

NSRIC Inc. (Nature Science Research and Innovation Centre)

Ontario (ON), Canada

Online Education (OE) Division



How to Develop High-quality Course Lecture Materials

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Lecture 1

(Course Information, Policies and Introduction of the Course)

Outcomes of the Course



This lecture will answer the following questions:

1. Introduction of the course – definitions, comparisons, differences, etc.
2. Benefits and limitations of online teaching and learning
3. Guidelines and steps for course preparation
4. Anatomy of preparing course materials
5. Common mistakes during the preparation of course materials
6. In-person course and class behaviour
7. Few templates (i.e., course outline, PPT slides and student feedback form) – example cases
8. Guideline on course project



Total hours: 25 hrs. plus your preparation of the project for potential publication

- An Introduction to the course with different definitions and comparison.
- Benefits and limitations of online courses.
- Types of different course delivery methodologies.
- Important skills and steps for crafting a high-quality course design.
- Anatomy of preparing course lecture materials.
- Common mistakes and their solutions while preparing a course.
- Where to publish your course.

Target Audiences



- Any students interested in preparing a course for in-person or online course.
- Any educators, teachers, lecturers, professors, researchers, scientists, students, and interested readers in any discipline.
- University graduates, early career educators, scientists, professionals, and mentors.
- Any undergraduate and graduate student who is interested in preparing course lectures.



References:

- 1) No Textbook.
- 2) Prof. Hossain's personal experience.
- 3) Course Materials.
- 4) Live session with Prof. Hossain in a synchronous delivery session.

Course Description



In this course, audiences will learn the essential concepts and requirements for crafting the course lecture materials in any field of study. The course introduces the fundamental concepts and an in-depth analysis of how to prepare effective and best-quality online or in-person course lectures in the respective discipline. It offers an understanding of logical and structural techniques, skills, course delivery types and methodologies, including how to administer classroom management. In addition, the course covers the benefits, limitations of online teaching and common mistakes while preparing course materials. Concepts, theories, examples and suggestions or solutions are blended through clear lecture notes, live sessions, learning activities, understanding questions, and lecture note preparation. Two-course preparation templates are also included to relate and apply the conceptual topics added in the course to showcase students' understandings.

The course is specifically designed for educators, professors, lecturers, teachers, students, researchers, and professionals interested in understanding and developing in-person or online course materials in their studies. This is an important course for audiences interested in preparing high-quality lecture materials for their courses to offer the same in synchronous, asynchronous, hybrid, or in-person modes of delivery and who want to be an established educator and build their career in academia.

The course is designed for individuals and educators who need to understand the basics of course preparation skills and subjects, too. The course contains ten lectures and two templates, each comprising 20 to 35 PowerPoint presentation slides and pdf documents. The course is also designed with three quizzes, one feedback form and one project. This project offers a hands-on experience by creating a course that students can publish on an online education platform like NSRIC. A certificate of completion will be awarded to the participant.

Course Learning Outcomes



Students who complete this course can achieve the following course learning outcomes (CLOs):

Module I

- CLO1: Understanding the requirements for preparing an online or in-person course lecture materials, benefits, and limitations.
- CLO2: Ability to identify the logic and structure of a better course design.
- CLO3: Understanding the process of mapping and structuring a high-quality course crafting.
- CLO4: Ability to identify the common mistakes that make a course lecture better and more effective.
- CLO5: Being able to know how to develop successful high-end course lecture materials.
- CLO6: Familiarize yourself with the selection criteria and steps for preparing course materials.
- CLO7: The ability to understand, comprehend, follow, and implement classroom management.
- CLO8: Familiarize the student's feedback form and collect the student's responses for the offered course.

