

# AD109

## Learning Design for Course Developers

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**Educational Media & Resources**





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## **Educational Media & Resources**

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# Course Guide

## Learning Design for Course Developers

## 1. Welcome

This online training module provides essential knowledge for the SUSS Course Developer to commence work on designing and developing an engaging course for the SUSS student. It provides relevant theoretical principles and supporting practices and processes in relation to writing content, learning activities and assessments that align to learning outcomes. It also highlights important copyright issues to take note of when incorporating material into the SUSS StudyGuide and lesson recordings.

## 2. Course Description and Aims

You have been tasked to develop a course for SUSS. As a subject matter expert, you have the required domain knowledge. However, you may not have the knowledge and skills to design a course that fits the SUSS teaching and learning context. Developing a course requires, for instance, knowledge of what constitutes a meaningful learning activity and how to design outcomes-based assessment and how to use copyrighted materials.

AD109 is an online training module to prepare you for the task ahead and to share with you what is expected of you as a SUSS course developer. Take note that this training module is a pre-requisite for all SUSS course developers. AD109 will give you the essential knowledge to get you started on your course design. It is also meant as a resource which you can refer to during the course of your development work.

### Course Structure

This training module consists of four study units.

#### **Study Unit 1: Getting Started**

- Chapter 1: Developing a SUSS Course
- Chapter 2: Knowing My Role as a Course Developer

#### **Study Unit 2: Learning Outcomes and Assessments**

- Chapter 1: Writing Learning Outcomes
- Chapter 2: Designing Assessments

### **Study Unit 3: Designing for Learner Engagement**

- Chapter 1: Developing the StudyGuide
- Chapter 2: Designing Engaging Learning Activities

### **Study Unit 4: Academic Integrity**

- Chapter 1: Respecting Copyrights
- Chapter 2: What Next

### 3. Learning Outcomes

By the end of this course, you should be able to:

- Explain the components of a SUSS course and the underlying factors that make a course engaging.
- Explain the role of a Course Developer.
- Write course learning outcomes that are aligned to the programme outcomes.
- Develop effective assessments that measure the attainment of learning outcomes.
- Develop engaging learning content for StudyGuide.
- Design engaging learning activities for blended learning.
- Apply knowledge of copyright issues to course development work.

## 4. Learning Mode

AD109 adopts a similar design as the course which you are expected to develop for your students. The intent is that you will, as you go through this module, experience what a SUSS student will also experience when he/she accesses the online course content. This will give you a good, first-hand feel on what works best as you design your own course.

The course that you will develop will be in a format known as a “StudyGuide”. A StudyGuide is a digital learning resource which students download from their mobile devices (such as tablets and smartphones), as well as laptops and desktops. Similarly, for AD109, this module is a downloadable resource for you to access via your mobile devices.

As you go through this module, you can:

- add bookmarks
- make highlights
- write personal notes
- share notes with other users

Use these features to help you keep track of your own learning.

And most importantly, enjoy the learning experience!

**Study  
Unit**

**1**

**Getting Started**

# Chapter 1: Developing a SUSS Course

## Learning Outcomes

By the end of this Chapter, you will be able to:

1. Describe the key attributes of a well-designed course.
2. List the main elements of a SUSS course relevant to you as a course developer.
3. Explain what makes a course engaging based on the ARCS model of motivational design and characteristics of an adult learner.

## Overview

A SUSS course comprises learning content, interactions and assessments. As a course developer, you have been engaged to help develop these resources. A well-written course is one where students find the learning engaging, and can attain the desired learning outcomes at the end of the course. This chapter provides you with a broad overview of the key components of a SUSS course and the underlying factors that make a course engaging.

### 1.1 The Big Picture

As a course developer, your main task is to design and develop a course based on a set of learning outcomes and topics. At SUSS, a typical course comprises a StudyGuide or an Interactive StudyGuide (iSG), Chunked Lesson Recordings (CLR), intro video and a prescribed textbook. These make up the main learning content for our students.

Learning takes place through self-study as well as interactions amongst students and with the instructor. Such interactions take the form of online or face-to-face learning activities. To help students gauge their level of understanding, formative assessments, graded assignments, and written examinations are conducted.

A well-designed course comprises all elements relevant to content, interactions, and assessments which are complementary and match the desired learning outcomes. The

course learning outcomes and topics are listed in the **Course Definitive Document (CDD)**.



**Figure 1.1** SUSS Teaching & Learning Context

SUSS courses are designed to provide flexibility for students to learn anytime, anywhere.

- The iSG and CLR are accessible via a desktop, a laptop or mobile devices.
- Instructors and students will interact via online discussion forums or virtual classroom systems available on the university's Learning Management System (LMS) – Canvas.
- All assignments and online quizzes are done and submitted online via the LMS.

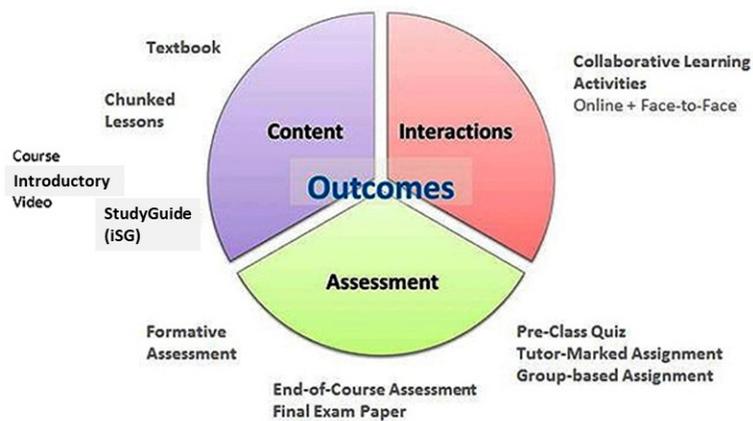
Most SUSS courses are delivered using a **blended learning** approach. Students learn via the online mode as well as face-to-face, instructor-led seminars. Our instructors (also known as teaching associates) play a critical role. They provide the necessary learning interventions to ensure that our students achieve the intended learning outcomes as they go through the prepared learning resources and planned activities.

To get a good overview of teaching and learning at SUSS, refer to:

- AD100: Teaching and Learning at SUSS

## 1.2 Key Elements of a SUSS Course

The following diagram and table show the key elements. You may not be required to work on all of them. The scope of work varies as determined by the Head of Programme (HoP).



**Figure 1.2** SUSS Teaching & Learning Context – Key Elements

**Table 1.1** Key Elements

Key Elements	Brief Description
StudyGuide (iSG)	<p>The iSG is essentially an electronic publication with multimedia features and links to online learning resources. It aggregates learning materials associated with a SUSS course in one downloadable document. The iSG comprises a Course Guide and Study Units with links to multimedia and interactive resources such as introductory video, chunked lesson recordings and quizzes.</p> <p>More about this in Study Unit 3, Chapter 1: Developing the StudyGuide.</p>
Chunked Lesson Recordings (CLR)	<p>CLRs are bite-sized instructional content presented as video recordings or voice-annotated slides by a course developer.</p> <p>More about this in Study Unit 3, Chapter 1: Developing the StudyGuide.</p>
Course Introductory Video	<p>This is a video which shows the course developer or instructor giving a short introduction of the course with emphasis on why the course is important and how it relates to real world issues. This video is embedded in the iSG.</p> <p>More about this in Study Unit 3, Chapter 1: Developing the StudyGuide.</p>

Key Elements	Brief Description
Textbook	<p>Most SUSS courses come with a prescribed textbook. Students are given a copy of the printed and/or electronic form (eTextbook).</p>
Formative Assessment	<p>For most courses, formative assessments typically take the form of an online, non-graded, multiple-choice questions (MCQs) with feedback. Students can access these assessments via iSG.</p> <p>More about this in Study Unit 2, Chapter 2: Designing Assessments.</p>
Pre-class Quiz	<p>For most courses, there is a prescribed set of graded online quizzes in the form of MCQs. Students are required to attempt the quizzes before they attend the face-to-face, instructor-led seminar sessions. Students can access these assessments via LMS.</p>
Tutor-marked Assignment (TMA)	<p>These assignments are part of the continuous assessment component which students need to submit during the semester. Students will receive their scores and qualitative feedback from their instructors after the assignments have been marked.</p> <p>View a sample <a href="#">TMA</a>.</p>
Group-based Assignment (GBA)	<p>Students form groups to do these assignments which are part of the continuous assessment component. Submission is usually made towards the end of the semester.</p>

Key Elements	Brief Description
	View a sample <a href="#">GBA</a> .
Exam Question Paper	<p>This is a typical exam paper which students are required to undertake at the end of the semester.</p> <p>View a sample <a href="#">Exam Question Paper</a></p>
End-of-Course Assessment (ECA)	<p>For some courses, instead of a final exam, students do an ECA. This an individual activity where a student is required to submit a report, a set of PowerPoint slides, and a video recording of his/her presentation.</p> <p>View a sample <a href="#">ECA</a>.</p>
Collaborative Learning Activities	<p>These are tasks facilitated by the course instructor to foster sharing of knowledge and learning amongst students. They can be delivered in the form of online and/or face-to-face seminar sessions.</p> <p>More about this is covered in Study Unit 3, Chapter 2: Designing Learning Activities</p>



### Reflect 1.1

As a course developer, what specific elements of a SUSS course am I required to develop?

## 1.3 What Makes a Course Engaging?

What makes a set of course materials better than another depends largely on you. Designing a course is like preparing a meal. The chef needs to decide what's on the menu and the ingredients that go into preparing each dish. But a great meal is more than that. It is also about the presentation, the setting, and even the company of fellow diners/guests. In the same way, you will need to consider the range of elements that contribute to making a course engaging for your students.



### Activity 1.1

I find a course engaging if it has... (check all that apply)

- Real-world examples that I can identify with.
- Questions that cause me to pause, reflect and think.
- Well-written learning outcomes that allow me to monitor my learning progress.
- Quizzes that I can try out with feedback that will allow me to check my understanding of the subject.
- Content presented in a multimedia format that enhances my understanding of the subject.
- Activities that allow me to interact with my classmates.

Fundamentally, an engaging course is one that motivates the student to learn. The ARCS model of motivational, designed by Keller (1987) and Keller and Suzuki (1987), proposes four dimensions of motivation, and the related tactics to adopt in course design.



**Figure 1.3** Keller's ARCS Model of Motivational Design

(Source: [www.arcsmodel.com](http://www.arcsmodel.com))



## Activity 1.2

**Table 1.2** ARCS Model Components

Attention	Relevance	Confidence	Satisfaction
<b>Perceptual Arousal</b> Provide novelty and surprise	<b>Goal Orientation</b> Present objectives and useful purpose of instruction and specific methods for successful achievement	<b>Learning Requirements</b> Inform students about learning and performance requirements and assessment criteria	<b>Intrinsic Reinforcement</b> Encourage and support intrinsic enjoyment to the learning experience

<b>Attention</b>	<b>Relevance</b>	<b>Confidence</b>	<b>Satisfaction</b>
<p><b>Inquiry Arousal</b></p> <p>Stimulate curiosity by posing questions or problems to solve</p>	<p><b>Motive Matching</b></p> <p>Match objectives to student needs and motives</p>	<p><b>Successful Opportunities</b></p> <p>Provide challenging and meaningful opportunities for successful learning</p>	<p><b>Extrinsic Rewards</b></p> <p>Provide positive reinforcement and motivational feedback</p>
<p><b>Variability</b></p> <p>Incorporate a range of methods and media to meet students' varying needs</p>	<p><b>Familiarity</b></p> <p>Present content in ways that are understandable and that related to the learners' experiences and values</p>	<p><b>Personal Responsibility</b></p> <p>Link learning success to students' personal effort and ability</p>	<p><b>Equity</b></p> <p>Maintain consistent standards and consequences for success</p>

(Source: [http://juliettausend.files.wordpress.com/2013/07/arcs\\_model\\_components\\_table.jpg](http://juliettausend.files.wordpress.com/2013/07/arcs_model_components_table.jpg) )

It is important to also remember that SUSS students who are enrolled in our part-time programmes are working adults. Based on well-accepted principles of adult learning, the following distinguishing characteristics of adult learners were suggested by Wlodkowski (2008).

Adult learners are more likely to:

- Consider **relevance** as the ultimate criterion for sustaining interest, i.e., what matters instead of what is “playful or stimulating”.
- Be more **critical** and more **self-assured** about how they judge the value of what they are learning.
- Be **reluctant to learn what they cannot endorse** based on its value, usefulness, or contributions to their learning goals.
- Require **respect** from their teachers or instructors as a condition for learning.
- **Actively test** what they have learnt in real life work settings.
- Use their personal **experience and prior knowledge** as consciously and as directly as possible while learning.
- **Integrate new learning** into their life roles, e.g., as spouses, parents, and employees.



### Reflect 1.2

To what extent do I agree with this portrayal of the adult learner?

Consider each aspect of the ARCS model and the characteristics of the adult learner as you develop your course content and learning activities. You will decide how these can be presented in a way that makes learning compelling for your students.

## References

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## Chapter 2: Knowing My Role as a Course Developer

### Learning Outcomes

By the end of this Chapter, you will be able to:

1. List the items that a course developer needs to produce.
2. Elaborate on the timeline for the development of a course.

### Overview

As a course developer, you will be producing or revising materials in collaboration with your Head of Programme (HoP) and course development and support team from the Educational Media & Resources (EMR) department. In this chapter, you will learn about your role in producing these materials as well as the workflow and timelines involved.

### 2.1 What is Expected of Me to Deliver

In a typical 5-credit unit (CU) blended course, there are F2F seminar sessions with chunked lesson recordings made available to your students and linked from the StudyGuide.

The role of a course developer is to produce the following types of learning materials when writing the StudyGuide:

- Create accurate, relevant and engaging content.
- Produce quality materials, which enhance students' learning.
- Comply with copyright issues when writing the content.
- Adhere to the agreed timeline to complete the project on time.

The deliverables are produced in three phases within a specific timeline worked out between you and your Head of Programme (HoP).

You will be working closely with the assigned Project Manager, Audio and Video member and your HoP to finalise the materials. The deliverables for each phase are listed in the table below.

**Table 1.3** Course Development Deliverables

Course Development	Deliverables
<b>Phase 1</b>	<ul style="list-style-type: none"> <li>• Course Definitive Document (CDD)</li> <li>• StudyGuide (Course Guide and Study Units)</li> <li>• Formative Quiz</li> <li>• Content Checklist</li> <li>• Copyright Declaration Form (for StudyGuide)</li> </ul>
<b>Phase 2</b>	<ul style="list-style-type: none"> <li>• Chunked Lesson Recordings</li> <li>• Course Introductory Video</li> <li>• Copyright Declaration Form (for Chunked Lesson Recordings)</li> </ul>
<b>Phase 3</b>	<ul style="list-style-type: none"> <li>• Exam Questions/Marking Guide (if necessary)</li> <li>• TMAs/GBAs/Marking Guide (if necessary)</li> <li>• Online/Pre-Class/Pre-Course Quiz</li> </ul>

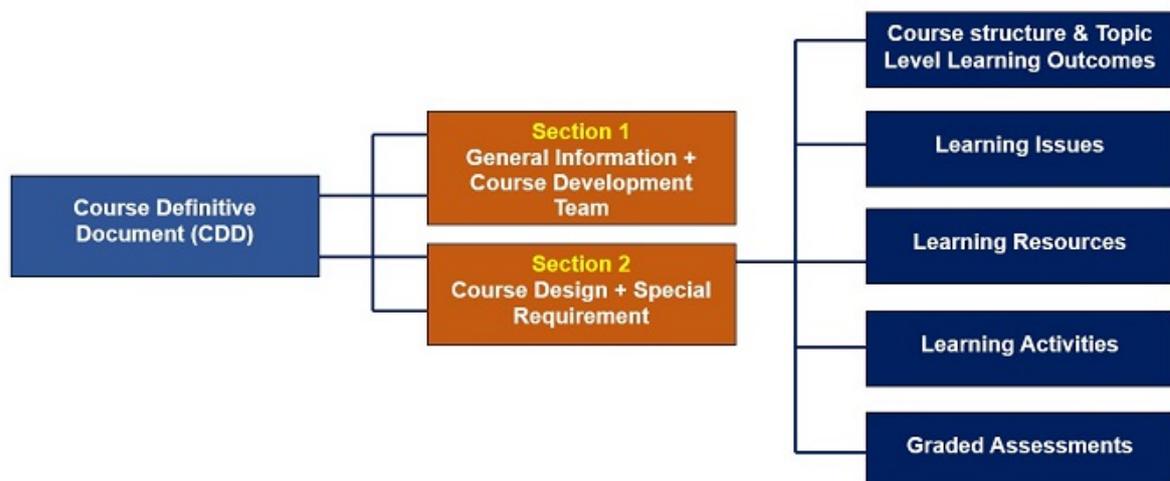
### 2.1.1 Phase 1 Deliverables

In this phase, as a course developer and content expert, you will work to:

- write the learning outcomes
- develop content and assessments that meet the learning outcomes
- organise content based on learning units (i.e. study units-chapters-topics) and design appropriate learning activities
- design appropriate multimedia and interactive elements

## Course Definitive Document (CDD)

This document provides a framework for the development of a SUSS course. The CDD contains important information on the course structure, the schedule, and the overall assessment.



**Figure 1.4** Main Sections of Course Definitive Document (CDD)

Listed below are short explanations of the main sections of the CDD.

### Section 1 - Administrative Information

Course information can be obtained from course proposal.

### Section 2 - Instructional Framework

Section 2: Comprises section 2A and 2B.

Section 2A – Course Design provides information about the planning of the course.

Section 2B – Special Requirement specify any other requirement needed for the course.

### Course Structure & Topic Level Learning Outcomes

You should plan the course based on study units, chapters, and topics in Section 2A - Course Design. You should also provide the learning outcomes relevant to each topic.

## Learning Issues

You should indicate any learning issue which students may encounter during their lessons. If students had difficulty learning a specific concept in a topic or you foresee they might find it difficult to understand, such issues should be included under this column. In a course development, we can use various strategies to address these listed issues, such as through chunked lesson recordings, multimedia elements, and online or class activities. You will learn more about how to write learning outcomes in the next chapter.

## Learning Resources

Learning resources refer to elements which enhance students' learning. You may decide to develop chunked lesson recordings in the form of voice-annotated presentation slides or video presentations, or appropriate multimedia elements such as graphics, diagrams, instructional videos, etc. You will learn more about developing chunked lesson recordings in Study Unit 3, Chapter 1 Developing the StudyGuide.

## Learning Activities

In this section, you should design the learning activities for both online and face-to-face lessons. These activities are aligned to the learning outcomes and provide essential information on the course to help course instructors plan their face-to-face or online sessions. Additional documents and information, such as lesson plan to serve as course guide for instructors, may be included in Annex. You will learn more about designing learning activities in Study Unit 3 Chapter 2 Designing Engaging Learning Activities.

## Graded Assessments

You should indicate all graded assignments and the deadlines for submission of assignments.

Once you complete this document, you should send it to the Project Manager, and the HoP for review. The final approval will be given by the HoP.

View a sample [CDD](#).

## **StudyGuide**

The StudyGuide contains the Course Guide and the Study Units. Details on what goes into the StudyGuide are provided in Study Unit 3, Chapter 1: Developing the StudyGuide.

## **Formative Assessment**

The purpose of a Formative Assessment is to allow students to monitor their own learning progress during the course. This type of assessment is typically not graded and provides for explicit feedback to the student based on their responses to the questions. The feedback can also direct students to specific resources from which they can learn more e.g. Textbook. For a 5-CU course, you are required to develop a minimum of 40 questions covering all the study units.

View a sample [Formative Assessment](#).

## **Content Checklist**

The Content Checklist provides a list of the various materials that you intend to incorporate into your course. This checklist will be given to students prior to course commencement so that they know they have received all the required learning materials e.g. StudyGuides, Textbooks.

View a sample [Content Checklist](#).

## **Copyright Declaration Form**

You will certainly be exploring use of various resources to enhance your course content. It is important that the materials you use do not infringe any copyrights. If there is need to seek permission to use any copyrighted materials, you can indicate these in the form. The Project Manager will write to the relevant sources to seek permission for use in the course

you are developing. If you are required to develop the StudyGuide and chunked lesson recordings, you will need to complete separate forms for these two resources. The form for chunked lesson recordings can be submitted later as part of Phase 2 deliverables. It is important for you to duly fill, sign and submit the Copyright Declaration forms timely. Copyright Declaration forms that are not properly filled or not submitted will result in delay of production of StudyGuide and course development payment.

You will learn more about the copyright issues in Study Unit 4, Chapter 1: Respecting Copyright.

View a sample [Copyright Declaration Form](#).

### 2.1.2 Phase 2 Deliverables

#### **Chunked Lesson Recordings**

Chunked Lesson Recordings are created to:

- provide an overview to a study unit/chapter/topic
- connect and summarise key learning points
- elaborate and explain specific concepts which are better achieved through direct instructions

You will learn more about developing chunked lesson recordings in Study Unit 3, Chapter 1: Developing the StudyGuide.

#### **Course Introductory Video**

The Introductory Video is important to help establish teaching presence and set the right tone for the course.

The key elements of an introductory video are:

1. A short introduction on the gist (or overview) of the course -- why the course is important and how it fits within the discipline.

2. A short elaboration or an example that illustrates how topics in the course are relevant to real life situations or to the industry.
3. Information on organisation, structure, and learning outcomes of the course.
4. Instructor's expectations and requirements of the students.
5. Elaboration of appropriate etiquette and academic integrity issues.
6. Information on how students will be assessed.
7. Tips on how best to learn and do well for the course.
8. Instructor's personal enthusiasm and interest in the subject matter.

You are required to write a script of not more than 200 words and send it to the assigned Audio and Video member in EMR and HoP for approval - at least a week before the scheduled video shoot. The AV team will work with you on the actual production of the video.

