | xxx  | xxx      | xxx | xxx    |
| You can do the learning activities in this course conveniently.         | xxx | xxx                    | xxx  | xxx      | xxx | xxx    |
| You are satisfied with your experience learning through the MUx system. | xxx | xxx                    | xxx  | xxx      | xxx | xxx    |
| Total   | xxx | xxx                    | xxx  | xxx      | xxx | xxx    |

## References

- Aljaraideh, Y. (2019). Massive Open Online Learning (MOOC) benefits and challenges: A case study in Jordanian context. *International Journal of Instruction*, 12(4), 65-78.
- Bruner, J. S. (2006). *In search of pedagogy volume I: The selected works of Jerome Bruner, 1957-1978*. Routledge.
- Budoya, C., Kissaka, M., & Mtebe, J. (2019). Instructional design enabled Agile method using ADDIE model and Feature Driven Development method. *International Journal of Education and Development using ICT*, 15(1).
- Burns, R. (2020). *Adult Learner at Work: The challenges of lifelong education in the new millenium*. Routledge.
- Dale, E. (1969). *Audiovisual methods in teaching* (3rd ed.). New York: Dryden Press.
- Rafiq, K. R. M., Hashim, H., Yunus, M. M., & Pazilah, F. N. (2019). Developing a MOOC for communicative english: A battle of instructional designs. *International Journal of Innovation, Creativity and Change*, 7(7), 29-39.
- Skinner, B. F. (1988). *The selection of behavior: The operant behaviorism of BF Skinner: Comments and consequences*. CUP Archive.
- Vygotsky, L.S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.