Course Delivery Schedule



Lec. No.	Module	Topics	Remarks
Module I			
01	Introduction	Course details and introduction of a high-quality course	
02	Benefits	Benefits and limitations of online teaching and learning 1	
03	Benefits	Benefits and limitations of online teaching and learning 2	
04	Steps	Guidelines and steps for course preparation	Quiz 1
05	Anatomy	Anatomy of preparing course materials 1	
06	Anatomy	Anatomy of preparing course materials 2	
07	Anatomy	Anatomy of preparing course materials 3	Quiz 2
08	Mistakes	Common mistakes during preparation of course materials	
09	Administration	In-person and online course and classroom administration 1	
10	Administration	In-person and online course and classroom administration 1	Quiz 3
11	Templates	Two templates – Course outline and PPT slides as example cases	
12	Project	Guideline on course project	
13	Feedback	A course feedback form for collecting student's response	
Final Project – The submission deadline for the developed course is within two weeks of the course completion date.			



Table 1: NSRIC grading system

Type of Assessment	Grade %
Participation/Engagement/Performance	10%
Assignments	0%
Quizzes	20%
Research Project	70%
Total	100%



Table 2: NSRIC letter grading system

Marks	Letter Grade	Points	Description
≥ 93	A+	4.00	Outstanding
≥ 90	A	3.75	
≥ 87	A-	3.50	Excellent
≥ 84	B+	3.25	Very good
≥ 81	B	3.0	
≥ 78	B-	2.75	Moderately Good
≥ 75	C+	2.50	Good
≥ 72	C	2.25	
≥ 69	C-	2.0	Moderately Good
≥ 66	D+	1.75	Pass
≥ 63	D	1.50	
≥ 60	D-	1.25	Poor Pass
< 60	F	0	Failing



Introduction of the Course



Definition

Online learning is defined as “*A method of education that delivers instruction to students in a fully virtual environment, i.e., an internet-based learning environment.*”

Features

- It is known as distance learning, distance education or eLearning.
- It delivers educational content and instruction through the Internet.
- It allows students to take courses and earn degrees remotely without the need to be physically present on campus.
- It can be **synchronous** (i.e., *students must log in and participate in a virtual class at a weekly specified time and be online during the lecture – **real-time***).



Features Cont.

- It can be **asynchronous** (i.e., *online learning that allows students to view instructional materials at any time and are not required to be online during the virtual class – anytime, anywhere*).
- Online learning can connect students of diverse backgrounds and different geographical areas to engage with an academic institution.
- It offers to learn flexibly, at their own pace, while working towards a degree or certificate.



Technologies used for online instruction

- Internet
- One-way and two-way transmissions through open broadcasts
- Wireless communication devices
- Audio conferencing
- Videocassette, DVDs and CD-ROMS



Definition

E-learning, or electronic learning, is defined as “*A formalized learning approach where digital resources are used to deliver learning and training.*”

Features

- It is provided through electronic devices such as computers, tablets and even cellular phones that are connected to the internet.
- Although teaching can take place in or out of classrooms, the main element of e-learning is the use of computers and the internet.
- E-learning methods can basically be divided into **synchronous** and **asynchronous** formats.

Comparisons between E-learning and Online Learning



Table 3 presents a comparison between e-learning and online learning where different differences are shown.

Table 3 Comparisons between e-learning and online learning

E-learning	Online Learning
Teachers do not conduct live lectures but provide students with materials and/or pre-recorded video lectures.	Unlike eLearning, live lessons conducted during online learning
Students go through learning materials by themselves.	Teachers guide students during online lessons in addition to the learning materials.
E-learning enables students to go through video lectures, quizzes or tests anytime.	Both teacher and student should be present simultaneously for online learning lessons.
Students go through pre-recorded video lectures, slides, and notes independently in e-learning.	In online learning, however, teachers guide students and explain learning materials along the way.
Students doing eLearning post questions on an online forum/discussion board/email their teachers.	Students during online learning can ask questions during live lessons on the spot instead of having to wait for answers in a forum.
Conclusively, the learning structure for e-learning is rather rigid as the learning material is the same for all students.	Teachers can customize lessons during online learning based on students' learning habits, strengths, and weaknesses.