Please note that all introductory videos must have a facial recording of the course developer, HoP or course lead, to introduce students to the course.

View a sample [video script](#).

### 2.1.3 Phase 3 Deliverables

#### **Assessments**

If you are writing a new course, or redeveloping an existing one, you may be asked to develop all the necessary assessments, such as, Pre-class Quiz, Tutor-marked Assignments (TMAs), Group-based Assignments (GBAs), and their corresponding marking guides. Pre-class Quizzes are developed to encourage students to go through any assigned readings prior to class attendance.

Detailed information on writing an assessment can be found in Study Unit 2 Chapter 2: Designing Assessments.

Important to Note:

1. All deliverables will be reviewed by the HoP for final approval.

2. The course will be pilot tested prior to implementation. You should do a final check to ensure accuracy of content prior to the pilot test.
3. After the course has been implemented for one semester, it will be sent for review by an external assessor. You will be required to make the necessary changes as advised by the HoP.

## 2.2 Course Development Timeline

The timeline is given as a guideline and it will vary depending on the nature of development, whether new, revision, or revamp, and the extent of work involved. Specific dates for each deliverable will be discussed during the kick-off meeting. It is important that you plan ahead and adhere to the agreed deadlines.

Below is the timeline for each development phase:

**Table 1.4** Course Development Timeline

	<b>Timeline</b>
<b>Phase 1</b>	<b>3-4 months</b>  Deliverables: <ul style="list-style-type: none"> <li>• CDD</li> <li>• StudyGuide</li> <li>• Formative Assessment</li> <li>• Content Checklist</li> <li>• Copyright Declaration Form</li> </ul>
<b>Phase 2</b>	<b>2-3 months</b>  Deliverables: <ul style="list-style-type: none"> <li>• Chunked Lesson Recordings</li> <li>• Introductory Video</li> </ul>

	Timeline
	<ul style="list-style-type: none"> <li>• Copyright Declaration Form</li> </ul>
<b>Phase 3</b>	<p><b>1-2 months</b></p> <p>Deliverables:</p> <ul style="list-style-type: none"> <li>• Exam Questions with Marking Guide</li> <li>• TMA / GBAs / Marking Guide</li> <li>• Online/Pre-Class/Pre-Course Quiz</li> </ul> <p>Necessary Amendment after Pilot Trial / External Assessment</p>

An course development timeline is based on the pilot trial date of the course depending on the term in which it is presented.

See below the timeline for the pilot trial:

Pilot Trial	Period
January Semester	1 <sup>st</sup> week of October to 2 <sup>nd</sup> week of November
July Semester	1 <sup>st</sup> week of April to 2 <sup>nd</sup> week of May

You will note that the pilot trial is conducted around a month prior to the date StudyGuide is accessible by the students. This is to allow time for any last minute amendments which may become necessary after the test. **If the amendments concern the StudyGuide or chunked lessons recordings, you will be required to make the necessary amendments.** If the amendments involve some technical issues, EMR will rectify them.

## Summary

In this chapter, you have learnt the following:

- The deliverables for a course based on the three development phases.
- The development workflow.
- How long the development of each phase takes.
- What you need to take note of to ensure that you are able to complete the tasks based on the agreed deadlines.

## Formative Assessment

1. A well-designed course comprises of the following elements:
  - a. Assessment
  - b. Content
  - c. Interactions
  - d. All of the above
  
2. ARCS as defined by Keller's model of motivation stands for \_\_\_\_\_.
  - a. Attention, Reality, Confidence, Satisfaction
  - b. Attention, Relevance, Commitment, Satisfaction
  - c. Attention, Relevance, Confidence, Sustainability
  - d. Attention, Relevance, Confidence, Satisfaction
  
3. In describing the typical adult learner, which of the following statements is **incorrect**.
  - a. The adult learner wants to integrate new learning into their life roles.
  - b. The adult learner tends to be more critical and self-assured because of past work experience and prior knowledge.
  - c. The adult learner requires respect from the instructor as a condition for learning.
  - d. The adult learner uses relevance as the ultimate criterion for sustaining interest.

## Solutions or Suggested Answers

### Activity 1.1

All the responses are valid and you may have others that you can add on to this list

### Formative Assessment

1. A well-designed course comprises of the following elements:

a. Assessment

Correct. But there are also other important elements apart from assessment. Refer to Study Unit 1 Chapter 2 to learn more.

b. Content

Correct. But there are also other important elements apart from content. Refer to Study Unit 1 Chapter 2 to learn more.

c. Interactions

Correct. But there are also other important elements apart from interactions. Refer to Study Unit 1 Chapter 2 to learn more.

d. All of the above

**Correct. A well-designed course comprises of elements related to assessment, content and interactions. Refer to Study Unit 1 Chapter 2 to learn more. The citation provided is a guideline. Please check each citation for accuracy before use.**

2. ARCS as defined by Keller's model of motivation stands for \_\_\_\_\_.

a. Attention, Reality, Confidence, Satisfaction

Almost correct except for one of the descriptors. Refer to Study Unit 1 Chapter 1 to learn more.

- b. Attention, Relevance, Commitment, Satisfaction

Almost correct except for one of the descriptors. Refer to Study Unit 1 Chapter 1 to learn more.

- c. Attention, Relevance, Confidence, Sustainability

Almost correct except for one of the descriptors. Refer to Study Unit 1 Chapter 1 to learn more.

- d. Attention, Relevance, Confidence, Satisfaction

**Correct. ARCS stands for Attention, Relevance, Confidence and Satisfaction. Refer to Study Unit 1 Chapter 1 to learn more.**

3. In describing the typical adult learner, which of the following statements is **incorrect**.

- a. The adult learner wants to integrate new learning into their life roles.

This is true of most adult learners as suggested by Wlodkowski, R.J. (2008). Refer to Study Unit 1 Chapter 1 to learn more.

- b. The adult learner tends to be more critical and self-assured because of past work experience and prior knowledge.

**Correct. This is not true of most adult learners. Refer again to the characteristics of adult learners as suggested by Wlodkowski, R.J. (2008). Refer to Study Unit 1 Chapter 1 to learn more.**

- c. The adult learner requires respect from the instructor as a condition for learning.

This is true of most adult learners as suggested by Wlodkowski, R.J. (2008). Refer to Study Unit 1 Chapter 1 to learn more.

- d. The adult learner uses relevance as the ultimate criterion for sustaining interest.

This is true of most adult learners as suggested by Wlodkowski, R.J. (2008).  
Refer to Study Unit 1 Chapter 1 to learn more.

# Study Unit 2

## Learning Outcomes and Assessments

# Chapter 1: Writing Learning Outcomes

## Learning Outcomes

By the end of this Chapter, you will be able to:

1. Explain the importance of learning outcomes.
2. Distinguish between programme, course and topic learning outcomes.
3. Explain the importance of aligning the topic learning outcomes to the course learning outcomes.
4. Adopt a systematic method to write learning outcomes using the "ABCD method".
5. Name the three domains of educational objectives listed under Bloom's Taxonomy.

## Overview

This chapter will begin with a short introduction on learning outcomes. This is important to help you to develop a broader understanding of SUSS's educational objectives, and how programme, course and topic learning outcomes are written and aligned to support the realisation of stated educational objectives. We will adopt the Bloom's Taxonomy of learning domains to write measurable learning outcomes using the "ABCD method".

## 1.1 Learning Outcomes

### What is a Learning Outcome?

A learning outcome is a statement that tells what learners should be able to do upon the completion of a segment of instruction.

A well-written learning outcome will:

- Enable the student to assess his/her own learning.

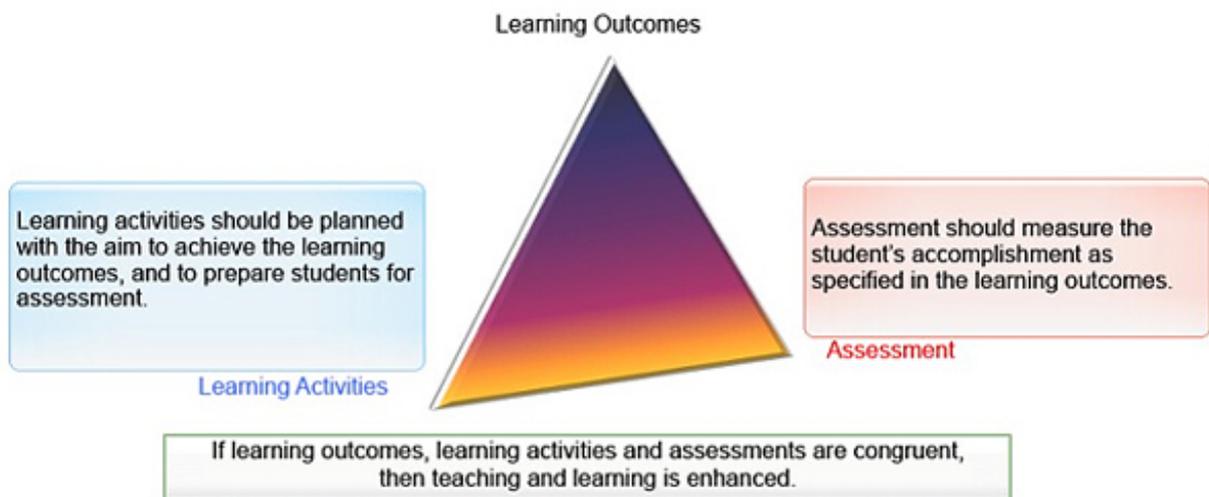
- Help the student to set priorities in learning.
- Guide the instructor in the delivery of instruction and evaluation of student achievement.

### Why are Learning Outcomes Important?

Learning outcomes are important because they:

- Define the type and depth of learning students are expected to achieve.
- Provide an objective benchmark for assessment.
- Communicate expectations to learners.

### How are Learning Outcomes Achieved?



**Figure 2.1** Learning Outcomes, Activities and Assessment



## Listen



This streaming audio requires Internet connection. Access it via Wi-Fi to avoid incurring data charges on your personal mobile

### Podcast

Instruction: Click here to listen to the audio explanation.

Click [here](#) to listen to the audio.<sup>i</sup>

This diagram illustrates the use of learning activities and assessments to achieve the desired learning outcomes. Learning activities should be planned with the aim to achieve the learning outcomes, and to prepare students for assessment. On the other hand, assessments should measure the student's accomplishment as specified in the learning outcomes. If learning outcomes, learning activities and assessments are congruent, then teaching and learning is enhanced.

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<sup>i</sup> [https://d2jifwt31jehd.cloudfront.net/AD109/others/AD109\\_AD109\\_su02ch01t01\\_1\\_aud1\\_v2\\_0.mp3](https://d2jifwt31jehd.cloudfront.net/AD109/others/AD109_AD109_su02ch01t01_1_aud1_v2_0.mp3)

## 1.2 Aligning Learning Outcomes at All Levels



### Activity 2.1

*Instruction: Complete the quiz to see if you can tell the difference among Programme Educational Objectives, Programme Learning Outcomes, and Topic Level Learning Outcomes.*

1. \_\_\_\_\_ are broad statements that describe what graduates are expected to attain a few years after graduation.
  - a. Programme Educational Objectives
  - b. Programme Learning Outcomes
  - c. Topic Level Learning Outcomes
  
2. \_\_\_\_\_ describe what students are expected to know and able to do after they graduate. These refer to knowledge, skills and behaviours that the students acquire as they progress through the programme.
  - a. Programme Educational Objectives
  - b. Programme Learning Outcomes
  - c. Topic Level Learning Outcomes
  
3. \_\_\_\_\_ are statements that specify what students are expected to know and able to do when they complete a course or a topic. They are also the primary building blocks of good curriculum design.
  - a. Programme Educational Objectives
  - b. Programme Learning Outcomes

---

c. Topic Level Learning Outcomes

### 1.2.1 What is the Relationship among Programme, Course and Topic Learning Outcomes?



**Figure 2.2** Programme, Course and Topic Learning Outcomes

**Programme Learning Outcomes are:**

- high level aims and broad expectations.
- achieved after the successful completion of ALL specified courses over the period of the undergraduate study for the specific programme.

Instruction: Click [here](#) to view an example of Programme Level Learning Outcomes.

**Course Learning Outcomes are:**

- derivatives of the programme learning outcomes.
- achieved after the successful completion of ONE specific course.
- written in the form of the type and depth of knowledge and understanding, as well as key skills achieved.

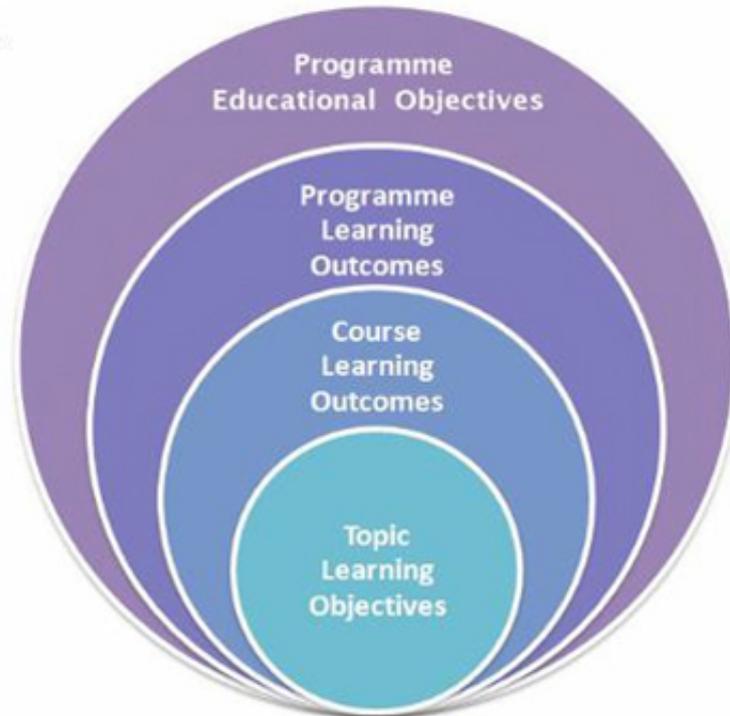
Instruction: Click [here](#) to view an example of Course Learning Outcomes

**Topic Learning Outcomes are:**

- achieved after the successful completion of a topic from a course
- written in the form of what a student is able to do (i.e. measurable and observable terms) in relation to discrete knowledge and understanding, and key skills

Instruction: Click [here](#) to view an example of Topic Learning Outcomes

## 1.2.2 Alignment of Educational Objectives and Learning Outcomes



**Figure 2.3** Alignment of Objectives and Outcomes



## Listen



This streaming audio requires Internet connection. Access it via Wi-Fi to avoid incurring data charges on your personal mobile plan.

### Podcast

Click [here](#) to listen to the audio. <sup>ii</sup>

The Head of Programme ensures that the Programme Learning Outcomes align with the Programme Educational Objectives. In turn, each course in the programme should have course learning outcomes that align with the Programme Outcomes.

As a course developer, you have to ensure that your Topic Learning Outcomes and Course Content align with the stated Course Learning Outcomes.

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<sup>ii</sup> [https://d2jifwt31jehd.cloudfront.net/AD109/others/AD109\\_AD109\\_su02ch01t01\\_2\\_aud2\\_v2\\_0.mp3](https://d2jifwt31jehd.cloudfront.net/AD109/others/AD109_AD109_su02ch01t01_2_aud2_v2_0.mp3)

## 1.3 How do I Write Learning Outcomes?

Consider the following learning outcomes.

At the end of this Topic, students will be able to:

1. appreciate the history of Federal Geographic Data Committee
2. grasp the significance of Section 2 Data Quality
3. fully understand the value of a Distribution Liability Statement



### Listen



This streaming audio requires Internet connection. Access it via Wi-Fi to avoid incurring data charges on your personal mobile plan.

### Podcast

Do you think students know what is expected of them?

Is the outcome observable or measurable?

How might you rewrite to improve the statements?

Click [here](#) to listen to the audio. <sup>iii</sup>

The verbs used here such as “appreciate”, “grasp”, “fully understand” are too general and vague. They are neither observable nor measurable. It is therefore important to

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<sup>iii</sup> [https://d2jifwt31jehd.cloudfront.net/AD109/others/AD109\\_AD109\\_su02ch01t01\\_3\\_aud3\\_v2\\_0.mp3](https://d2jifwt31jehd.cloudfront.net/AD109/others/AD109_AD109_su02ch01t01_3_aud3_v2_0.mp3)

use action verbs that would allow someone like the instructor to assess if the student has attained the required outcome.

## 1.4 Using ABCD Method and Bloom’s Taxonomy

What is the “ABCD Method” in Writing Learning Outcomes?

Using Roger Mager’s model (1962), refer to the table below and consider the following questions as you write your learning outcomes.

**Table 2.1** ABCD Method

Criteria	Performance
Audience	Who are my learners? What prior knowledge do they have?
Behaviour	What behaviour or action do I expect my learners to demonstrate after instruction? Is this behaviour observable and measurable?
Condition	What is the given condition for the demonstration of the required action/behaviour?
Degree	Is there a standard that my learners need to attain?

Using the first letters of the criteria, viz: Audience, Behaviour, Condition and Degree, we call this approach the “ABCD method” of writing learning outcomes.



## Activity 2.2

Instruction: Refer to the following example of a learning outcome written using the ABCD method. Can you identify the Audience, Behaviour, Condition and Degree?

At the end of this topic, the student will be able to use the lasso tool of Adobe Photoshop version 8.0 to trace and copy the outline of a given image of Eiffel Tower in less than 10 minutes.

Let us now consider how to write measurable behaviours.

### 1.4.1 When there is No Condition and Degree

As an existing instructor, you may have noticed that some learning outcomes written in the existing StudyGuides are not written in accordance to the “ABCD method”. Thus the “ABCD method” does not apply all the time.

**Table 2.2** ABCD Method (No Condition and Degree)

Criteria	Performance
Audience	Who are my learners? What prior knowledge do they have?
Behaviour	What behaviour or action do I expect my learners to demonstrate after instruction? Is this behaviour observable and measurable?

Criteria	Performance
Condition	There is no condition.
Degree	There is no degree.

Take note that there are times when condition and degree are absent from a learning outcome. This is when

- no condition affects the intended outcome, or
- there is no set of degree or standard the learner has to adhere to.

At the end of the Topic, the student will be able to:

- list four barriers and bridges in communication.
- compare arguments related to the impact of climatic variability on global warming theories.

### 1.4.2 What is Bloom's Taxonomy?

One of the most important aspects of writing good learning outcomes is the ability to clearly describe the desired observable behaviours. This involves the use of action verbs found in Bloom's Taxonomy. Benjamin S. Bloom (1956), an American educational psychologist, developed the classification of educational objectives based on the theory of mastery-learning. Bloom proposed three psychological domains of educational objectives that relate to the learning process.

- **Cognitive (Knowing)**

Explains one's ability to process and use information meaningfully.

- **Affective (Feeling)**

Describes one's changes in attitudes and feelings.

- **Psychomotor (Doing)**

Relates to one's ability to perform physical skills.

### 1.4.3 Cognitive Domain

The cognitive domain comprises six levels of learning and thinking. Bloom's Taxonomy describes the levels from the conceptual point of view. The order of learning and thinking increases progressively from the lower-order thinking (Knowledge) to the higher-order thinking (Evaluation), as shown in the following diagram.



**Figure 2.4** Bloom's Taxonomy

In this diagram, knowledge level refers to the ability to recall information. Comprehension refers to the ability to grasp meanings. Application refers to the ability to use learnt information to solve problems. Analysis refers to the breaking up of information to form new parts. Synthesis refers to the ability to integrate separate information to establish new knowledge. And finally, evaluation refers to the ability to judge, review, and assess information.

The Cognitive Domain of Bloom's Taxonomy has been revised by Anderson & Krathwohl (2001). They have preserved the original intent and structure, but changed the category names from nouns to verbs. The rationale for using verbs instead of nouns is that verbs are

more practical and they are easily linked to an action/outcome. Therefore, when writing learning objectives, this action/outcome should be observable or measurable.



**Figure 2.5** Revised Bloom's Taxonomy

(Source: Old Dominion University)

In the revised Bloom's Taxonomy, "remembering" refers to the ability to recall information from memory. "Understanding" refers to the ability to construct meaning from different types of information. "Applying" refers to the ability to carry out a procedure. "Analysing" refers to the ability to break information into parts and relate or interrelate them for a purpose. "Evaluating" refers to the ability to pass judgments through checks and critiques, while "Creating" refers to the ability to put different information together and reorganise them to form a new structure.

The following diagram shows a list of action verbs that can be used for each level of the cognitive domain. This list is not exhaustive or prescriptive. Some of the verbs can be used at other levels, depending on the context of the learning outcomes.

**Table 2.3** Action Verbs Related to Cognitive Domain

Remembering	Understanding	Applying	Analysing	Evaluating	Creating
Define	Describe	Demonstrate	Appraise	Appraise	Compose
Duplicate	Discuss	Dramatise	Compare	Criticise	Combine
List	Expand	Execute	Contrast	Defend	Construct
Name	Explain	Illustrate	Deconstruct	Experiment	Create
Recall	Identify	Implement	Differentiate	Judge	Design
Repeat	Locate	Operate	Discuss	Prioritise	Formulate
	Paraphrase	Practice	Distinguish	Rate	Hypothesise
	Report	Solve	Examine	Test	Improve
	Restate		Infer	Verify	Invent
			Sequence		
			Solve		

#### 1.4.4 Psychomotor Domain

The psychomotor domain describes the progressive development, from levels 1 to 4, of the coordination and the mastery of physical skills.

**Table 2.4** Levels in Psychomotor Domain

Level	Description
Level 4: Adapting (Mastering)	Adapting and making minor adjustments of the physical activity to perfection
Level 3: Practising (Performing)	Practising a physical activity repeatedly to attain competency
Level 2: Imitating (Following)	Copying the physical activity as it is being performed
Level 1: Observing (Watching)	Giving active mental attention to a physical activity being performed

Examples of action verbs that can be used for each level of the psychomotor domain are shown in the following table. Again, this list is not exhaustive or prescriptive. Some of the verbs can be used at other levels, depending on the context of the learning outcome/objective.

**Table 2.5** Action Verbs related to Psychomotor Domain

Observing	Imitating	Practicing	Adapting
Detect	Copy	Assemble	Achieve
Differentiate	Follow	Calibrate	Accomplish
Distinguish	Replicate	Construct	Advance
Identify	Repeat	Dismantle	Exceed
Isolate	Adhere	Display	Excel
Select	Observe	Manipulate	Master
Separate	Identify	Measure	Reach
	Mimic	Sketch	Refine
	Try	Mix	Succeed
	Re-enact	Organise	Surpass
	Imitate		Transcend

### 1.4.5 Affective Domain

The affective domain deals with emotions such as feelings, values, appreciation, and attitudes. The following table lists the five major categories of emotions ranging from the simplest (Level 1) to the most complex behaviour (Level 5).

**Table 2.6** Levels in Affective Domain

Level	Description
Level 5: Characterising	Valuing and demonstrating total belief in a value system
Level 4: Organising	Comparing, relating and synthesising values
Level 3: Valuing	Showing involvement or commitment
Level 2: Responding	Participating actively
Level 1: Receiving	Hearing, listening, and being aware

Examples of action verbs that can be used for each level of the affective domain are shown in the following table. Again, take note that this list is not exhaustive or prescriptive. Some of the verbs can be used at other levels, depending on the context of the learning outcome.

**Table 2.7** Action Verbs related to Affective Domain

Receiving	Responding	Valuing	Organising	Characterising
Ask	Answer	Complete	Adhere	Act
Choose	Assist	Demonstrate	Alter	Discriminate
Describe	Aid	Explain	Arrange	Display
Follow	Comply	Follow	Combine	Influence
Give	Conform	Form	Compare	Listen
Identify	Help	Initiate	Complete	Modify
Name	Greet	Invite	Defend	Perform
Select	Perform	Join	Explain	Practice
Reply	Practice	Justify	Formulate	Qualify
Use	Present	Propose	Generalise	Question
	Read	Read	Integrate	Revise
	Report	Report	Modify	Serve
	Select	Select	Organise	Solve
	Write	Share	Prepare	Verify
		Study	Relate	
		Work	Synthesise	

Having gone through the various Bloom's Taxonomy of learning domains, it is now time for you to take a quiz.



### Activity 2.3

*Instruction: Improve the following Learning Outcomes.*

1. Learning outcome: Apply and use vectors to solve geometrical problems.
  - a. At the end of this topic, students will be able to solve geometrical problems using vectors.
  - b. At the end of this topic, students will be able to solve geometrical problems using vectors successfully.
  - c. At the end of this topic, students will be able to solve geometrical problems using vectors successfully, making only a few errors.
  - d. At the end of this topic, students will be able to solve geometrical problems using vectors with 100% accuracy.
  
2. Learning outcome: Learn predictive modelling and apply the results to business cases.
  - a. At the end of this topic, students will be able to apply predictive modelling using Clementine software to forecast business results with 80% to 90% accuracy.
  - b. At the end of this topic, students will be able to apply predictive modelling using Clementine software to forecast business results with few errors.
  - c. At the end of this topic, students will be able to apply predictive modelling using Clementine software to forecast business results accurately.
  - d. At the end of this topic, students will be able to apply predictive modelling using Clementine software to forecast business results with high degree of accuracy.

3. Learning outcome: Apply perceptual-checking technique to improve communication with others.
  - a. At the end of this topic, students will be able work on perceptual-checking technique, using the six principles of perception skills in an office scenario to solve a dispute effectively.
  - b. At the end of this topic, students will be able to do perceptual-checking technique, using the perception skills in an office scenario to solve a dispute within a day.
  - c. At the end of this topic, students will be able to apply perceptual-checking technique using the six principles of perception skills in an office scenario to solve a dispute within a day.
  - d. At the end of this topic, students will be able to understand perceptual-checking technique using the six principles of perception skills in an office scenario to solve a dispute efficiently.

## 1.5 How can Bloom's Taxonomy Tie in with Different Course Level Designations at SUSS

Having understood Bloom's Taxonomy of learning domains and the use of action verbs in the different levels of Bloom's Taxonomy, how would this help you to write learning outcomes that better reflect the different course levels? Course level designations adopted at SUSS range from Level 1 to Level 5, where Levels 1 to 4 are used in undergraduate courses, and Level 5 for post-graduate courses at the Master's level.

At SUSS, different course level designations require students to exhibit different levels of competency related to the depth of cognitive development in the subject matter. In addition, each School may also specify its own requirements for students to achieve a desired level of essential skills in relation to different course level designations.

As a course developer, you are advised to use the Bloom's Taxonomy to write learning outcomes that are associated with the course level designation. To help you to do so, please use the pdf document as a reference.

## Summary

You now have a good idea why topic and course learning outcomes should align with the overall programme outcomes. You have also gained some fundamental knowledge on writing effective learning outcomes that are specific, measurable, and achievable.

- **Specific learning outcomes** use action verbs to clearly indicate the expected level of student's performance at the end of the course.
- **Measurable learning outcomes** ensure appropriate assessment methods can be used to observe, monitor and measure a student's performance as an evidence of learning.
- **Achievable learning outcomes** ensure the outcome is realistic, attainable and aligned with the programme outcomes.

This knowledge and skill are especially important as you prepare the Course Definitive Document (CDD).

## References

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## Chapter 2: Designing Assessments

### Learning Outcomes

By the end of this Chapter, you will be able to:

1. Clarify the role of assessment in learning.
2. Compare and contrast the different types of assessment.
3. Design assessments that are aligned with the course learning outcomes.

### Overview

Assessments are meaningful only when they are designed thoughtfully and systematically. When you write the learning outcomes, it is important to have the evidence to support the attainment of those outcomes. Hence, assessments must map onto the learning outcomes of the course. Additionally, assessment strategies must take into account the learners' thinking and abilities.

### 2.1 Why Assess?

Assessment is a fundamental part of any curriculum.

It is present in all phases of learning and it is used to:

- collect evidence of student learning
- objectively measure students' learning and competence level
- make judgments on students' progress in the subject matter
- clarify areas for improvement
- identify how best to help the students master the subject matter

To be effective, assessments must be closely aligned with the course and topic learning outcomes. In particular, **they should contain tasks that require the students to**

**demonstrate specific knowledge and skills outlined in the course and topic learning outcomes.**

Assessments reveal the thinking and learning of students within the subject domain. They provide evidence of the students' level of competency in the tasks they are required to complete, and their progress throughout the course.

### 2.1.1 Aims of Assessment

When deciding on the type of assessments, and how you would design and craft your assessments, consider what you are trying to accomplish with the assessment you are designing. You should ask yourself the following questions:

- What knowledge and skills must students acquire upon completion of the course? In other words, what are the learning outcomes to be measured?
- How will the instructor evaluate students' progress?
- How effective are the assessments as a measure of students' competency and mastery of the subject matter?
- How can the instructor use the evidence collected to improve his/her teaching?

### 2.1.2 Outcomes-based Assessments

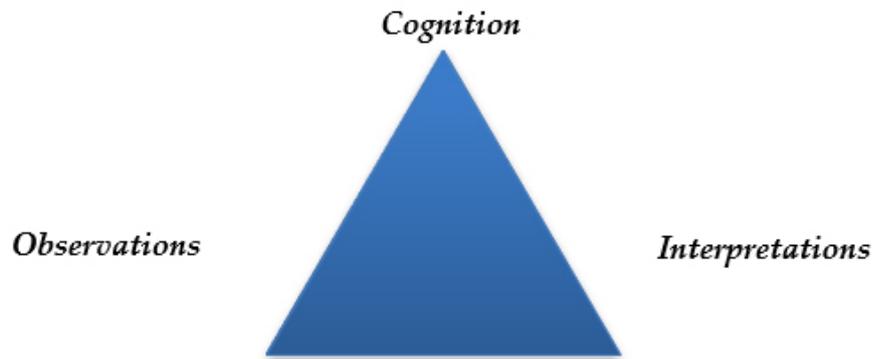
At SUSS, assessments are closely aligned with the learning outcomes. All assessments (e.g. TMA, GBA, ECA, and final examinations) are written with the target knowledge and skills in mind.

Effective assessments must be crafted to provide students with the opportunities to demonstrate their competence and mastery of the required knowledge and skills outlined in the learning outcomes.

Such assessments contain three key components:

- **Cognition**, which refers to the thinking and learning of the students within the subject domain;

- **Observations**, which refer to the tasks or activities that students engage in that provide evidence of learning; and
- **Interpretations**, which refer to the process or methods in making sense of the evidence.



**Figure 2.6** The Assessment Triangle

Assessments are effective and useful only when all three components – cognition, observations, interpretations – are present.

**Assessments will not yield any useful evidence of students' learning if the tasks do not require students to demonstrate the knowledge and skills outlined in the learning outcomes.**

When that happens, we will not be able to detect and evaluate our students' strengths or weaknesses in the area being assessed, because the assessment is not measuring what we want to measure.

**Assessments must go hand-in-hand with student learning, and provide multiple points of evaluation.** This ensures that assessments are not one dimensional. Rather, the students' mastery of a subject matter is captured from a variety of evidence – both in a more structured and guided forms (e.g. multiple-choice quiz, fill-in-the-blanks quiz) as well as in a more open-ended manner (e.g. essay question, reflection journal).

Similarly, students must also understand the aims of the assessment, and what is expected of them in terms of the skills and knowledge to be demonstrated.

## 2.2 Types of Assessments

There are three main types of assessments:

1. Diagnostic
2. Formative
3. Summative

Each of these assessments is used to extract specific information about the students' learning, and may be introduced at different phases of the learning process.

### 2.2.1 Diagnostic Assessments

The purpose of diagnostic assessments is to determine each student's strengths, weaknesses, knowledge, and skills. They are typically administered prior to any learning taking place. The outcomes of such assessments are used to revise the curriculum, or to implement a remedial programme that will help students to bridge the gap and bring them to the required level of knowledge and skills.

Example: Assessments are used to ascertain a freshman's command of the English language and writing skills, and to subsequently determine if the student needs to attend academic writing workshops or classes that will improve their command of the language at undergraduate level.

### 2.2.2 Formative Assessments

Popularly known as "assessments for learning," formative assessment is a means for both the student and the instructor to discover what the student knows, and to identify the gaps or misunderstanding in the students' learning process, so as to provide the appropriate feedback and **scaffolding** for learning.

**Formative assessments** take place during the learning process and they are often used in the form of non-graded tasks and activities. They encourage self-regulation skills in students, by fostering self-study practices and motivating and engaging them to take

ownership of their learning. At the same time, the instructor is able to evaluate and adjust the instructional strategy for the course, wherever necessary.

Example: Within the SUSS context, **pre-class quizzes** may be regarded as formative assessments, if instructors use the results of the pre-class quiz to clarify and close the gaps in their students' learning. On their part, students can also use these pre-class quizzes to take ownership of their learning, by using the quiz as a self-regulation mechanism to track their understanding and progress throughout the course, and as a result adjust their self-study practices.

### Question 1

\_\_\_\_\_ is the process of systematically determining the relative worth of jobs for the purpose of creating an organisation's job structure.

- Performance evaluation
- Job analysis
- Job evaluation
- Point factor evaluation

### 2.2.3 Summative Assessments

**Summative assessment** (or “assessments of learning”) determines the quality of learning that has taken place. It is the end-point judgement that measures to what extent the student has achieved in acquiring knowledge and skills. Such assessment usually takes place at the end of a unit or term or semester, and the grades are benchmarks for reporting.

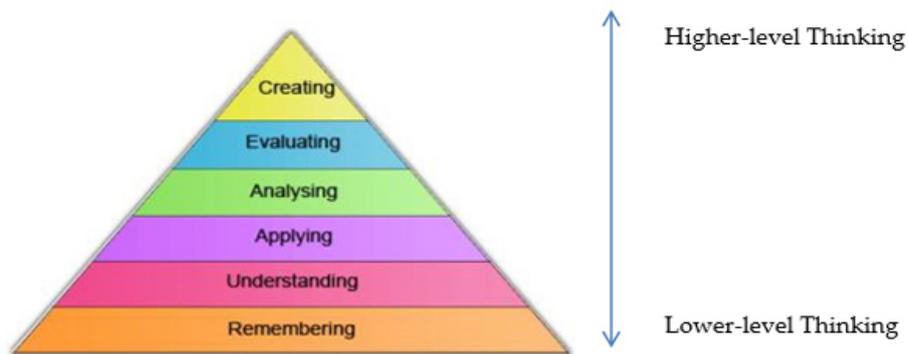
**At SUSS, summative assessment refers to the assessments that make up the OCAS (Overall Continuous Assessment Score) and OES (Overall Examinable Score).**

Examples of the OCAS include Computer-Marked Assessments (CMAs), Group-Based Assignments (GBAs), and Tutor-Marked Assessments (TMAs).

Examples of the OES include End-of-Course Assessments (ECAs) and final written examinations.

## 2.3 Aligning Assessments with Learning Outcomes

At SUSS, assessments are written to determine the extent to which our students have met the course and topic learning outcomes. These learning outcomes are based on the cognitive aspects of Bloom's Taxonomy, which ranks thinking skills in six stages – from the lower-level to the higher-level thinking skills.



**Figure 2.7** Revised Bloom's Taxonomy

(Source: Old Dominion University)

### 2.3.1 Bloom's Taxonomy in Assessments

In Chapter 1, you were introduced to Bloom's Taxonomy and the three psychological domains of educational objectives, in particular the six levels of thinking skills associated with the cognitive domain. You will now see how the action verbs associated with the various domains can be linked to assessments.

The following is a summary of the types of assessment that are appropriate to the six levels of thinking skills.

#### **Bloom's Taxonomy in Assessment**

##### **Level 1: Remembering**

**Description:** Ability to Recall

**Action Verbs:** Classify, Cite, Define, Duplicate, Identify, List, Match, Recall, Record, Relate, Repeat, Select, State

**Types of Assessments:**

Papers, oral/written exam questions, problems, class discussions, concept maps, homework assignments that require (oral or written):

- Objective Test items that require students to recall or recognise information
- Fill-in the Blanks
- Multiple choice items with question stems such as, "what is a...", or "which of the following is the definition of..."
- Labelled diagrams
- Recital (orally or in writing)

**How to Measure:**

- Accuracy – i.e., correct answers versus number of errors
- Item Analysis

**Level 2: Understanding Description**

**Description:** Ability to Grasp Meaning

**Action Verbs:** Comment, Conclude, Describe, Discuss, Expand, Explain, Express, Give, Identify, Interpret, Locate, Outline, Paraphrase, Present, Recognise, Report, Re-state, Respond

**Types of Assessments:**

Papers, oral/written exam questions, problems, class discussions, concept maps, homework assignments that require (oral or written):

- Summarising readings, films, speeches, etc.
  - Comparing and/or contrasting two or more theories, events, processes, etc.
  - Classifying or categorising cases, elements, events, etc., using established criteria
  - Paraphrasing documents or speeches
-

- Finding or identifying examples or illustrations of a concept, principle

**How to Measure:**

Scoring or performance rubrics that identify critical components of the work, and discriminates between differing levels of proficiency in addressing the components.

**Level 3: Applying**

**Description:** Ability to use learnt information to solve problems

**Action Verbs:** Apply, Demonstrate, Develop, Determination, Dramatise, Employ, Execute, Illustrate, Implement, Indicate, Operate, Practise, Re-arrange, Solve

**Types of Assessment:**

Activities that require students to use procedures to solve or complete familiar or unfamiliar tasks; may also require students to determine which procedure(s) are most appropriate for a given task.

Activities include:

- Problem sets
- Performances
- Labs
- Prototyping
- Simulation

**How to Measure:**

- Accuracy scores
- Checklists
- Rubrics

**Level 4: Analysing**

**Description:** Ability to break information apart to form new parts

**Action Verbs:** Analyse, Appraise, Calculate, Categorise, Compare, Compute, Contrast, Criticise, Debate, Deconstruct, Diagram, Differentiate, Discriminate, Discuss, Distinguish, Examine, Infer, Sequence, Solve

**Types of Assessment:**

Activities that require students to discriminate or select relevant from irrelevant parts, determine how elements function together, or determine biases, values or underlying intent in the presented materials. These might include:

- Case studies
- Critiques
- Labs
- Papers
- Projects
- Debates
- Concept Maps

**How to Measure:**

- Rubrics scored by instructor, juries, external clients, employers, internship supervisor, etc.
- Primary Trait Analysis

**Level 5: Evaluating**

**Description:** Ability to put separate information together to establish new knowledge

**Action Verbs:** Appraise, Arrange, Assemble, Collect, Compose, Construct, Create, Criticise, Design, Defend, Draft, Draw, Experiment, Formulate, Judge, Prioritise, Rate, Test, Verify

**Types of Assessment:**

- Research Projects
- Performances

- Essays

**How to Measure:** Rubrics scored by instructor, juries, external clients, employers, internship supervisor, etc.

### **Level 6: Creating**

**Description:** Ability to judge, review, assert information, and make judgement

**Action Verbs:** Appraise, Assess, Choose, Compare, Conclude, Compose, Combine, Construct, Create, Critique, Design, Estimate, Formulate, Hypothesise, Improve, Invent, Judge, Measure, Predict

**Types of Assessment:** A range of activities that require students to test, monitor, judge or critique readings, performances, or products against established criteria or standards. These activities might include:

- Journals
- Diaries
- Critiques
- Problem Sets
- Product Reviews
- Case Studies

**How to Measure:** Rubrics scored by instructor, juries, external clients, employers, internship supervisor, etc.



## Reflect 2.1

Select one of the topics within your course which you wish to assess your students on. Look at the learning outcomes associated with that topic.

1. From Table 2.1, determine the types of assessments that you may use to assess the learning outcome.
2. Decide on the particular assessment you would use to ensure that the particular level of learning within Bloom's Taxonomy is being assessed.
3. Ask yourself the following questions:
  - a. Why did you select a particular assessment method (e.g., writing a journal) over another method (e.g., writing a critique) within the suggested list?
  - b. Why do you think the particular type of assessment is appropriate and effective for assessing the topic learning outcomes?
  - c. How does the assessment allow your students to demonstrate the specific knowledge and skills outlined in the topic learning outcomes?

### 2.3.2 Example of an Assessment

Here is an example of how an assessment may be aligned with the learning outcomes for a course: Topic Learning Outcome: Describe conceptual, human, and technical skills and their relevance for managers and employees.

#### Suggested Assessment Question

You are the CEO of a company and you would like to promote one of your department heads to be the general manager. Identify and describe two management skills you would

look for in assessing the potential candidate. Elaborate your answer with appropriate examples. (15 marks)

## 2.4 Assessment Rubrics

Now that you have a better idea of how your assessment may be aligned with the learning outcomes, we need to look at crafting the assessment rubric that allows you to discriminate between the different levels of student performance.

**ECA Marking Rubric (as percentage of FRS)**

Rubric to be tested (use course LOs to simplify marking)	Performance Descriptor and Marking Range for Unsatisfactory Performance (Percentage Mark Range 0 to 20%)	Performance Descriptor and Marking Range for Poor Performance (Percentage Mark Range 21 to 40%)	Performance Descriptor and Marking Range for Satisfactory Performance (Percentage Mark Range 41 to 60%)	Performance Descriptor and Marking Range for Good Performance (Percentage Mark Range 61 to 80%)	Performance Descriptor and Marking Range for Excellent Performance (Percentage Mark Range 81 to 100%)
<b>Design, plan and construct</b> an app for a mobile computing device to suit a market demand (15 marks)	Candidate does not have any concept or idea on how to conceptualize an app or even understand client's needs (0 to 3 marks)	Candidate is able to provide some understanding of matching device app to client demand specs (4 to 6 marks)	Candidate has a fair understanding of the fit to match device app characteristics to client specs (7 to 9 marks)	Candidate is able to furnish plans for an app that will fulfill most of the client's needs, missing out some details (10 to 12 marks)	Candidate is able to produce a set of plans for an app that will fully meet all the specs of the client (13 to 15 marks)
<b>Analyze</b> market needs for the proposed app (5 marks)	Candidate is unable to demonstrate the characteristics of market needs of the project (0 to 1 mark)	Candidate is able to demonstrate in writing communication an understanding of the project's market needs (2 marks)	Candidate is able to demonstrate an understanding of project's market needs and explain some of these specific needs (3 marks)	Candidate is able to demonstrate an understanding of project's market needs and explain most of these specific needs (4 marks)	Candidate is able to demonstrate an understanding of project's market needs and explain all of these specific needs (5 marks)
<b>Select</b> one or more programming means to develop the app. (5 marks)	Candidate is unable to establish the programming needs to develop the app (0 to 1 mark)	Candidate is able to explain in sketchy terms, the programming means available in the current literature to develop the app but is unable to provide any programming means (2 marks)	Candidate has shown full understanding of the programming effort to develop the app and is able to furnish one method to develop the app's programme (3 marks)	Candidate has shown full understanding of the programming effort to develop the app and is able to furnish more than one method to develop the app's programme (4 marks)	Candidate has shown full understanding of the programming effort to develop the app and is able to furnish more than one method to develop the app's programme as well as explain the best solution justifiably (5 marks)
<b>Create</b> the app for a mobile computing device platform in an efficient manner (30 marks)	Candidate is unable to show any evidence that programme to run the app has been written at all or has shown only parts of the programme written (less than 10% working) (0 to 5 marks)	Candidate is able to show sketchy evidence that programme to run the app has been written (between 20% to 30% working) (6 to 11 marks)	Candidate has shown full understanding of the programming effort to develop the app and is able to demonstrate working parts of the programme for the app (between 40% to 70% working) (12 to 17 marks)	Candidate has shown full understanding of the programming effort to develop the app and is able to demonstrate a working programme to run the app (18 to 23 marks)	Candidate has shown full understanding of the programming effort to develop the app and is able to demonstrate various alternatives/programmes to run the app (24 to 30 marks)
<b>Test and evaluate</b> the app for robustness (20 marks)	Candidate is unable to provide a test and evaluation plan or only able to explain in sketchy terms a possible test plan (0 to 4 marks)	Candidate has produced a test and evaluation plan, but is not able to show execution of plan. (5 to 8 marks)	Candidate has produced a test and evaluation plan and demonstrate through the ECA report that parts of the plan had been tested out with success - standard benchmark for apps robustness will be used (9 to 12 marks)	Candidate has produced a test and evaluation plan and demonstrate through the ECA report that all of the plan had been tested out with success - standard benchmark for apps robustness will be used (13 to 16 marks)	Candidate has produced a test and evaluation plan and demonstrate through the ECA report that all of the plan had been tested out with success - standard benchmark for apps robustness will be used. Additionally candidate is able to compare this plan with alternatives (17 to 20 marks)
<b>Revise</b> the attractiveness and usability of the app developed so that the app developed has greater potential for marketability (15 marks)	Candidate is unable to write down the salient features of the apps usability as established through a user needs analysis - via a survey or focus group measurement. (0 to 3 marks)	Candidate is able to write down the salient features of the apps usability as established through a user needs analysis - via a survey or focus group measurement. However candidate is unable to extrapolate results of attractiveness for revision of app (4 to 6 marks)	Candidate is able to write down the salient features of the apps usability as established through a user needs analysis - via a survey or focus group measurement. Additionally, candidate is able to revise the program for the apps partially (up to 70% working) (7 to 9 marks)	Candidate is able to write down the salient features of the apps usability as established through a user needs analysis - via a survey or focus group measurement. Additionally, candidate is able to revise the program for the apps fully (10 to 12 marks)	Candidate is able to write down the salient features of the apps usability as established through a user needs analysis - via a survey or focus group measurement. Additionally, candidate is able to revise the program for the apps fully as well as provide alternative revision strategies (13 to 15 marks)
<b>Formulate a proposal</b> as a mock marketing exercise to potential buyers and verify the rationale of its design. (10 marks)	Candidate did not produce any proposal or have shown only sketchy plans of a proposal. (0 to 1 mark)	Candidate produces a proposal but is unable to verify the rationale of the design. (2 to 4 marks)	Candidate produces a proposal and is partially able to verify the rationale of the design. (5 to 6 marks)	Candidate produces a proposal and is able to fully verify the rationale of the design. (7 to 8 marks)	Candidate produces a proposal and is able to fully verify the rationale of the design. Additionally he/she is able to furnish alternative marketing plans supported by strong rationale. (9 to 10 marks)

**Figure 2.8** Example of an Assessment Rubric

Click [here](#) to download a PDF version of an assessment rubric.

Rubrics are “scoring tools” that serve as a guideline for instructors when rating their student’s performance. They are essentially a set of scoring values that rank a student’s

performance according to his / her competence in the skills and knowledge required for the learning outcomes being assessed. With a clearly defined rubric, both the instructor and the students are able to discriminate between the different levels of student performance.

### 2.4.1 Uses of an Assessment Rubric

Essentially, a rubric is used to:

- enhance scoring reliability.
- provide clear and unambiguous expectations of the student.
- convey "grading or point standards" and align them with the learning outcomes.
- allow students to evaluate their learning progress.

### 2.4.2 Developing an Assessment Rubric

You should also keep in mind the following questions when developing your assessment rubric:

- **How is the assessment linked to the curriculum mapping?**

It is important that your assessment is mapped not just to the course learning outcomes, but also to the programme learning outcomes and the programme education objectives.

- **How well did students do?**

In order to assess your students' performance, you must develop a list of concrete descriptors that clearly identify each observable criterion associated with the assessment. You should also clearly differentiate and demarcate between the different levels of competence observed, using a range of categories or levels.

- **What score will students get?**

You need to assign a value or rating to each of the categories, and also to review the rubric to ensure the defined categories are measuring the intended learning outcomes.

- **What graduate attributes are achieved?**

Your rubric should consider the different levels of competency required of an employee by his/her employer.



## **Reflect 2.2**

Assessments are most effective when the writer adopts a thoughtful and reflective approach.

Before you sit down to design and craft your assessments, ask yourself the following questions:

- Why am I assessing my students?

For example:

- What is the purpose of the assessment?
- What knowledge do I want my students to acquire?
- How does the type of assessment I have chosen– whether it is a quiz, an essay, or a short answer question – tests my students’ ability to attain the required level of knowledge for this topic?

- What are the key skills and knowledge that I want my students to have at the end of the course?

For example:

- Do I want my students to define a concept, to show that they know what it is all about?
- Do I want my students to show that they have understood a concept, and are able to use an example to explain the concept, as well as to apply this in a different context?

- Do I want my students to show a systematic approach to analysing a problem I have posed, and to provide a definitive solution based on the particular characteristics of the problem?
- How will I know that my students have attained the required knowledge and skills?

For example:

- How do I distinguish between varying levels of quality in my students' answers? What would constitute an "Excellent" answer, versus a "Good," an "Average," or a "Poor" answer?
- How much weightage should I place on each level of skills and knowledge that my students demonstrated in their answers?

Doing such reflection exercise will allow you to craft a more thoughtful assessment that effectively assesses your students' performance based on the required learning outcomes.

## Summary

In this chapter, you were introduced to the key components of an effective assessment. In particular, an assessment that is effective allows students to demonstrate their level of mastery and their attainment of the required level of skills and knowledge for the course. Assessment writers must thus ensure that their assessment is aligned with the course learning outcomes, and that the assessment provides an accurate means for measuring the students' attainment of those learning outcomes.

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## Formative Assessment

1. Select from the list below the action verb that is NOT used when writing learning outcomes associated with “applying”.
  - a. Repeat
  - b. Practice
  - c. Solve
  - d. Operate
  
2. Select from the list below the action verb that is NOT used when writing learning outcomes associated with “remembering”.
  - a. Repeat
  - b. List
  - c. Name
  - d. Explain
  
3. An effective learning outcome should be specific, \_\_\_\_\_ and achievable.
  - a. Changeable
  - b. Teachable
  - c. Measurable
  - d. Scalable
  
4. Assessments are effective when they are closely aligned with the course and topic learning outcomes.
  - a. False
  - b. True
  
5. The objective of \_\_\_\_\_, also known as “assessments for learning,” is to reveal gaps in the students’ learning so that the instructor can properly scaffold and provide

the appropriate feedback that will get the students back on track before the final assessment.

- a. diagnostic assessments
- b. formative assessments
- c. summative assessments
- d. final assessments

6. Which of the following are characteristics of a clearly defined assessment rubric?
- i. Leads to greater reliability in the awarding of scores in a course with different instructors.
  - ii. Establishes clear and unambiguous expectations of students.
  - iii. The scoring values or assigned point system are established according to standards aligned with the course and/or topic learning outcomes.
  - iv. Provides guidelines on discriminating between different levels of student performance.
- a. i and ii
  - b. ii and iii
  - c. i, ii, and iv
  - d. i, ii, iii, and iv

## Solutions or Suggested Answers

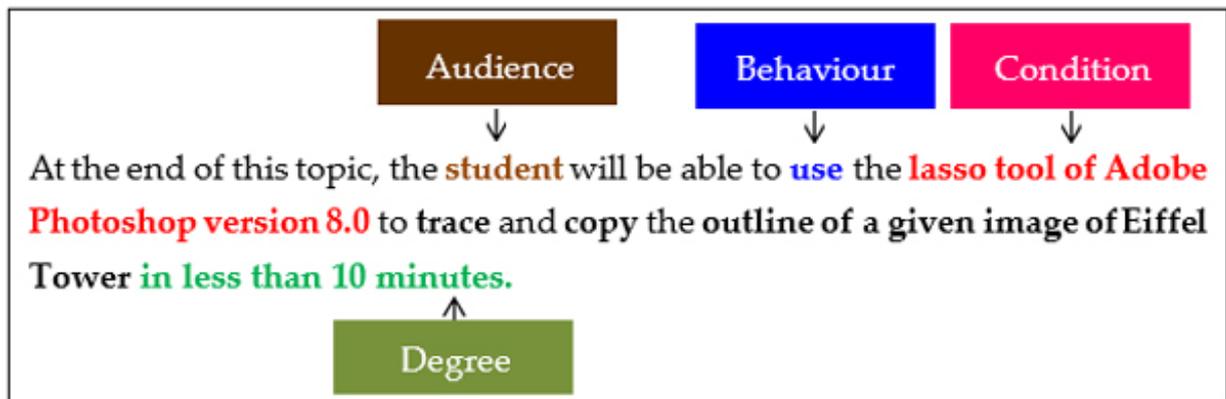
### 1.3 How do I Write Learning Outcomes?

#### Suggested learning outcomes

At the end of this Topic, students will be able to:

1. outline the history of Federal Geographic Data Committee.
2. explain the significance of Section 2 Data Quality.
3. discuss the value of a Distribution Liability Statement.

### Activity 2.2



### Activity 2.1

1. \_\_\_\_\_ are broad statements that describe what graduates are expected to attain a few years after graduation.
  - a. Programme Educational Objectives  
**Correct.**
  - b. Programme Learning Outcomes  
**Incorrect.**

- c. Topic Level Learning Outcomes  
Incorrect.
2. \_\_\_\_\_ describe what students are expected to know and able to do after they graduate. These refer to knowledge, skills and behaviours that the students acquire as they progress through the programme.
- a. Programme Educational Objectives  
Incorrect.
- b. Programme Learning Outcomes  
**Correct.**
- c. Topic Level Learning Outcomes  
Incorrect.
3. \_\_\_\_\_ are statements that specify what students are expected to know and able to do when they complete a course or a topic. They are also the primary building blocks of good curriculum design.
- a. Programme Educational Objectives  
Incorrect.
- b. Programme Learning Outcomes  
Incorrect.
- c. Topic Level Learning Outcomes  
**Correct.**

### Activity 2.3

1. Learning outcome: Apply and use vectors to solve geometrical problems.

- a. At the end of this topic, students will be able to solve geometrical problems using vectors.  
Incorrect.
  - b. At the end of this topic, students will be able to solve geometrical problems using vectors successfully.  
Incorrect.
  - c. At the end of this topic, students will be able to solve geometrical problems using vectors successfully, making only a few errors.  
Incorrect.
  - d. At the end of this topic, students will be able to solve geometrical problems using vectors with 100% accuracy.  
**Correct.**
2. Learning outcome: Learn predictive modelling and apply the results to business cases.
- a. At the end of this topic, students will be able to apply predictive modelling using Clementine software to forecast business results with 80% to 90% accuracy.  
**Correct.**
  - b. At the end of this topic, students will be able to apply predictive modelling using Clementine software to forecast business results with few errors.  
Incorrect.
  - c. At the end of this topic, students will be able to apply predictive modelling using Clementine software to forecast business results accurately.  
Incorrect.

- d. At the end of this topic, students will be able to apply predictive modelling using Clementine software to forecast business results with high degree of accuracy.

Incorrect.

3. Learning outcome: Apply perceptual-checking technique to improve communication with others.

- a. At the end of this topic, students will be able work on perceptual-checking technique, using the six principles of perception skills in an office scenario to solve a dispute effectively.

Incorrect.

- b. At the end of this topic, students will be able to do perceptual-checking technique, using the perception skills in an office scenario to solve a dispute within a day.

Incorrect.

- c. At the end of this topic, students will be able to apply perceptual-checking technique using the six principles of perception skills in an office scenario to solve a dispute within a day.

**Correct.**

- d. At the end of this topic, students will be able to understand perceptual-checking technique using the six principles of perception skills in an office scenario to solve a dispute efficiently.

Incorrect.

### **Formative Assessment**

1. Select from the list below the action verb that is NOT used when writing learning outcomes associated with “applying”.
- a. Repeat

**Correct. Repeat is an action verb that belongs to cognitive domain of Bloom's Taxonomy: level one, remembering. Refer to Study Unit 2, Chapter 1 to learn more.**

b. Practice

Incorrect. Practice is an action verb that belongs to cognitive domain of Bloom's Taxonomy: level three, applying. Refer to Study Unit 2, Chapter 1 to learn more.

c. Solve

Incorrect. Solve is an action verb that belongs to cognitive domain of Bloom's Taxonomy: level three, applying. Refer to Study Unit 2, Chapter 1 to learn more.

d. Operate

Incorrect. Operate is an action verb that belongs to cognitive domain of Bloom's Taxonomy: level three, applying. Refer to Study Unit 2, Chapter 1 to learn more.

2. Select from the list below the action verb that is NOT used when writing learning outcomes associated with "remembering".

a. Repeat

Incorrect. Repeat is an action verb that belongs to cognitive domain of Bloom's Taxonomy: level one, remembering. Refer to Study Unit 2, Chapter 1 to learn more.

b. List

Incorrect. List is an action verb that belongs to cognitive domain of Bloom's Taxonomy: level one, remembering. Refer to Study Unit 2, Chapter 1 to learn more.

c. Name

Incorrect. Name is an action verb that belongs to cognitive domain of Bloom's Taxonomy: level one, remembering. Refer to Study Unit 2, Chapter 1 to learn more.

- d. Explain

**Correct. Explain is an action verb that belongs to cognitive domain of Bloom's Taxonomy: level two, understanding. Refer to chapter 4 to learn more.**

3. An effective learning outcome should be specific, \_\_\_\_\_ and achievable.

- a. Changeable

Incorrect. Changeable is one not of the considerations when writing effective learning outcome. Refer to Study Unit 2, Chapter 1 to learn more.

- b. Teachable

Incorrect. Teachable is one not of the considerations when writing effective learning outcome. Refer to Study Unit 2, Chapter 1 to learn more.

- c. Measurable

**Correct. Effective learning outcome should be measurable so that assessment can be set based on the desired performance standard. Refer to Study Unit 2, Chapter 1 to learn more.**

- d. Scalable

Incorrect. Scalable is one not of the considerations when writing effective learning outcome. Refer to Study Unit 2, Chapter 1 to learn more.

4. Assessments are effective when they are closely aligned with the course and topic learning outcomes.

- a. False

Incorrect. Refer to Study Unit 2, Chapter 2 to learn more.

- b. True
-

**Correct. Assessments are a means for students to show their competency and mastery of the course and it is indeed aligned with topic learning outcomes. Refer to Study Unit 2, Chapter 2 to learn more.**

5. The objective of \_\_\_\_\_, also known as “assessments for learning,” is to reveal gaps in the students’ learning so that the instructor can properly scaffold and provide the appropriate feedback that will get the students back on track before the final assessment.

- a. diagnostic assessments

Incorrect. Diagnostic assessments are pre-assessments that are usually administered prior to any learning taking place. The outcomes of such assessments are used to revise the curriculum, or to implement a remedial programme that will help students to bridge the gap and bring them to the required level of knowledge and skills. Refer to Study Unit 2, Chapter 2 to learn more.

- b. formative assessments

**Correct. Formative assessments are administered during the learning process, and they are often middle-of-the-course assessments. Such assessments are usually non-graded, and are means to provide students with a mid-point evaluation and feedback on their performance, so that they can take the necessary action to improve their final grades. Refer to Study Unit 2, Chapter 2 to learn more.**

- c. summative assessments

Incorrect. Summative assessments, also known as assessments of learning are administered after a specific point in instruction to measure to what extent the student has achieved in acquiring knowledge and skills. Some examples of summative assessments include tests, mid-year exams, and final exams. Refer to Study Unit 2, Chapter 2 to learn more.

- d. final assessments

Incorrect. Final assessments are usually administered at the end of the semester to measure to what extent the student has achieved in acquiring knowledge. Refer to Study Unit 2, Chapter 2 to learn more.

6. Which of the following are characteristics of a clearly defined assessment rubric?
- i. Leads to greater reliability in the awarding of scores in a course with different instructors.
  - ii. Establishes clear and unambiguous expectations of students.
  - iii. The scoring values or assigned point system are established according to standards aligned with the course and/or topic learning outcomes.
  - iv. Provides guidelines on discriminating between different levels of student performance.
- a. i and ii

Incorrect. A clearly defined rubric leads to greater reliability in awarding scores and establishes clear expectations of students. In addition, it includes other characteristics such as the scoring values to be established according to standards aligned with the course learning outcomes. Furthermore, it provides guidelines on discriminating between different levels of student performance. Refer to Study Unit 2, Chapter 2 to learn more.

- b. ii and iii

Incorrect. A clearly defined rubric establishes clear expectations of students and the scoring values to be established according to standards aligned with the course learning outcomes. In addition, it leads to greater reliability in the awarding of scores in a course with different instructors. Furthermore, it provides guidelines on discriminating between different levels of student performance. Refer to Study Unit 2, Chapter 2 to learn more.

- c. i, ii, and iv

Incorrect. A clearly defined rubric leads to greater reliability in awarding scores, establishes clear expectations of students and the scoring values

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are established according to standards aligned with the course learning outcomes. Additionally, it provides guidelines on discriminating between different levels of student performance. Refer to Study Unit 2, Chapter 2 to learn more.

d. i, ii, iii, and iv

**Correct. A clearly defined rubric that exhibits all of the above characteristics would be an effective scoring tool that can be used to rate students' performance in the assessment. Refer to Study Unit 2, Chapter 2 to learn more.**



Study  
Unit **3**

**Designing for Learner Engagement**

# Chapter 1: Developing the StudyGuide

## Learning Outcomes

By the end of this Chapter, you will be able to:

1. Explain what a StudyGuide is.
2. Describe the key components of a StudyGuide.
3. Explain how to structure and chunk information in a StudyGuide.
4. Determine the strategies to use for content presentation and engagement in a StudyGuide.

## Overview

At SUSS, the StudyGuide is possibly the very first contact students have with a course. As a self-study learning resource, a good StudyGuide encapsulates all key learning content and helps to guide students in their learning journey. It provides key touchstones that students can use to assess their learning, identify gaps in their knowledge and skills, and determine how best to bridge the gaps. A good StudyGuide can pique students' interest on the subject and encourage them to perform further research on the topics covered. On the other hand, a substandard StudyGuide may have an opposite effect and turn the student off. The StudyGuide thus plays an important role in the students' learning journey, as it sets the overall tone in the study of the subject.

A StudyGuide is intended to:

- Clearly establish and outline the coverage and assessment strategies of the course.
- Articulate the learning outcomes (knowledge and skill sets) expected of students.
- Focus students' attention on essential and important information (e.g. concepts, theories, and models).
- Provide a framework for organising the subject knowledge upon which students may build and develop their own understanding of the subject.

- Scaffold, engage, reinforce, and lead students to actively participate in a learning journey through the use of various learning tools and activities.
- Provide instructors with a consistent set of materials to be used throughout a course.

## 1.1 The StudyGuide

A StudyGuide is a digital, interactive and mobile-friendly StudyGuide. It is enriched with interactive learning activities and multimedia to enhance the learning experience and increase student engagement with the learning resource.

As a course developer, you may be required to develop a StudyGuide from scratch, modify or update an existing StudyGuide, or enhance one with learning activities and student engagement elements.

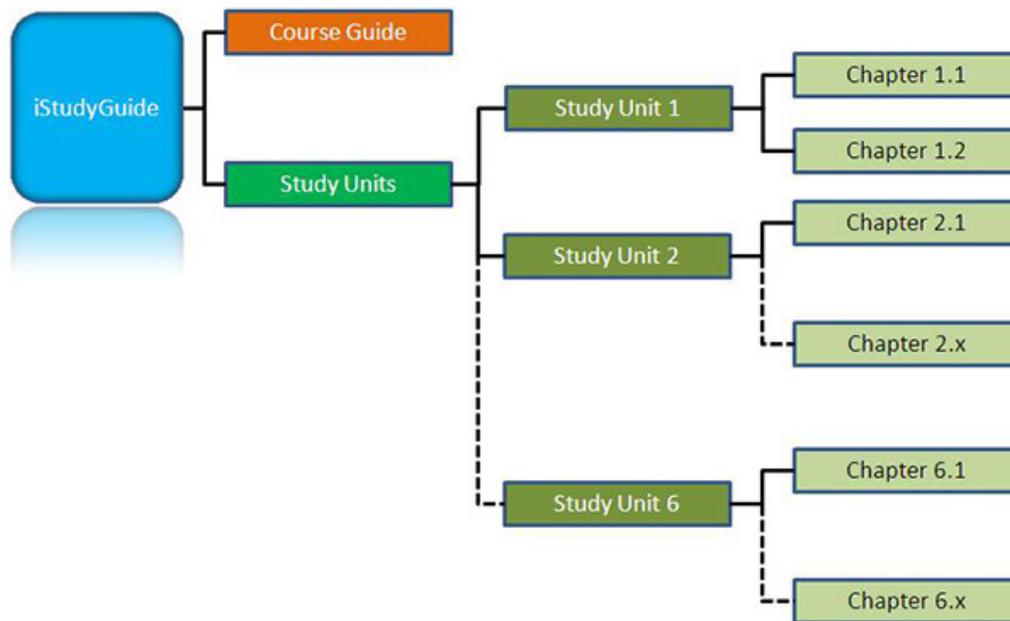
Developing a StudyGuide from scratch can be a daunting task. The processes and templates in place will help you approach it in a structured and systematic manner. In this chapter, you will learn about the key elements of the StudyGuide, developing the StudyGuide, and the strategies that can be incorporated to make the StudyGuide interactive and engaging.

## 1.2 Key Features of the StudyGuide

A typical StudyGuide consists of two main sections: Course Guide and Study Units. The course guide provides students with an overview and syllabus of the whole course. It also informs students of the requirements and expectations for successful completion of the course.

The course content is typically structured into six study units for a 5 credit unit course. The number of study units to be developed may be determined by the School's requirements or the credit units for the course. Each study unit may be further structured into chapters or topics. This depends on how you chunk and sequence the content to achieve the learning outcomes for the course.

The following diagram shows a typical structure of a StudyGuide.



**Figure 3.1** Typical Structure of a StudyGuide

### 1.2.1 Course Guide

The StudyGuide begins with the Course Guide. The course guide provides students with the overview and syllabus of the whole course. It also informs students of the requirements and expectations for successful completion of the course.

A typical course guide has the following structure:

#### 1. Welcome

This section welcomes students to the course and includes a course introduction video. The video is meant to establish a human (instructor) presence, pique the students' interest, and engage them on what they are about to go through in the course right from the start.

Example from FLM203: Film Theory



## Watch



This streaming video requires Internet connection. Access it via Wi-Fi to avoid incurring data charges on your personal mobile

Click [here](#) to watch the video. <sup>i</sup>

## 2. Course Description and Aims

This section provides learners with an overview of the course and describes the subject coverage and the course structure.

## 3. Learning Outcomes

Each statement of learning outcome defines the students' performance in a particular area. There are two components in this section:

- Knowledge and Understanding (Theory Component) - what students should be able to articulate by the end of the course
- Key Skills (Practical Component) - what students should be able to do or perform by the end of the course

The learning outcomes should be written based on Bloom's Taxonomy cognitive levels.

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<sup>i</sup> [https://d2jifwt31jehd.cloudfront.net/AD109/others/AD109\\_AD109\\_su03ch01t01\\_2\\_vid1\\_v2\\_0.mp4](https://d2jifwt31jehd.cloudfront.net/AD109/others/AD109_AD109_su03ch01t01_2_vid1_v2_0.mp4)

More about this in Study Unit 2, Chapter 1: Writing Learning Outcomes.

#### **4. Learning Materials**

This section lists the:

- required textbook(s)
- supplementary learning resources from various sources such as journal articles and websites

#### **5. Assessment Overview**

This section displays the assessment items and scoring weightage that make up the Overall Student Assessment (OSA) for the course.

More about this in Study Unit 2, Chapter 2: Designing Assessments.

#### **6. Course Schedule**

This section makes reference to the course schedule in the Student Portal.

#### **7. Learning Mode**

This section makes reference to modes in which the course will be delivered. Typically, students will learn in the following manner:

- Work on assignments, either individually or in groups
- Self-study, as guided by the study units, e-learning resources and the required textbook(s)
- Classroom sessions

### **1.2.2 Study Units**

As you develop the study units, consider the ways in which each study unit (and the chapters and topics within) can effectively support all nine Events of Instruction as proposed by Robert Gagne (2007). The sequence of events serves as a general guide for developing instructional strategies that engage and provide support for learner's cognitive processes of attention, encoding and retrieval of information.



## Read

Schneider, D. K. (2007, April 10). Nine events of instruction.

Retrieved from [http://edutechwiki.unige.ch/mediawiki/index.php?title=Nine\\_events\\_of\\_instruction&oldid=11040](http://edutechwiki.unige.ch/mediawiki/index.php?title=Nine_events_of_instruction&oldid=11040)

Each study unit, chapter, and topic should lead to the achievement of one or a set of learning outcomes.

A typical study unit has the following features or elements:

### 1. Learning Outcomes

Each study unit has a set of learning outcomes that are aligned with the overall course learning outcomes. Hence, students' achievements of the learning outcomes should lead them to achieve the learning outcomes set out at the course level.

Clearly articulated learning outcomes serves as the foundation for developing content, learning activities and assessments. They help to drive the development of the study unit.

More about this in Study Unit 2, Chapter 1: Writing Learning Outcomes.

### 2. Overview

This section provides a brief introduction to the study unit, outlining its scope. The introduction section should be written in an engaging manner, connect the content to real world context, and highlight why it is important and necessary to learn about the topics contained within the study unit. A good introduction prepares learners for lessons, sets expectations, piques the learner's interests, promotes connection to existing knowledge, and establishes purpose for the lesson.

Here are some suggestions for the introduction:

- Provide an *introductory* video lesson that sets the stage for what is to come

- Use *attention grabbers* to pique the learners' interest and as a motivational tool. Examples of attention grabbers are:
  - Asking a rhetorical question
  - Using visuals or visual imagery to tell a story or describe a work scenario
- Use *advance organisers* to help learners organise new information to be learnt and retained. Advance organisers are organisational cues that can be used to link new information to previously learnt concepts, or as a framework to help learners understand what they will be learning. Advance organisers can be in the form of charts, diagrams or concept maps.

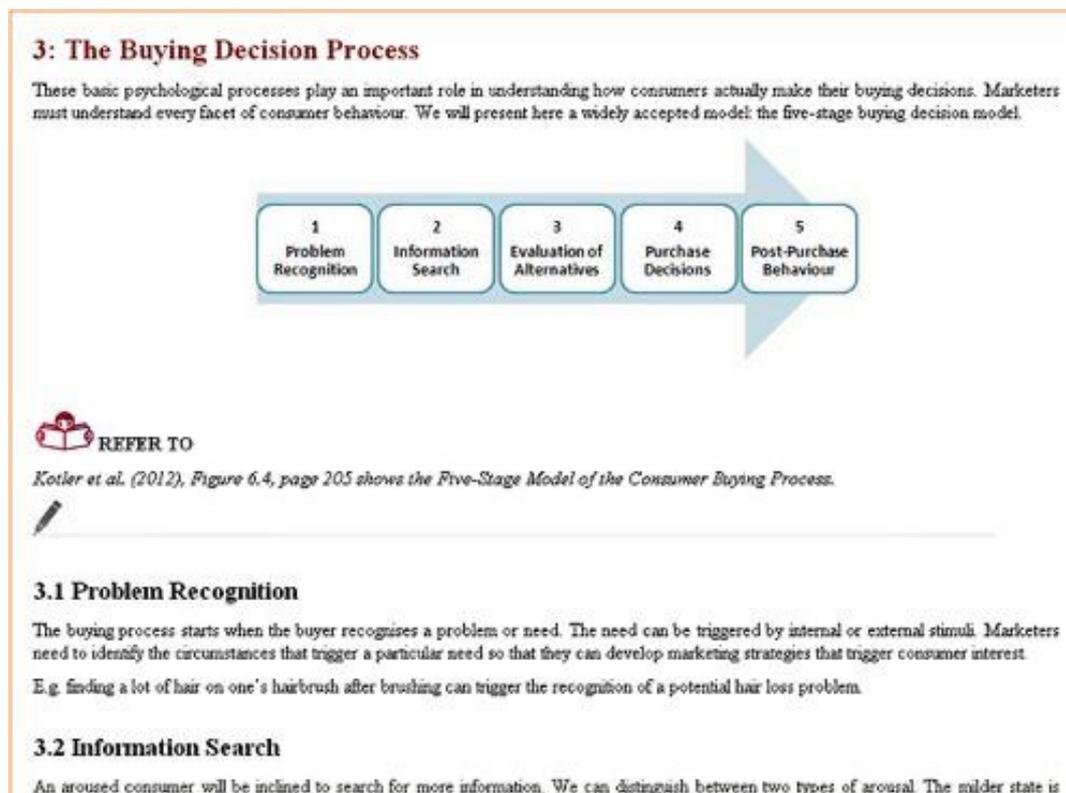


Figure 3.2 Process Diagram Developed as Advance Organiser

### 3. Chapters and Topics

The chapters and topics present the main content of the study unit. These may include one or more concepts, theories or models. Presentation of content should be logically chunked

and sequenced. They should also be contextualised with examples, scenarios and real-world cases (where appropriate) to illustrate and connect to real-world contexts.

The approved content will be sent for Turnitin to check for plagiarism. If the Turnitin report indicates a high percentage for similarity, the affected content must be removed, rewritten or paraphrased.

More about this in this Chapter, Topic 1.3: Presenting Content.

#### **4. Learning Activities**

Learning activities provide opportunities for students to apply the knowledge and skills learnt in a given situation and show if they have achieved the desired learning outcomes. The learning activity should be aligned with an individual or a set of learning outcomes.

Examples of learning activities that may be incorporated include:

1. Readings from textbooks, journals and websites
2. Multiple choice questions with feedback
3. Reflection
4. Student-centered activities using social web tools

More about this in Study Unit 3, Chapter 2: Designing Learning Activities.

#### **5. Multimedia Elements**

Appropriate multimedia elements are developed to support the learning of content and to engage learners. The following are some examples of multimedia elements that can be incorporated into the study unit:

1. Graphics and images
2. Chunked lesson recordings
3. Audio podcasts
4. Videos
5. Animations

More about this in this Chapter, Topic 1.4: Using Multimedia.

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## 6. Formative Assessments

Formative Assessments (FA) typically contain a set of non-graded, multiple-choice questions (MCQs) with feedback. The purpose is to allow students to monitor and test their level of understanding at the end of each study unit.

More about this in Study Unit 2, Chapter 2: Designing Assessments and Study Unit 3, Chapter 2: Designing Learning Activities.

## 7. Summary

The purpose of the summary is to ensure learners recall and synthesise their learning. Summaries provide opportunities for learners to review what they have learnt and transfer the knowledge for further application or future learning.

Here are some points to take note of when developing summaries:

- Each study unit should conclude with a summary to provide learning takeaways for students.
- The summary should highlight key points covered within the unit. It should not be a regurgitation of the learning outcomes.
- As with the introduction, it is important to highlight why the course is important and relevant, in the summary.
- Visuals may be used to help students review and make connections of concepts learnt.
- Encourage learners to apply the knowledge and skills learnt by posing questions related to real world situations and applications.

## 8. References

The content in the StudyGuide should be original and not copied verbatim from textbooks or external sources without permission. Refer students to relevant materials in a textbook or any given sources to complement learning from the StudyGuide. Where references to external sources are made, the full bibliographical information should be provided in the References section of the StudyGuide. The American Psychological Association

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(APA) format must be used for citations and bibliographic information, unless students are required to specifically use other forms of citation as part of the course.

Examples of citation placement in the text:

- Place the author(s) and date(s) within parentheses at an appropriate place within or at the end of a sentence.

Example: Researchers have pointed out that the lack of trained staff is a common barrier to providing adequate health education (Fisher, 1999) and services (Weist & Christodulu, 2000).

- Place only the date within parentheses. Example: Fisher (1999) recommended that health education be required for high school graduation in California.
- Integrate both the author and date into your sentence. Example: In 2001, Weist proposed using the Child and Adolescent Planning Schema to analyse and develop community mental health programmes for young people.

Examples of Bibliographic information

- Textbook: Burger, J. M. (2011). *Introduction to personality* (8th ed.). Cengage Learning.
- Journal Article: Caspi, A., Elder, G. H., & Bem, D. J. (1987). Moving against the world: Life-course patterns of explosive children. *Developmental Psychology*, 23, 308-313.
- Website: HPB: Health Promotion Board. (n.d.). About AIDS. <https://www.healthhub.sg/programmes/107/hiv-prevention>

For guidelines on APA style, refer to the website: <https://apastyle.apa.org/style-grammar-guidelines>.

More about this in Study Unit 4, Chapter 1: Respecting Copyrights.

## 1.3 Presenting Content

Developing the StudyGuide begins with defining the Course Learning Outcomes. As you have learnt in Study Unit 1, Chapter 2 and Study Unit 2, Chapter 1, the development process begins with the creation of the CDD. This phase of the development process requires you to define and shape the scope and structure of the course.

Once you have developed the CDD, you would have created the basic structure of the course that comprises study units, chapters and topics. You would also have defined the learning outcomes to be achieved at study unit, chapter and topic levels. These will help you develop the content and design activities that are mapped to the appropriate learning outcomes.

### 1.3.1 Types of Content

According to Clark and Mayer (2007), content can be categorised into five primary types:

**Table 3.1** Types of Content

<b>Facts</b>	Specific and unique data or instance. For example, Bangkok is the capital of Thailand.
<b>Concepts</b>	A classification of items or ideas. Concepts may be concrete or abstract. Concrete concepts are classified by physical attributes such as the concept of a square and a circle. Abstract concepts are classified by matching a definition or a list of characteristics, for example democracy and marketing.
<b>Processes</b>	A flow of events or activities that describe how things work. Processes may describe: <ul style="list-style-type: none"> <li>• business workflows</li> <li>• mechanical, chemical or computerised operations to produce something</li> </ul>

	<ul style="list-style-type: none"> <li>• biological or natural phenomenon</li> </ul>
<b>Procedures</b>	A series of step-by-step actions or decisions that are performed to accomplish tasks. Some examples of procedures include how to send out Announcements on the Learning Management System, and how to change car tires.
<b>Principles</b>	A set of relational rules, guidelines and parameters that help us predict, explain and draw implications. For example, one of the principles in the law of demand states that “as the price of a good or service increases, consumer demand for the good or service will decrease and vice versa.”

Depending on the learning outcomes, you may need to present one or more of the content types, and they should be built upon logically.

### 1.3.2 Chunking and Sequencing Content

The purpose of chunking and sequencing is to allow learners to learn in a structured and meaningful way. Content is chunked for the purpose of recall, retrieval and comprehension. Based on Reigeluth’s Elaboration Theory, chunking is the configuration of large amount of information into smaller units in order to accommodate memory and learning limitations. Sequencing presents the chunks in a logical and meaningful way that supports scaffolded learning.

Here are some techniques for chunking and sequencing:

- Present from general to specific information
- Sequence by simple to complex ideas
- Provide elaboration and show relationship of ideas
- Synthesise and summarise the ideas

Read this article to learn more about the Elaboration Theory.

[http://www.nwlink.com/~donclark/hrd/learning/id/elaboration\\_theory.html](http://www.nwlink.com/~donclark/hrd/learning/id/elaboration_theory.html)

### 1.3.3 Contextualising Content

Presentation of content can be supported with examples, scenarios and real-world cases where appropriate to illustrate and connect to real-world context.

Examples, scenarios and real-world cases are meant to illustrate how a concept, theory or model works in the real world, or is used by a particular company or within a specific industry. They are instances of activities that involve individuals, organisations or societies. They provide the context to help students make connections to prior knowledge or create meaning to new knowledge.

#### **Examples**

*Examples* are effective ways to illustrate the meaning of concepts. For example, to illustrate the concept of “personality traits” you may want to provide examples of good traits and bad traits. You may also want to provide examples of “character traits” to differentiate the two concepts.

Here are some guidelines to consider when providing examples:

- Use examples from a range of practices or alternative viewpoints or experiences.
- Provide non-examples to help distinguish between concepts that might cause confusion. For example, when describing passive-aggressive behaviour, you may want to give non-examples in the form of aggressive behaviour, where hostility is directed directly as opposed to indirect hostility in a passive-aggressive person.
- Examples should be written in a simple, clear and engaging style with enough background details to allow a student to get a snapshot of its primary activity and purpose.
- Consider if the examples should be representative of local, regional or global context.

#### **Scenarios**

*Scenarios* are basically instances of situations which are usually fictitious and presented as a story. Key elements in scenario settings include background to the story, environment,

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characters, interactions, issues, and challenges. Scenarios bring the learners into a situation either as an observer or a key character. Depending on the complexity, scenarios can be developed into an interactive format with multiple decision points and outcomes.

Here are some points to consider when developing scenarios:

- The scenario should be as realistic as possible, with accurate representation of real events and consequences
- The situation is recognisable to the learner
- The issues and problems is sufficiently challenging for learners

### **Real-world Cases**

*Real-world cases* present authentic situations that provide opportunities for learners to analyse and solve complex, ill-defined, and real problems. They allow learners to apply and transfer their learning to real life situations. It is essential that learning activities are built around cases. This can be done by getting students to respond to case-based questions.

- Allow opportunities for learners to analyse the situation and apply concepts learnt
- Make room for different opinions and perspectives
- Design to draw out problem-solving skills
- Include analysis and evaluation of past problem-solving situations, and have learners discuss and recommend how they can solve the problem differently

## **1.4 Using Multimedia**

The effective use of multimedia will assist learners in processing information that is aligned with the way humans process text and images (Mayer and Moreno, 2002). Multimedia refers to the way information is presented using a combination of different content formats such as text, images, sound, animation, and video.

In the context of developing a StudyGuide, the use of multimedia should be included to engage learners and cater to different learning styles and preferences. Animations, slide presentations, and audio and video productions should be used whenever appropriate to

enhance and reinforce learning. Technology should not, however, be included for its own sake. All media elements must have a clear purpose for its inclusion.

When deciding on the type of multimedia to develop, do keep in mind Keller's ARCS Model of Motivation.



**Figure 3.3** Keller's ARCS Model of Motivation

(Source: [www.arcsmodel.com](http://www.arcsmodel.com))

The following are some examples of multimedia elements that can be incorporated into the StudyGuide.

1. Graphics and images
2. Chunked lesson recordings
3. Audio podcasts
4. Videos
5. Animations

### 1.4.1 Graphics and Images

The adage “a picture speaks a thousand words” should be kept in mind as you develop the content. People generally have the tendency to remember pictures better than words. Relevant images and diagrams can be used to illustrate the content being presented and facilitate learning.

Here are a few examples of images and diagrams used.

Concept maps: to depict meaning and relationships of abstract concepts

#### Example

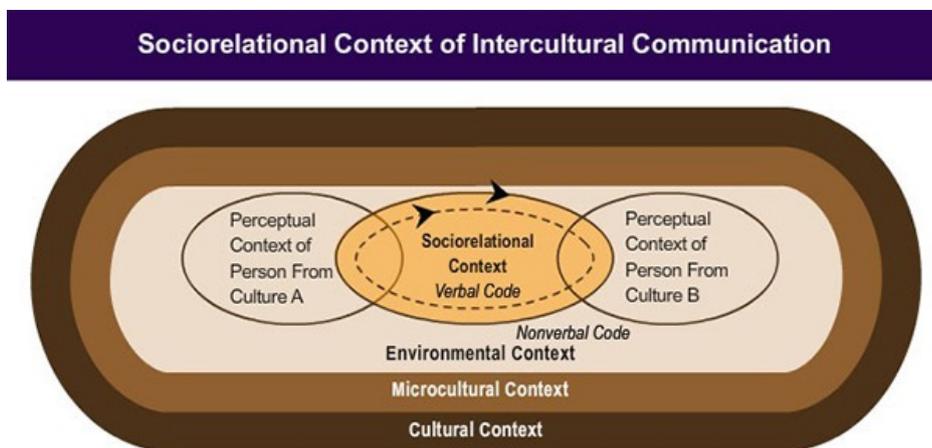
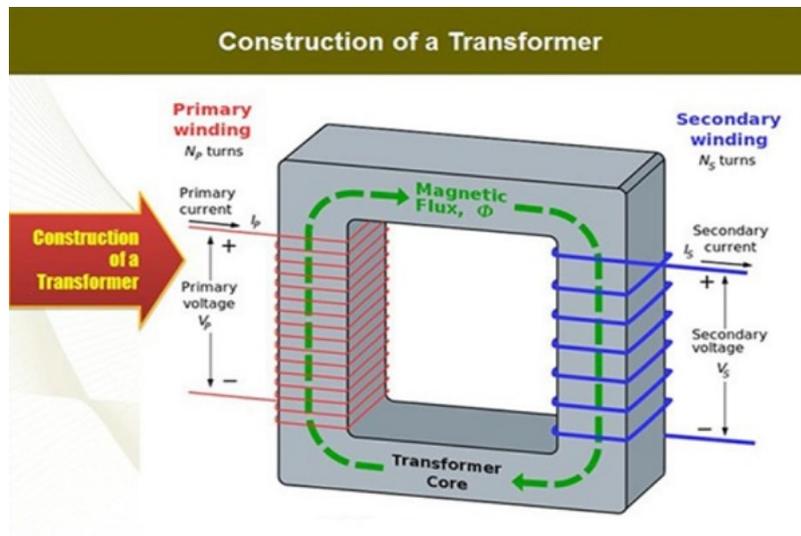


Figure 3.4 Concept Map of Intercultural Communication

Photographs or illustrations: to illustrate concrete concepts

### Example



**Figure 3.5** Depicting the Construction of a Transformer

(Source: GNU Free Documentation available under a Creative Commons Attribution-Share Alike 3.0 at [http://en.wikipedia.org/wiki/File:Transformer3d\\_col3.svg](http://en.wikipedia.org/wiki/File:Transformer3d_col3.svg))

Graphs and charts: to illustrate statistical or historical data

### Example



**Figure 3.6** Presenting Revenue on a Chart

Aesthetic images: while these may not directly facilitate learning, they can serve to motivate. Such images should be relevant and not detract from the learning of the content.

### Example



Figure 3.7 Using Relevant Images

### 1.4.2 Chunked Lesson Recordings

Lesson recordings are voice annotated PowerPoint slides, developed in bite-sized pieces to help learners grasp the information easily. These lesson recordings may be used to elaborate, explain, highlight, analyse or synthesise concepts and to help learners make connections between the concepts being presented.

The use of lesson recordings is meant to complement the content presented in the StudyGuide, provide focused learning, and engage learners. With this in mind, lesson recordings may be developed with the following intention:

1. For viewing at the start of study unit -- to provide an overview of the study unit, chapters, and topics; and highlight the importance and relevance of the study unit.
2. For viewing at the end of the study unit -- to connect and summarise key learning points. View Example.



## Lesson Recording

### Needs and Interests in the Context of Educational Provision

3. For viewing in the middle of the study unit - to elaborate and explain specific key learning points that may be more effectively achieved through direct instruction.

Here are brief guidelines to take note of when developing lesson recordings:

- Align the lessons with the course learning outcomes
- Keep each lesson duration to no more than 10-15 minutes
- Avoid too much text per slide. Provide no more than six points per slide and no more than six words per line
- Text should be readable with clear colour contrast that does not strain the eye
- Animations and transitions should be used sparingly and only if they enhance learning
- As with presenting any content, it should have an introduction/overview, body, and summary.

Your assigned Audio and Video member will advise you and recommend best practices prior to developing the Lesson Recordings. A template will also be provided to you.

### 1.4.3 Audio Podcasts

The StudyGuide may be enriched with audio podcasts to explain a particular topic or concept, or provide commentary on a subject. They are relatively easy to create. By directly communicating to the learner, audio podcasts make the lessons more personal.

- Learning of soft skills like listening skills and verbal communication skills

The following are some guidelines on using audio podcasts:

- Keep the audio podcasts short and concise: no more than three minutes in duration
- Use audio podcasts to deliver information that do not require visual presentation
- Include a text transcript of the audio podcast

Examples where audio podcasts may be effective for learning include:

- Learning of soft skills like listening skills and verbal communication skills
- Language learning
- Interviews with experts (who do not wish to be videotaped)
- Explanation and commentary on specific concept or topic

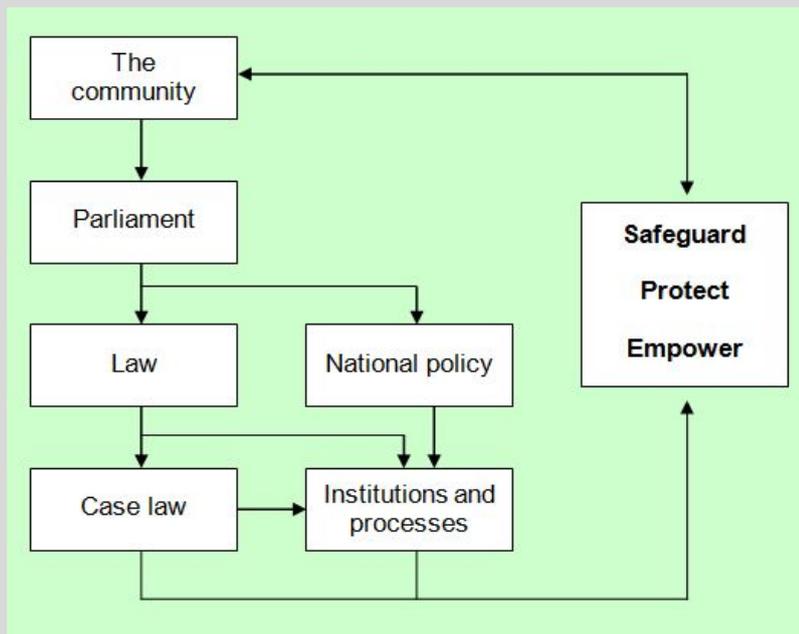


#### **Listen**



This streaming audio requires Internet connection. Access it via Wi-Fi to avoid incurring data charges on your personal mobile

Here is an example of using audio podcast to explain a diagram.



**Figure 3.8** Legal Framework for the Protection of Children

Click [here](#) to listen to the audio. <sup>ii</sup>

### 1.4.4 Videos

Video learning resources provide learners with a pre-recorded visual experience that the classroom and other media do not provide. This can enhance students' interests, motivation, and engagement. The popularity of videos can be seen in the mainstream where people are increasingly turning to websites such as YouTube for entertainment, information and knowledge.

Here are some ways in which videos can be effectively used in the StudyGuide:

- Demonstrate procedural activities or “how-to” videos, especially where movement is relevant

<sup>ii</sup> [https://d2jifwt31jehd.cloudfront.net/AD109/others/AD109\\_AD109\\_su03ch01t01\\_4\\_aud1\\_v2\\_0.mp3](https://d2jifwt31jehd.cloudfront.net/AD109/others/AD109_AD109_su03ch01t01_4_aud1_v2_0.mp3)

- Interview experts or guest speakers
- Video case studies/simulation/role plays
- Reflective commentaries and perspectives



## Watch

This streaming video requires Internet connection. Access it via Wi-Fi to avoid incurring data charges on your personal mobile

Here is an example of using video to demonstrate a procedure.

Click [here](#) to watch the video. <sup>iii</sup>

### 1.4.5 Animations

Animation is a series of illustrations with movement. It may be used in a number of ways. You may choose to use animations to visually illustrate a particularly, complex teaching point or dynamic relationships. This medium may be used to illustrate a complex process that is difficult to simulate in real life or capture on video.

For example, a process that involves several sequential steps can be the subject of an illustration. Showing ways in which different outcomes might follow from a single action or initiative under different conditions might be another. When designing such an animation, think about how the concept would be applied in the real world. You may

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<sup>iii</sup> [https://d2jifwt31jehd.cloudfront.net/AD109/others/AD109\\_AD109\\_su03ch01t01\\_4\\_vid2\\_v2\\_0.mp4](https://d2jifwt31jehd.cloudfront.net/AD109/others/AD109_AD109_su03ch01t01_4_vid2_v2_0.mp4)

want to illustrate the concept with a fictitious company or talk about the application of the concept to a particular industry.

Here are some guidelines for designing animations:

- Keep animations short and straight to the point
- Do not add animations purely for entertainment value. They should be used only to advance and reinforce the student's learning
- Provide relevant contextual information to accompany the animation
- Limit the number of concepts presented in animations to one or two to prevent information overload, unless the point is to show relationships among several concepts.
- Provide a storyboard to describe the sequence of actions, settings and graphics as a means of communicating your intent to the animator / graphic designer

## 1.5 Writing Style and Grammar

The StudyGuide should be written in British English and in a style that is engaging and easy to read. The language used should be clear, coherent and concise.

Here are some guidelines on writing to keep in mind.

- Writing style

Write simply and clearly to improve readability.

- Paragraphs

Reading text online is different from reading from a book. Break up the text into bite-sized paragraphs. Keep one idea to one paragraph.

- Subheadings and lists

Use headings, bulleted and numbered lists to break up the text and guide students through the material. For visual interest, bullet points are preferred over numbered lists unless you are referring to a sequence of events or you need numbering for later referencing.

- Acronyms

For acronyms, provide the full words and the abbreviated form at first use. For example, “Just-in-Time (JIT)”.

- Contractions

Avoid using contractions except in cases where you wish to include a transcript of dialogue in your content. Examples are:

- it is (not it's)
- do not (not don't)
- you will (not you'll)

## Summary

In this chapter, you have learnt the following:

- The StudyGuide provides a framework for organising subject knowledge upon which students can build and develop their own understanding of the subject.
- The StudyGuide is enriched with interactive learning activities and multimedia to enhance the learning experience and increase student engagement. It is mobile-friendly and allows students to learn on the go.
- A typical StudyGuide consists of two main sections: a Course Guide and Study Units. The course guide provides students with an overview and syllabus of the whole course. The Study Units contain the main content of the course. It is structured into chapters and topics that are aligned with the learning outcomes of the study unit.
- There are five types of content namely, facts, concepts, processes, procedures and principles. The course content may include some or all of the types. The content should be appropriately chunked and sequenced to help learners learn by presenting them in a structured and logical manner -- from general to specific, simple to complex ideas.

- Contextualising content with examples, scenarios and real-world cases where appropriate, is useful to help illustrate and connect the ideas to real-world contexts.
- The course content should be written in a style that is clear, coherent, consistent, and easy to read and understand.
- Multimedia elements are incorporated to engage and enhance the learning of content. These elements typically include:
  1. Graphics and images
  2. Chunked lesson recordings
  3. Audio podcasts
  4. Videos
  5. Animations

## References

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## Chapter 2: Designing Engaging Learning Activities

### Learning Outcomes

By the end of this Chapter, you will be able to:

1. Explain the differences between independent and collaborative learning activities.
2. Explain the differences between face-to-face and online learning activities.
3. List the different types of learning activities.
4. Explain how to design learning activities that are aligned with Bloom's Taxonomy.
5. Identify the essential elements of engaging learning activities.
6. Explain how to design activities for independent and collaborative learning.

### Overview

Chapter 2 focuses on designing engaging learning activities that meet the different levels of Bloom's Taxonomy for blended learning mode. These can be in the form of an online or face-to-face classroom-based activity. Such activities can also be designed to support independent or collaborative learning.

### 2.1 What are Learning Activities?

A learning activity is *"an interaction between a learner and an environment (optionally involving other learners, practitioners, resources, tools and services) to achieve a planned learning outcome"* (Beetham 2004).

According to Horton (2006) *"learning activities exercise the basic skills, thought processes, attitudes and behaviours of learners. These activities can be categorized into absorb, do and connect activities"* (p.38).

Watkins (2005) further defined “e-learning activities as using online technologies, such as chat room, discussion boards, or email, to facilitate participation of e-learners in meaningful exercises related to the course and its learning objectives” (p.2).

Hence, the key intent of learning activities is really to help students achieve the designated learning outcomes of your course.

### 2.1.1 Types of Learning Activities

When designing learning activities, it is helpful to consider if such activities are:

- online or face-to-face;
- independent or collaborative.

#### 1. Online or Face-to-Face Activities

At SUSS, our courses adopt a blended mode of delivery where students attend face-face instructor-led seminars as well as participate in online learning activities. Digital learning content is uploaded onto the university’s learning management system prior to the start of semester. This enables students to read the course materials before coming for classes and at any time throughout the entire course duration.

As highlighted in AD108: Blended Learning at SUSS, face-to-face sessions are meant for students to clarify misconceptions regarding core concepts, discover, build and organise their knowledge. For this reason, it is necessary for the course developer to design learning activities that enable student participation in both online as well as during face-to-face seminar sessions.

Face-to-face learning activities refer to synchronous activities that are facilitated by the instructor during the seminar sessions. Examples of face-to-face activities are role-plays, business case discussions, laboratory exercises and language interpretation exercises.

On the other hand, online learning activities refer to activities that require students to use the computer to do a learning task. Depending on the nature of the task, an Internet

connection may or may not be necessary. Online learning activities give students the flexibility to perform the activity without the need to be at a fixed place and time.

Online learning activities can also be categorised as synchronous or asynchronous. Synchronous learning refers to live or real-time learning where students are all logged in to their computers at the same time. In an asynchronous learning environment, students perform the activity over a longer period of time.

<https://www.talentlms.com/elearning/synchronous-vs-asynchronous-elearning>

Examples of online activities are watching chunked lesson recordings, listening to podcast and participating in online discussion forum.

## **2. Independent Learning or Collaborative Activities**

There are many different terms used to describe independent learning, the most common one being “self-regulated learning.” Fundamentally, these terms refer to a concept of independent learning where students have control over their learning, are motivated to take responsibility for their own learning, and work with their instructors to structure their learning environment. In SUSS’s context, independent learning activities refer to learning activities that a student can carry out on his/her own.

Examples of independent learning activities are answering TMA questions, doing pre-class test and formative assessment.

Conversely, collaborative learning activities require the student to work collaboratively with at least one other person. Such activities are based on the notion of learning interdependence, where learning is best negotiated through dialogues as well as achieved through mutual exchanges of ideas and information, feedback, reciprocal teachings, and resources (Curtis and Lawson, 2001; Johnson and Johnson 1996; Dillenbourg and Schneider 1995).

The benefit of collaborative learning is the building of learning communities that help to provide the necessary support to ensure that students persist in their studies. Learning is a social experience and a student’s participation in collaborative learning activities is just

one of the avenues for building and nurturing academic and social support networks that can be drawn upon beyond the confines of the classroom space and duration of course (Cabrera et al, 2002).

The aim of collaborative learning is for learners to interact and actively engage in the construction of knowledge.

Examples of collaborative learning activities are doing group-based assessment, classroom presentation and role-play.

### 2.1.2 Why are Learning Activities Important?

Learning activities provide opportunities for students to apply their knowledge and competencies in a given situation, and show if they have achieved the desired learning outcomes. Hence, learning activities are often designed based on the learning outcomes that students can demonstrate by, for example, submitting a learning artifact as evidence of their learning. The instructor will review the submitted artifact, make an assessment and give feedback vis-a-vis the intended learning outcomes. On the other hand, students can check and monitor their own learning progress by completing the learning activities as well as to identify their own strengths and weaknesses from the feedback given.

From Study Unit 1 Chapter 1: The Big Picture, we learned that a well-designed course is made up of content, interactions and assessments which complement each other and match the desired learning outcomes. Well-designed learning activities foster engaging interactions which involve:

- independent, online learning activities, such as quizzes and reflective questions as found in the StudyGuide
- collaborative, online learning activities which make use of discussion forums, wikis, blogs or virtual classroom tools available on LMS
- collaborative, face-to-face activities such as role-plays, classroom discussions or group presentations

## 2.2 Design Learning Activities

### 2.2.1 Designing Activities for Blended Learning

SUSS courses are delivered using a blended learning approach. Students learn via the online mode as well as face-to-face instructor-facilitated sessions. As a course developer, it is important for you to be able to design both online and face-to-face learning activities. Such activities should be designed in a way that allows one activity to build onto another while scaffolding the students' learning - from a lower to a higher level of learning and showing students how to connect and integrate existing knowledge with new knowledge.

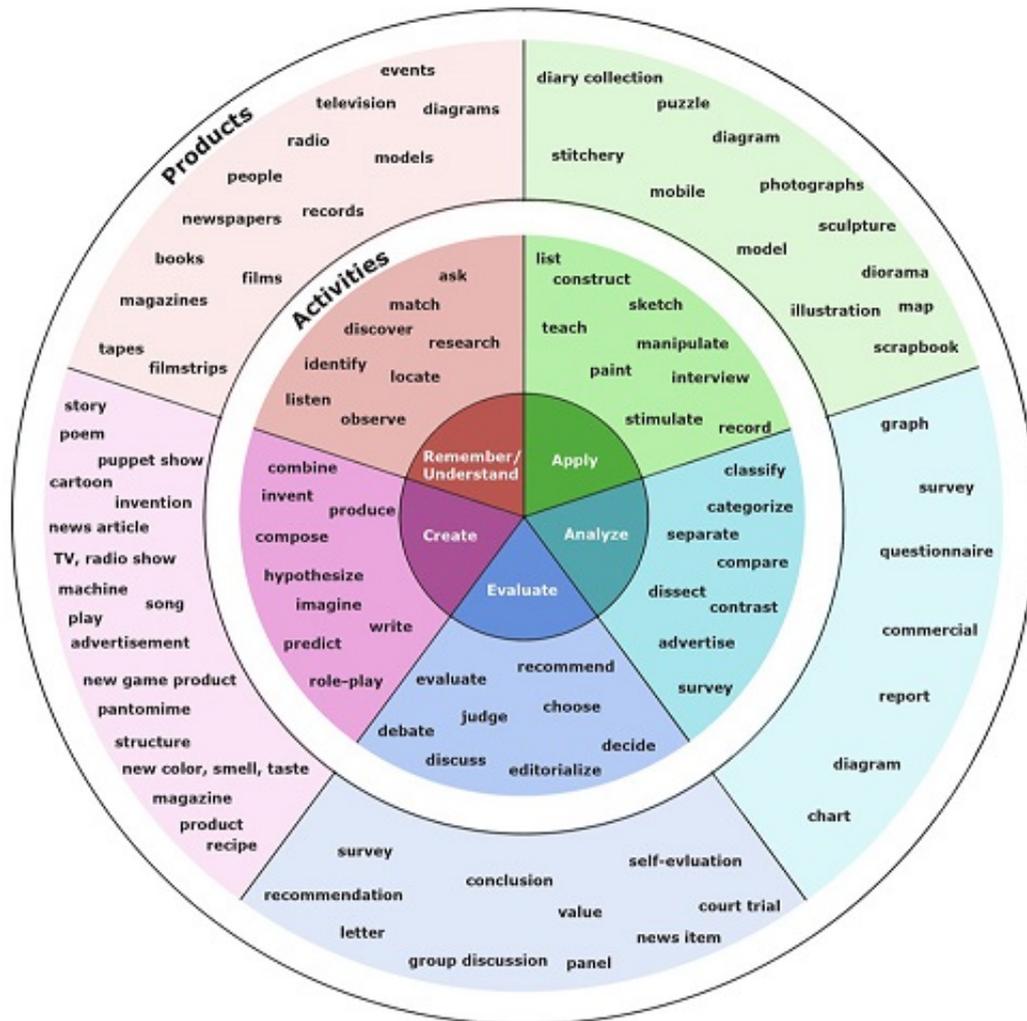
Example:

You can plan a learning activity that requires students to first create, in class, a diagram that illustrates the inter-relationship between important concepts and theories. For the online session, students are then required to discuss and improve on the diagram. In the subsequent face-to-face session, students are required to present and elaborate on the improvements made.

### 2.2.2 Learning Activities and Bloom's Taxonomy

In the previous section, we learned that outcomes-based learning activities are planned with specific learning outcomes in mind. The following diagram illustrates the different levels of Bloom's Taxonomy, and the suggested learning activities that support the attainment of different levels of Bloom's Taxonomy.

Bloom's revised taxonomy for the cognitive domain



Adapted from: Anderson, L. W. and David R. Krathwohl, D. R., et al (2000)  
 A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives. Allyn & Bacon

The development of instructional objectives as a means to support purposeful development of instructional content benefitted a great deal from Benjamin Bloom, when in 1956 he published a taxonomy of intellectual behaviors. For the next 40 years, the application of his work found its way into many instructional disciplines. A key milestone came in 2000, when Anderson and Krathwohl (see citation) revisited the taxonomy to make the model more appropriate to current audiences. In 2002, Barbara Clark, a researcher in educational practices of the gifted, adapted the revised taxonomy into roughly the circular graphic shown here. CDWS is still trying to contact Ms. Clark to obtain permission to add adjustments to the design, as represented in the included graphic.

Figure 3.9 Bloom's Revised Taxonomy for Cognitive Domain

(Source: Clark, B., 2002)



## Listen

This streaming audio requires Internet connection. Access it via Wi-Fi to avoid incurring data charges on your personal mobile

Click [here](#) to listen to the audio.<sup>iv</sup>

In a paper entitled *Growing up gifted: Developing the potential of children at home and at school*. Barbara Clark presented this diagram as an adaptation of Bloom's Taxonomy. The inner circle represents different levels of Bloom's Taxonomy under the cognitive domain. The middle circle indicates the associated action verbs. The outer circle shows the various possible learning artefacts or products of student learning.

Figure 7.2 in the above mentioned paper shows how Clark's adapted model of Bloom's Taxonomy can be used to trigger ideas on types of learning activities. We start from the intended learning outcome which is pitched at the level of "Evaluate", say, for example, "At the end of the chapter, students would be able to **judge** the effectiveness of the user interface design of a software application based on a set of criteria". By reviewing the items listed in the corresponding outer circle (**product** or evidence of student learning), the course developer would be able to come up with different examples of learning activities such as having a **group discussion** or requiring students to design a survey questionnaire on user interface design.

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<sup>iv</sup> [https://d2jifwt31jehd.cloudfront.net/AD109/others/AD109\\_AD109\\_su03ch02t02\\_2\\_aud2\\_v2\\_0.mp3](https://d2jifwt31jehd.cloudfront.net/AD109/others/AD109_AD109_su03ch02t02_2_aud2_v2_0.mp3)

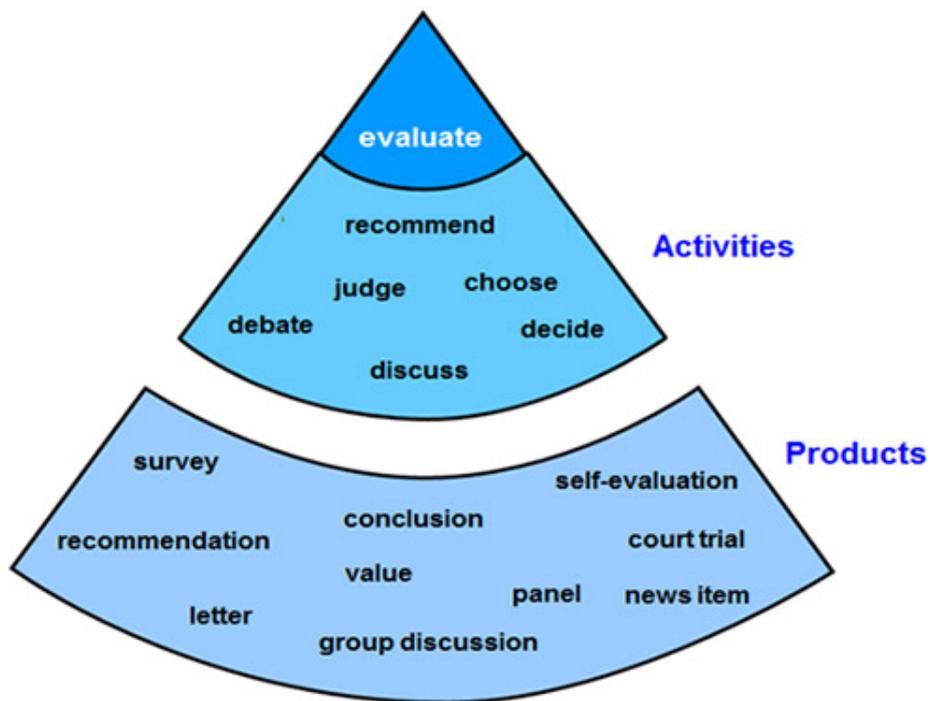


Figure 3.10 Segment on Evaluation Level of Bloom's Taxonomy



### Listen

This streaming audio requires Internet connection. Access it via Wi-Fi to avoid incurring data charges on your personal mobile

Click [here](#) to listen to the audio. <sup>v</sup>

<sup>v</sup> [https://d2jifwt31jehd.cloudfront.net/AD109/others/AD109\\_AD109\\_su03ch02t02\\_2\\_aud3\\_v2\\_0.mp3](https://d2jifwt31jehd.cloudfront.net/AD109/others/AD109_AD109_su03ch02t02_2_aud3_v2_0.mp3)

It is important to take note that the items listed under the various segments of the circle are not exhaustive. These are meant for course developers to explore different possibilities in designing the most appropriate learning activity based on the intended learning outcome(s) and abilities of the students.

Since 2002, when Clark originally presented this model, other researchers have adapted and created other variations. Access the following links to find out more:

<http://spatkinson.wordpress.com/tag/affective-wheel/>

<https://designingoutcomes.com/the-pedagogy-wheel-its-a-bloomin-better-way-to-teach/>

### 2.2.3 Examples of Learning Activities

Example 1: Bloom's Taxonomy level 1- Remembering (**Independent Online Learning Activity in StudyGuide**)

**Type of Learning Activity:** Multiple choice question written in StudyGuide

4. The main reason why companies pursue international procurement is because \_\_\_\_\_

- a. Off-shore suppliers are cheaper than local suppliers.
- b. Off-shore suppliers are more reliable in supply lead time.
- c. Off-shore suppliers offer advantages over local suppliers.
- d. Off-shore suppliers possess technical expertise not available in-house.

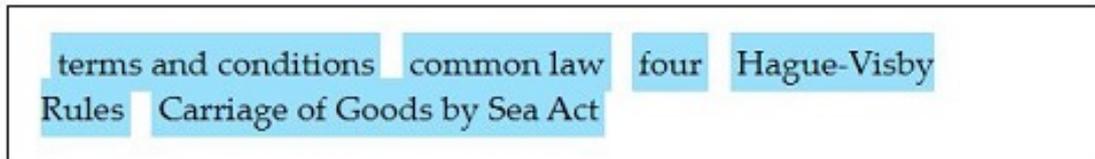
Not necessary. Local suppliers can be better but lost out when evaluated against a basket of considerations

**Figure 3.11** Multiple Choice Question in StudyGuide

Example 2: Bloom's Taxonomy Level 2 - Understanding (**Independent Online Learning Activity in StudyGuide**)

**Type of Learning Activity:** Fill-in-the-blank via StudyGuide

Click or tap once to select the answer. Then click or tap in the appropriate blank to place the answer.



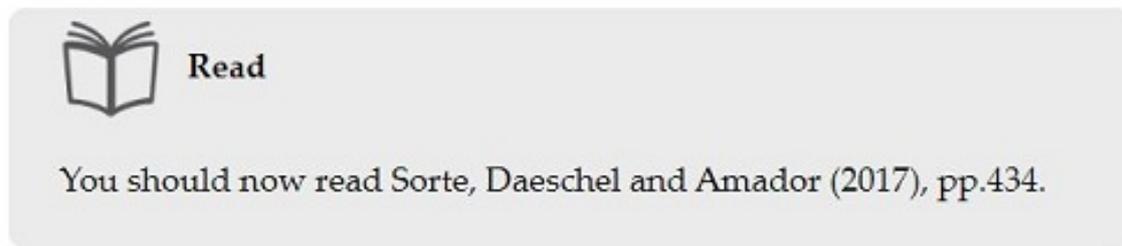
Broadly speaking, a bill of lading (B/L) is a document signed by (or on behalf of) the carrier stating that certain specified goods have been shipped on board a particular ship, and setting out the \_\_\_\_\_ on which the goods would be carried by the ship.

In Singapore, a bill of lading is governed by statute (Bill of Ladings Act, Cap. 384) and common law. Under \_\_\_\_\_, the B/L has \_\_\_\_\_ functions. Its terms and conditions can also be

Figure 3.12 Fill-in-the-Blanks in StudyGuide

Example 3: Bloom's Taxonomy Level 2 - Understanding (**Independent Online Learning Activity in StudyGuide**)

**Type of Learning Activity:** Reading



**Figure 3.13** Read Activity in StudyGuide

1. You may ask the students to send you their answers via e-mail. Based on their answers, you may then provide individual feedback.
2. In the situation where you wish to encourage collaborative learning, you may ask the students to post their answers on the discussion forum so that you can read and learn from the answers posted by their course mates. Your feedback can then be posted in the forum.

#### Example 4: Bloom's Taxonomy Level 3 - Applying (**Independent & Collaborative Online Learning Activity**)

**Type of Learning Activity:** Drill-and-practice activity using online discussion forum

< CT1121 >

Author: Chow Siew Hoong ETP

Posted Date: Monday, March 24, 2014 6:53:06 PM SGT

Edited Date: Monday, March 24, 2014 7:07:07 PM SGT

Learning Outcome: Apply direct and figurative translations techniques for Chinese-English Translation.  
 Instruction: Translate the following sentences from Chinese to English. Post your answer on this discussion thread.  
 Study and compare the translations posted you and your course mates and discuss the similarities and differences in the writing styles.

Expectation:  
 Deadline: 10 March 2014, 2359 hrs.  
 Chinese: 三心二意  
 English: \_\_\_\_\_  
 Chinese: 三三两两  
 English: \_\_\_\_\_

Feedback: I will provide individual feedback to help you to improve your translation via this discussion thread on 11 March 2014.

< CT1121 >

**Figure 3.14** Drill-and-Practice Activity Using a Discussion Forum

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Example 5 - Bloom's Taxonomy Level 4 - Analysis. **(Independent Learning Activity in StudyGuide)**

**Type of Learning Activity:** Reflection Question in StudyGuide



**Reflect**

Refer to Figure 13-4 (p.464) in particular, what are the pros and cons of this classroom set up?

Compare this with the child care centre or kindergarten that you have been attached to. To enhance your own learning, analyse and sketch out as many classroom plans as possible to build your own resource of "learning spaces". This will come in handy as you learn to design your own classroom space in the near future.

**Figure 3.15** Reflection Activity in StudyGuide

- Prompt reviews of the learning situation to determine what is known, what is not yet known, and what has been learnt.
- Provide authentic tasks involving ill-structured problems that allow for alternative points of view and justifications.
- Prompt students' reflection by asking questions that seek reasons and evidence of their understanding.
- Provide some explanations to guide the students' thought processes during explorations.
- Provide a less-structured learning environment that prompts students to explore what they think is important.
- Provide social-learning environments such as those inherent in peer group work and small group activities to allow students to see others' points of view.

Example 6 - Bloom's Taxonomy Level 4 - Analysis. **(Independent Online Learning Activity)**

**Type of Learning Activity: Blog**

Instruction:

Visit the Access to Culture link <https://www.protocolww.com/blog/> and read any two articles on intercultural communication and post your own comment of not more than 200 words.

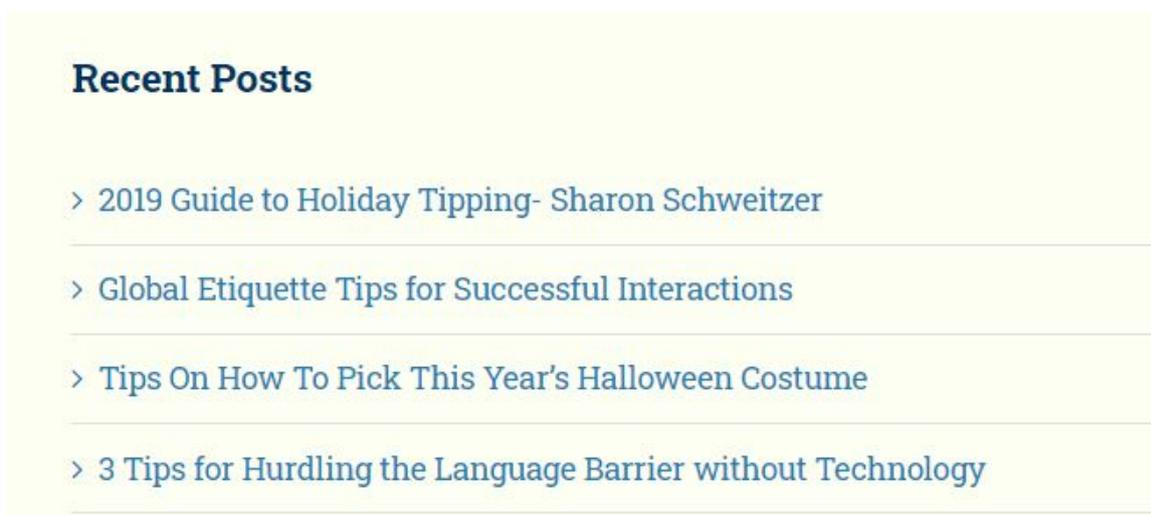
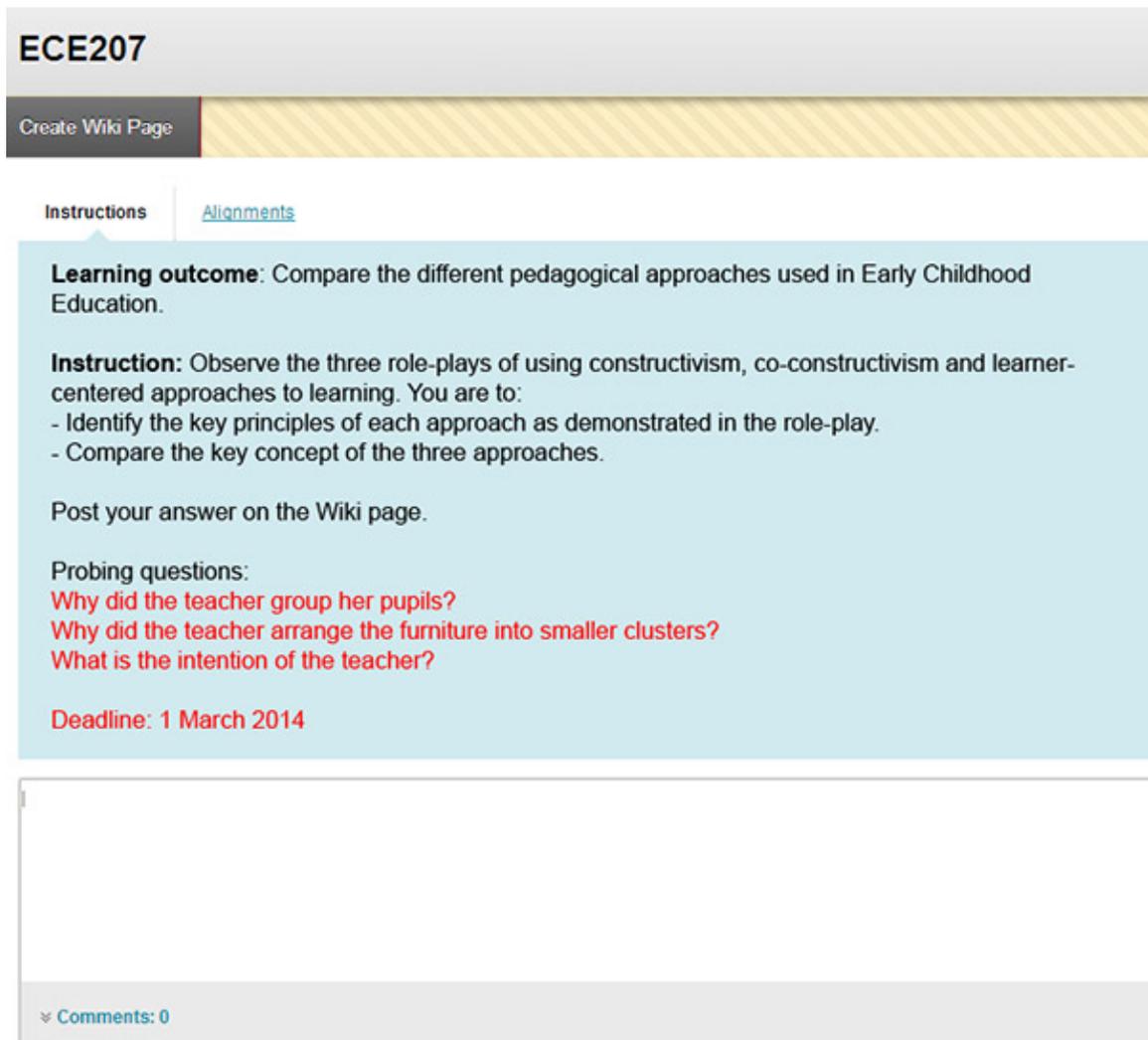


Figure 3.16 Blogging Activity

Example 7 - Bloom's Taxonomy Level 4 – Analysis. **Independent Learning Activity (F2F/ Online)**

**Type of Learning Activity: Role-play (F2F) and Wiki (online) Activities – Part 1**



**ECE207**

Create Wiki Page

Instructions [Alignments](#)

**Learning outcome:** Compare the different pedagogical approaches used in Early Childhood Education.

**Instruction:** Observe the three role-plays of using constructivism, co-constructivism and learner-centered approaches to learning. You are to:

- Identify the key principles of each approach as demonstrated in the role-play.
- Compare the key concept of the three approaches.

Post your answer on the Wiki page.

Probing questions:

- Why did the teacher group her pupils?
- Why did the teacher arrange the furniture into smaller clusters?
- What is the intention of the teacher?

**Deadline: 1 March 2014**

Comments: 0

Figure 3.17 Role-play (F2F) and Wiki (Online) Activities - Part 1

**Example 8:** Bloom's Taxonomy Level 5 - Synthesizing. Collaborative Learning Activity (F2F/Online)

**Type of Learning Activity:** Role Play (F2F) and Wiki (Online) Activity - Part 2

**ECE207**

Create Wiki Page

[Instructions](#) | [Alignments](#)

**Learning Outcome:** Judge the effectiveness of constructivism, co-constructivism and learner-centred approaches in a given scenario.

**Instructions:**  
Observe the three role-plays of using constructivism, co-constructivism and learner-centred approaches to learning. In a group of five students

- Judge the effectiveness of constructivism, co-constructivism and learner-centred approaches in teaching young children as demonstrated in the role play.

Post your answer on your group wiki page.

**Hint:**  
Which is the most effective approach?  
When did teacher in the role-play change her teaching approach?  
Deadline: 15 March 2014

▼ Comments: 0

Figure 3.18 Role-play (F2F) and Wiki (Online) Activities - Part 2

**Example 9:** Bloom's Taxonomy Level 6 - Creating, Collaborative Learning Activity (F2F)

**Type of Learning Activity:** Problem-based Learning / Presentation activity



### Reflect 3.1

Based on the examples shown, what do you think are the common attributes found in these learning activities?

An effective learning activity comprises some of the following attributes:

**Table 3.2** Attributes of Learning Activity

Attributes of a Learning Activity	ARCS
1. Aligns with selected learning outcome/s	Relevance
2. Has clear instructions	Confidence
3. Provides sufficient scaffolding for students' learning	Satisfaction
4. Provides useful feedback on students' learning in relation to the learning outcome/s tied to this activity	Satisfaction
5. Includes challenging and meaningful opportunities for successful learning	Confidence
6. Includes surprising and unanticipated events that catch students' attention	Attention
7. Makes connections to students' prior knowledge and excites them to explore the content	Attention
8. Provides learning tasks with various choices, and opportunities of learning ownership	Relevance
9. Empowers students to take ownership of learning	Relevance
10. Presents content and examples which are related to students' experience and values	Relevance
11. Forms part of the graded assignment	Satisfaction

These listed attributes are adapted from the ARCS Model of Motivational Design. They provide a good starting point when designing engaging learning activities.

“Learners learn by researching, analyzing, evaluating, synthesizing, discussing, testing, deciding and applying knowledge. Thus the goal in designing learning activities is to provoke the exact mental experience that leads to learning” Horton (2006).

## Summary

The chapter provides the course developer with the basic skills and fundamental theories in designing engaging learning activities for blended learning.

Some types of learning activity that can be incorporated are:

- Fill in the blank
- Formative assessment
- Online discussion forum
- Wiki
- Reflection questions
- Role-play

Remember to make use of the ARCS Model while designing learning activities. Consider the following questions:

- How to grab the attention of learners?
- How to make learning relevant to learners?
- How to build the confidence of learners?
- How to make learning experience more satisfying for learners?

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- Watkins, R. (2005). *75 e-learning activities making online learning interactive*. Pfeiffer.

## Formative Assessment

1. Which of the following element is NOT a component of the StudyGuide?
    - a. Formative assessment
    - b. Learning outcomes
    - c. Pre-class quiz
    - d. Introductory video
  
  2. Which of the following is FALSE about Chunking and Sequencing of Content?
    - a. Sequencing of content is to present chunked lesson recordings in a logical and meaningful way.
    - b. Chunking is the concatenation of small units of information.
    - c. Content is chunked for the purpose of recall, retrieval and comprehension. Refer to Study Unit 3 Chapter 1 to learn more.
    - d. Chunking and sequencing of content is to segment the content into smaller units in order to scaffold learning.
  
  3. \_\_\_\_\_ are meant to illustrate how a concept, theory or model works in the real world, or is used by a particular company or within a specific industry.
    - a. Examples, scenarios and authentic cases
    - b. Story, environment and characters
    - c. Text, images and sound
    - d. Facts, processes and procedures
  
  4. Which one of the following is a collaborative learning activity?
    - a. Participating in a discussion forum
    - b. Reading the StudyGuide
    - c. Creating a reflective blog
    - d. Listening to a podcast
-

5. Which one of the following is an independent learning activity?
  - a. Participating in a role-play
  - b. Engaging in a debate
  - c. Reviewing chunked lesson recordings
  - d. Joining an online discussion
  
6. Which one of the following is NOT a required component of an effective learning activity?
  - a. Clear learning outcomes
  - b. Clear instructions
  - c. Feedback on learning
  - d. Adoption of multimedia resources

## Solutions or Suggested Answers

This learning activity is enhanced by providing feedback for all four choices.

Learners are required to recognise the technique used in translating a given sentence. This is an improvement from Example 1. Notice that the learner is able to read the feedback given. In addition, the learning outcome is also added to the question.

Reading should also include scaffolding for learning and feedback for improvement. The scaffolding is the probing question: “See if you can identify the major components of Mayer’s framework. How would it aid you in your study of personality?”

There are two ways in providing feedback.

Learners are required to translate from Chinese to English using direct and figurative translations techniques.

This activity includes both independent and collaborative learning. First, learners are asked to translate the sentences individually; they are then required to post their answers on the discussion thread. Peer learning occurs when learners examine and compare their answers with course mates.

Finally, the instructor will scaffold students’ learning and offer individual feedback to them via the online discussion forum.

Reflection activities develop higher-order thinking by prompting students to relate new knowledge to prior understanding, apply new knowledge to real world situations, or apply strategies to solve real world problems.

Here are some useful tips to keep in mind when designing reflection type of activities:

A blog can be used to capture learning artifacts and record the learning process. Blog learning activity can be enhanced if the developer posts probing questions that scaffold learning. These questions can be:

“How would you handle the situation if you were Obama?”

“Would you bow to the Japanese?”

“What have you learnt?”

Learning Outcome:

Appraise the cultural nuance and how it colours our worldview and affects our communication and relationships with people of other cultures.

In a face-to-face session, three groups of students will role play using the three learning approaches of constructivism, co-constructivism, and learner-centred learning respectively. Another group of students observing the role play are required to discuss and assess each approach in the given scenario.

The follow-up online activity requires each individual to identify the principles and key concepts of learning approaches. They are required to create a Wiki page to record their observation.

Notice the instructor posted the three scaffolding questions and set the deadlines.

In this part 2 of the activity, students are to make a collective judgement on the effective of each approach and give reasons to justify their answers. They are required to create a Wiki page to explain their answer. This Wiki page is evidence of their learning. Instructors can provide feedback to learners based on their understanding.

Notice the instructor posted the two scaffolding questions and set the deadlines.

In this activity, learners will take on the role of a member of the Curriculum Design Committee. Based on the report of the changing of Early Children Teaching Curriculum, the learners will evaluate the current situation, and learning environment and climate, to formulate three different curricula based on constructivism, co-constructivism and learner-centred approaches that can be implemented in the 5-year plan.

The activity will challenge the learner to create and to develop a curriculum that is current and relevant to the changing learning landscape.

**Learning Outcome:** Formulate three different curricula on constructivism, co-constructivism and learner-centred approaches.

### Formative Assessment

1. Which of the following element is NOT a component of the StudyGuide?

- a. Formative assessment

Incorrect. Formative assessment is indeed an important component of the StudyGuide designed to help students to monitor their own learning. Refer to Study Unit 3 Chapter 1 to learn more.

- b. Learning outcomes

Incorrect. Learning outcomes is indeed an important component of the StudyGuide. Learning outcomes are stated at the beginning of each study unit. Refer to Study Unit 3 Chapter 1 to learn more.

- c. Pre-class quiz

**Correct. Pre-class quiz is found in the Learning Management System and not in the StudyGuide. Refer to Study Unit 3 Chapter 1 to learn more.**

- d. Introductory video

Incorrect. Introductory video is found in the Course Guide section of the StudyGuide. Refer to Study Unit 3 Chapter 1 to learn more.

2. Which of the following is FALSE about Chunking and Sequencing of Content?

- a. Sequencing of content is to present chunked lesson recordings in a logical and meaningful way.

Incorrect. Indeed, the purpose of sequencing is to present the chunked content in a logical and meaningful way. Refer to Study Unit 3 Chapter 1 to learn more.

- b. Chunking is the concatenation of small units of information.

**Correct. This statement is false about chunking. Refer to Study Unit 3 Chapter 1 to learn more.**

- c. Content is chunked for the purpose of recall, retrieval and comprehension. Refer to Study Unit 3 Chapter 1 to learn more.

Incorrect. Indeed, the purpose of chunking is to make recall, retrieval faster and to improve the comprehension of complex ideas. Refer to Study Unit 3 Chapter 1 to learn more.

- d. Chunking and sequencing of content is to segment the content into smaller units in order to scaffold learning.

Incorrect. Indeed, the purpose of sequencing is to present the chunks in smaller units to support scaffolding. Refer to Study Unit 3 Chapter 1 to learn more.

3. \_\_\_\_\_ are meant to illustrate how a concept, theory or model works in the real world, or is used by a particular company or within a specific industry.

- a. Examples, scenarios and authentic cases

**Correct. Examples, scenarios and authentic cases can be used to illustrate real world context. Refer to Study Unit 3 Chapter 1 to learn more.**

- b. Story, environment and characters

Incorrect. Story, environment and characters are key elements of developing scenario. Other elements include background to the story, environment, characters, interactions, issues, and challenges. Refer to Study Unit 3 Chapter 1 to learn more.

- c. Text, images and sound

Incorrect. Text, images and sound are multimedia elements. Multimedia refers to the way information is presented using a combination of different formats such as text, images, sound, animation, and video. Refer to Study Unit 3 Chapter 1 to learn more.

- d. Facts, processes and procedures

Incorrect. These are types of content. There are five types of content, namely, facts, concepts, processes, procedures and principles. The course content may include some or all of the types. The content should be appropriately chunked and sequenced to help learners learn by presenting them in a structured and logical manner - from general to specific, simple to complex ideas. Refer to Study Unit 3 Chapter 1 to learn more.

4. Which one of the following is a collaborative learning activity?

- a. Participating in a discussion forum

**Correct. Discussion forum is a platform for peer learning and sharing of ideas. Refer to Study Unit 3 Chapter 2 to learn more.**

- b. Reading the StudyGuide

Incorrect. Reading StudyGuide is a self-directed learning activity learners can do in isolation. Refer to Study Unit 3 Chapter 2 to learn more.

- c. Creating a reflective blog

Incorrect. A reflective blog essentially is for individuals to reflect and internalise their own learning. They may articulate how the newly acquired knowledge can be put to use in their daily life or at work. Refer to Study Unit 3 Chapter 2 to learn more.

- d. Listening to a podcast

Incorrect. Listening to a podcast is a self-directed learning activity. While listening to the podcast, the learner will likely be writing his/her own notes and summarising his/her understanding of the content presented. Refer to Study Unit 3 Chapter 2 to learn more.

5. Which one of the following is an independent learning activity?

- a. Participating in a role-play
-

Incorrect. Participating in a role-play requires learners to observe the behaviours of others and to react accordingly. This is a collaborative learning experience. Refer to Study Unit 3 Chapter 2 to learn more.

b. Engaging in a debate

Incorrect. In a debate, learners interact with others. Learners are expected to organise their own thoughts, to present and to defend their arguments in order to convince others. This is a collaborative learning experience. Refer to Study Unit 3 Chapter 2 to learn more.

c. Reviewing chunked lesson recordings

**Correct. Reviewing chunked lesson recordings is merely learner-content interaction. It can be done individually. Refer to Study Unit 3 Chapter 2 to learn more.**

d. Joining an online discussion

Incorrect. This is a collective learning platform for learners to share and construct knowledge together. Learners are expected to reply to their instructor or their peers. Refer to Study Unit 3 Chapter 2 to learn more.

6. Which one of the following is NOT a required component of an effective learning activity?

a. Clear learning outcomes

Incorrect. When designing a learning activity, it is indeed important to clear learning outcomes. Refer to Study Unit 3 Chapter 2 to learn more.

b. Clear instructions

Incorrect. In a self-directed online learning environment, it is important to provide clear and adequate instruction to inform learners how to complete a learning activity. Refer to Study Unit 3 Chapter 2 to learn more.

c. Feedback on learning

Incorrect. Providing timely feedback in a self-directed online learning environment is crucial to learning. According to Keller's ARCS Model of Motivational Design, a way to engage learners is to provide positive reinforcement and feedback. Refer to Study Unit 3 Chapter 2 to learn more.

- d. Adoption of multimedia resources

**Correct. Adoption of multimedia resources is not a required component of an effective learning activity. Even though multimedia elements such as video and animation may be visually attractive, however, in designing effective learning activities, the key consideration is achieving learning outcomes. Refer to Study Unit 3 Chapter 2 to learn more.**

**Study  
Unit**

**4**

**Academic Integrity**

# Chapter 1: Respecting Copyright

## Learning Outcomes

By the end of this Chapter, you will be able to:

1. Identify works that are copyrighted.
2. Differentiate the options available for use of copyrighted materials.
3. Cite sources that are referenced in the course material.
4. Describe the procedure for record-keeping of copyrighted materials.

## Overview

SUSS takes copyright issues very seriously. Course content delivered to students must be cleared for copyright, and the use of copyrighted materials should be within permissible limits. Unless otherwise explicitly stated, SUSS holds the rights to all contents developed for its courses.

As our course developer, you are expected to adhere to SUSS's guidelines on using copyrighted works.

This chapter will provide you with important information on how you may use copyrighted materials in your course material, and how to cite the referenced material and keep records.

## 1.1 What are Copyrighted Works?

These would include:

Literary works	<ul style="list-style-type: none"> <li>• Books</li> <li>• Articles in journals or newspapers</li> <li>• Lyrics in songs</li> <li>• Source codes of computer programs</li> </ul>
Dramatic works	<ul style="list-style-type: none"> <li>• Scripts for films and drama (as applied)</li> <li>• Choreographic scripts for shows or dance routines</li> </ul>
Musical works	<ul style="list-style-type: none"> <li>• Melodies</li> </ul>
Artistic works	<ul style="list-style-type: none"> <li>• Paintings, sculptures, drawings, engravings or photographs</li> <li>• Buildings or models of buildings</li> <li>• Works of artistic craftsmanship such as designer furniture that is not mass produced</li> </ul>
Published editions of literary, dramatic, musical, or artistic works	<ul style="list-style-type: none"> <li>• Typographic arrangements of a published work</li> </ul>
Sound Recordings	<ul style="list-style-type: none"> <li>• Podcasts, music, or audiobooks contained in a digital file</li> </ul>
Films	<ul style="list-style-type: none"> <li>• Movies or videos</li> </ul>
Television and radio broadcasts	<ul style="list-style-type: none"> <li>• Broadcasts by way of television or radio</li> </ul>

Cable programmes	<ul style="list-style-type: none"> <li>• Programmes (visual images and sound) included in a cable programme service sent by means of a telecommunication system</li> </ul>
Performances	<ul style="list-style-type: none"> <li>• Performances by musicians, singers, and comedians</li> </ul>

Please refer to [Copyright Factsheet on Copyright Act 2021](#) from IPOS for more information on copyright for educators.

## 1.2 Options for Using Copyrighted Works

When developing material for the StudyGuide (or iSG), chunked lesson recordings and other electronic resources for your course, you need to ensure that the content produced is original. If you find it necessary to refer to third-party sources to substantiate your material, you may copy under the licence from a rights management organisation like the Copyright Licensing and Administration Society of Singapore (CLASS), or a statutory exception under the Copyright Act of Singapore.

### 1.2.1 Reproducing Material under the CLASS Licence

Under a licence granted by CLASS, SUSS can make copies, distribute and receive certain “Licensed Materials” that belong to CLASS members.

“Licensed Materials” includes published literary, musical, dramatic and artistic works; and other subject matter of a CLASS member in which copyright subsists in Singapore. BUT that does not include “Excluded Materials” and works for which a separate licence has been granted by any CLASS member to SUSS to reproduce or distribute in Singapore.

1. Printed music (including the lyrics)
2. Privately owned documents issued for tuition purposes and limited to clientele who pay a fee

3. Any work which a copyright owner has contracted CLASS members to publish but has expressly and prominently stipulated in the published work that it may not be copied under the licence granted to SUSS
4. Any category of works that from time to time may be added to the list of excluded material by the mutual agreement between CLASS and SUSS

### **CLASS Licence Provisions**

If your course is not in an Excluded Programme, you are permitted under the CLASS Licence to reproduce, distribute or receive the following for purposes of course instruction:

- a. One chapter or section, as the case may be
- b. One or more articles of the same subject matter in a collection
- c. One short story or poem in a collection
- d. One case report in a collection of case reports
- e. Less than 10% (of bytes or pages) of an edition of a Licensed Material

Reproduction and distribution of Licensed Materials must not exceed the lecturer/tutor and the student headcount in the relevant course. All sources must be attributed.

#### **Usage Scenario**

The CLASS Licence can be used when you need tables, photos, charts, diagrams or other materials for the development of a StudyGuide or chunked presentations.

### **1.2.2 Reproducing Materials for Educational Purposes**

You may use copyrighted materials under the educational exceptions (i.e. other than for criticism and review) provided in the Copyright Act. To ensure that such copying is done without the need for payment to the relevant copyright owner, please observe the following conditions: All sources must be attributed.

1. Under the Copyright Act 2021, SUSS being a non-profit educational institution may copy or communicate a **very small portion** of a literary or dramatic work (without the need for notation or record-keeping) if:
  - a. the copy or communication is made for the purposes of a course of education provided by SUSS; and
  - b. the copy or communication is done from SUSS' premises or made on a network operated or controlled by SUSS; and
  - c. the part of the work copied or communicated does not exceed
    - 5 pages if the edition has 500 pages or less; or
    - 5% of the total number of pages in the edition if the edition has more than 500 pages; or
    - if the edition is an electronic edition and is not divided into pages, then 5% of the total number of bytes in the edition or 5% of the total number of words in the edition or, where it is not practicable to use the total number of words as a measure, 5% of the contents of the edition; and
  - d. in the 14 days before the day on which the work is copied or communicated, SUSS does not copy or communicate any part of the work or cause any part of the work to be copied or communicated.
2. SUSS may under the Copyright Act 2021, copy or communicate a **reasonable portion** of a literary, dramatic or musical work if:
  - a. the copying or communication is for educational purposes.
  - b. in the case of an article in a periodical publication, (i) the copy or communication does not include 2 or more articles from the same periodical publication; or (ii) the copied or communicated articles relate to the same subject matter.
  - c. in the case of any other material that has been separately published:
    - (i) not more than a reasonable portion of the material is copied or communicated; or (ii) before the material is copied or communicated,

- SUSS makes a reasonable investigation and is satisfied that there is no new copy that could be obtained within a reasonable time at an ordinary commercial price;
- d. the copy is notated according to the requirements of Section 301 of the Copyright Act 2021; and
  - e. prescribed record of the copy or communication is made.
3. Under Section 43 of the Copyright Act 2021, a **reasonable portion** of a work is taken to mean:
- a. where the edition has 10 or more pages – only 10% or less of the number of pages in the edition are copied in total; or if the edition is divided into chapters, the pages copied are all from the same chapter;
  - b. where the edition is an electronic edition and is not divided into pages – (i) only 10% or less of the total number of bytes in the edition are copied in total; or (ii) only 10% or less of the total number of words in that edition are copied in total; or (iii) if it is not practicable to use the total number of words as a measure, only 10% or less of the contents of that edition are copied in total; or
  - c. if the edition is divided into chapters – the parts copied are all from the same chapter.

### Usage Scenario

You can use this provision when you need to copy material purely to enhance the content, say, a photo of an author whose work you are explaining in a topic.

### 1.2.3 Reproducing Material for Criticism or Review

If you intend to use a material for the purpose of criticism or review, and such material does not belong to any CLASS member, you may copy a literary, dramatic, musical or artistic work as long as **sufficient acknowledgement of the work** is made.

#### Usage Scenario

Material from authentic websites, DVDs, newspapers, etc. belonging to the copyright owner can be used **ONLY IF** you are referring to these as part of your explanation of the copied work, or as part of an activity where your students would be analysing it in relation to the content covered in a topic.

### 1.2.4 Reproducing Material for Criticism or Review

Here are some websites which contain materials that can be used for educational purposes:

- Microsoft Clipart Gallery ([office.microsoft.com/en-us/images/results.aspx](https://office.microsoft.com/en-us/images/results.aspx))
- Creative Commons ([search.creativecommons.org](https://search.creativecommons.org/))
- Free Photo Search ([www.everystockphoto.com](http://www.everystockphoto.com))
- Openclipart (<https://openclipart.org/>)
- PhET Interactive Simulations ([phet.colorado.edu/en/simulations/category/by-level](https://phet.colorado.edu/en/simulations/category/by-level))

Do inform your Project Manager of any website that provides royalty-free materials in your subject area, so that we can collectively build a library of resources for all our course developers.

#### Usage Scenario

Materials from the above websites would be useful for enhancing your write-up and/or presentations with relevant images so as to make the content visually appealing.

### 1.2.5 Reproducing Material under the Publisher Model

The Publisher Model is an arrangement whereby a publisher permits SUSS to freely use, reproduce, edit and modify materials in certain of its textbooks for purposes of developing a StudyGuide. The copyright to the StudyGuide is jointly owned by SUSS and the publisher (subject to existing third-party rights that may subsist in the textbook used).

If the StudyGuide that you are developing falls within the Publisher Model, you are permitted to take any material from the prescribed textbooks and their related sources, with no limits on the amount reproduced (but subject to limitations relating to third-party rights as may be applicable).

### 1.2.6 Reproducing Material for Examinations

If you are developing any form of graded assessments, the Copyright Act allows you to use materials without any restriction or prior permission sought from the copyright owner.

## 1.3 How to Cite

### 1.3.1 Text from Printed Publications

Use the **APA** (American Psychological Association) or **MLA** (Modern Language Association) style depending on the discipline of your course.

If you are quoting from a book, include the citation in-text and the full reference at the end of the Study Unit.

#### **Format for Citing a Book in APA Style**

In-text Citation:

“According to Author’s last name (Year of publication), ...”

Full Reference:

Author, A. A. (Year of publication). *Title of work*. Publisher’s Name.

### 1.3.2 Visuals from Printed Publications

Provide the in-text citation below the image and the full reference of the publication at the end of the Study Unit.

#### Format for Citing an Image in APA Style

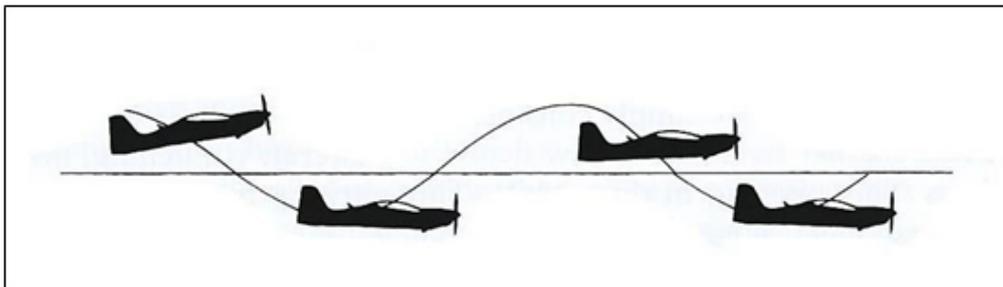
Citation below image:

Figure #. Caption of the image. (Author's last name, Year of publication, p. page number)

Full Reference:

Author, A. A. (Year of publication). *Title of work*. Publisher's Name.

Here is an example for citing an image taken from a book.



**Figure 4.1** Neutral Dynamic Stability (Barnard & Philpott, 2010, p. 55)

Full Reference:

Barnard, R. H., & Philpott, D. R. (2010). *Aircraft flight*. Pearson Education.

### 1.3.3 Content from Copyright-shared Resources

You are permitted to use content that has been shared under the Creative Commons (CC) licence, for example from resources such as Wikimedia, Flickr and Fotopedia.

#### Format for Citing CC Licensed Material from Wikimedia

For images:

Figure #. Caption of the image. (Uploader's Username / Wikimedia Commons / CC- BY-SA-3.0)

For text:

Use the APA reference style for in-text citation.

Here is an example for citing an image taken from Wikimedia Commons.



**Figure 4.2** Piston Engine and Propeller

(Lelystad Aviodrom / Wikimedia Commons / [CC-BY-SA-3.0](#) & [GFDL](#))

You can find copyright details of an image by clicking on ‘**Use this file on the web**’ link on the right-hand side of the Wikimedia page. Click [here](#) to see an example.

For further information on how you can reuse materials from Wikimedia Commons, please click [here](#) for detailed instructions on how you can do so.

### 1.3.4 Content from Internet Sources

Here is an example for citing an image from websites that **permit reuse** of their materials for non-commercial or educational purposes.



**Figure 4.3** Beech Starship (NASA)

**Note: DO NOT** copy images that you find via Google Search or other tools unless the website is from the copyright owner **and** explicitly gives permission for reuse. You may refer to the section “Reproducing Material for Criticism or Review” for an exception.

### 1.3.5 Content in the Public Domain

You are permitted to copy a work that has become Public Domain in Singapore if it satisfies the following conditions:

COPYRIGHT WORKS	Whether Work is Published or Made Available to the Public, and if so, When?	Expiry of Copyright
<ul style="list-style-type: none"> <li>• Literary works</li> <li>• Musical works</li> <li>• Dramatic works</li> <li>• Engravings</li> </ul>	70 years after death of the author.	
<ul style="list-style-type: none"> <li>• Artistic works (except photographs and engravings)</li> </ul>	Same as the works mentioned above.	

<ul style="list-style-type: none"> <li>• Photographs</li> </ul>	Same as the works mentioned above.	
<ul style="list-style-type: none"> <li>• Anonymous and pseudonymous authorial works</li> <li>• Films</li> </ul>	Unpublished.	70 years after the making of the work.
	Published more than 50 years after the making of the work and the work is not otherwise made available to the public within those 50 years.	
	Published more than 50 years after the making of the work, but the work is first made available to the public (other than by publication) within those 50 years.	70 years after making available to the public.
	Published within 50 years after the making of the work.	70 years after first publication.
Sound recordings	Unpublished.	70 years after the making of the sound recording.
	Published more than 50 years after the making of the sound recording.	
	Published within 50 years after the making of the sound recording.	70 years after the first publication of the sound recording.

Here is an example for citing an image that is in the Public Domain.



**Figure 4.4** William Shakespeare [Painting]  
(Public Domain)

### 1.3.6 Content from Copyright-free Sources

Unless the Terms & Conditions specify, you are **not required** to attribute material taken from such sources, as for example images from the Microsoft Clipart Gallery.

## 1.4 Record Keeping

All records of copyrighted works used in a course development have to be kept in accordance to the University's requirements. EMR will provide you with a Copyright Declaration Form that you must complete and submit in order to close the project and clear your payment.

If you require EMR to seek permission from the author/publisher for specific works, please inform us early and plan for alternatives in case it is not granted.

## Summary

In this Chapter, we explored the types of copyrighted works and the options that are available to reproduce such material. We also examined the source citation guidelines that you will need to follow to develop the learning materials.

While drafting content for a StudyGuide, chunked lesson recordings and other course material, remember these tips to avoid copyright infringement:

- Use less than 10% of the Licensed Material from CLASS members.
- If the content that you wish to use is not covered under the CLASS Licence, try to find alternate sources that grant permission for educational purposes.
- Provide hyperlinks to audio and video clips that are from the copyright owner, instead of importing the media files directly.
- Only use copyrighted works for the purpose of critique, review and discussion.
- Always provide attribution to the original source.
- Maintain records of all the reproduced copyrighted works by using the Copyright Declaration Form.
- Consult the Project Manager when in doubt.

## Chapter 2: What Next

Well done! You have now completed all the chapters in AD109.

Here is what you need to do next:

- Try out the quizzes to test your understanding – accessible via [LMS](#)
- Give us your feedback and suggestions on how we may improve the design and implementation of this course

AD109 is developed to provide you the essential knowledge to get you started on your course design. **We hope the course will help you transform your subject matter knowledge into representations that help students with their learning.**

But your best learning comes from actual hands-on experience i.e. learning by doing. So, as you develop your course, you may come across issues which need further clarification. Do contact the Project Manager as the need arises. The team is here to support you.

We wish you an enriching and fulfilling experience!

## Formative Assessment

1. What is the CLASS licence limit for materials copied from a member's publication?
  - a. Less than 20%
  - b. Less than 10%
  - c. More than 10%
  - d. Any amount
  
2. Which one of these is not, by default, a copyright-free resource site?
  - a. YouTube
  - b. Good Images
  - c. iTunes
  - d. All of the above
  
3. In which of the following scenarios do you need to seek permission from a CLASS member?
  - a. I will be using more than 10% of a publication.
  - b. I only require some visuals not amounting to more than 10% of the total number of pages.
  - c. I would like to use less than 10% of the publisher's instructor resources for my chunked lesson recordings.
  - d. I am developing a jointly-owned StudyGuide with the publisher.

## Solutions or Suggested Answers

### Formative Assessment

1. What is the CLASS licence limit for materials copied from a member's publication?
    - a. Less than 20%

Incorrect. Please refer to Study Unit 4 Chapter 1 Topic 1.2.1 Reproducing Material under the CLASS Licence.
    - b. Less than 10%

**Correct.**
    - c. More than 10%

Incorrect. Please refer to Study Unit 4 Chapter 1 Topic 1.2.1 Reproducing Material under the CLASS Licence.
    - d. Any amount  
Incorrect. Please refer to Study Unit 4 Chapter 1 Topic 1.2.1 Reproducing Material under the CLASS Licence.
  
  2. Which one of these is not, by default, a copyright-free resource site?
    - a. YouTube  
Incorrect. There are copyrighted materials in this site. Please refer to Study Unit 4 Chapter 1 Topic 1.2 Options for Using Copyrighted Works.
    - b. Good Images  
Incorrect. There are copyrighted materials in this site. Please refer to Study Unit 4 Chapter 1 Topic 1.2 Options for Using Copyrighted Works.
    - c. iTunes  
Incorrect. There are copyrighted materials in this site. Please refer to Study Unit 4 Chapter 1 Topic 1.2 Options for Using Copyrighted Works.
-

- d. All of the above

**Correct.**

3. In which of the following scenarios do you need to seek permission from a CLASS member?

- a. I will be using more than 10% of a publication.

**Correct.**

- b. I only require some visuals not amounting to more than 10% of the total number of pages.

Incorrect. You will not need to seek permission from the CLASS member in this case. Please refer to Study Unit 4 Chapter 1 Topic 1.2 Options for Using Copyrighted Works.

- c. I would like to use less than 10% of the publisher's instructor resources for my chunked lesson recordings.

Incorrect. You will not need to seek permission from the CLASS member in this case. Please refer to Study Unit 4 Chapter 1 Topic 1.2 Options for Using Copyrighted Works.

- d. I am developing a jointly-owned StudyGuide with the publisher.

Incorrect. You will not need to seek permission from the CLASS member in this case. Please refer to Study Unit 4 Chapter 1 Topic 1.2 Options for Using Copyrighted Works.