Definition

In-person learning is defined as *“A learning approach involving face-to-face interactions between teachers and students, or among colleagues and peers, in-person and real-time.”*

Features

- It is the most traditional type of learning instruction.
- In face-to-face learning, course content and learning material are taught in person to a group of students.
- This allows for an in-person interaction between a learner, peers, and professors and to collaborate with them on a set schedule.
- Instruction and learning happen in the same place and at the same time.

Comparisons between Online and In-person



Table 4 shows a comparison between e-learning, online learning and in-person learning. The different differences are presented in the table.

Table 4 Comparisons between online and e-learning, and in-person learning

Online, e-learning	In-person learning
Virtually covering classrooms and subject materials is what online learning is all about.	In-person learning is the traditional way of learning, where students attend face-to-face classes at allotted times.
More interactive in comparison, with many different types of training.	Only involves traditional learning materials such as textbooks and lecture notes etc.
Online learning transfers this component to a virtual environment.	Classroom Learning involves physical interactions with a teacher and peers.
It happens online via virtual lectures, virtual discussions, face-to-face video workshops, etc.	It happens while there is human interaction in an in-person environment.
There are fewer options for students in online classrooms. They can't talk to others, interact in the classroom openly, etc. Students do all teamwork online, all by themselves.	Physical classrooms have several options for students to engage and get involved in many recreational activities.



Table 4 Comparisons between online and e-learning, and in-person learning cont.

Online, e-learning	In-person learning
<p>Pros</p> <p>According to <i>InsideHigherEd</i>, women and Black Americans prefer online learning. 60% of Black Americans have confidence in the quality of online education, and 48% (nearly half!) of women would choose to pursue an education online.</p> <ol style="list-style-type: none">1. Online learning does not provide the opportunity to actively monitor what is happening in the classroom, from discussions to exams to student relationships.2. Virtual classrooms provide great accessibility for students.3. Online classes offer self-paced learning and schedule flexibility.4. Online learning can be cheaper than in-person learning.	<p>Pros</p> <ol style="list-style-type: none">1. In-person, instructors can actively monitor what is happening in the classroom, from discussions to exams to student relationships. Being in person in a lecture makes it easier for instructors to conduct discussions.2. There can be more community and relationship connection opportunities.3. There are less distractions in the classroom.



Table 4 Comparisons between online and e-learning, and in-person learning cont.

Online, e-learning	In-person learning
<p>Cons</p> <ol style="list-style-type: none">1. Certain subjects had a more difficult time modifying to the online realm.2. There's been an increase in online fatigue.3. There can be a lack of engagement in virtual classrooms.4. Certain subjects are hard to accommodate online.	<p>Cons</p> <ol style="list-style-type: none">1. One of the major disadvantages of traditional in-person learning is that it's not always readily available to people.2. For some students, their local university or college may not offer their field of study.3. Going to class can be time-consuming.4. In-person classes are not as flexible as online classes.5. Some students' learning styles do not align with physically being there.

Which one is Better – Online or In-person Learning



- With all the **comparisons**, **pros** and **cons** laid out about each type of learning sphere, it's **hard to say** that one is better than the other.
- With the increasing technological advancements, there's no way to avoid using it in the classroom altogether.
- Both mediums can be great options and achieve exemplary educational outcomes, in-person or online.
- While it is unclear that one modality is superior to the other, the best way to support academic outcomes is by generating active learning communities inside and outside the classroom.
- It is recognized that many students do not truly engage in discussion with their peers through traditional discussion boards, which only further constrains relationship building and effective communication. These two aspects are intrinsic to successful learning, and strongly advised to create building that human bridge.
- Learning should not just happen inside the classroom but also in the outside classroom too, learn how it works.



- The future of online learning will continue to see exponential growth.
- As more educational institutions, corporations, and online learners worldwide recognize the importance of online learning, its role in education will only continue to rise.
- Online learning already has numerous uses in education, and its future role in education will be immense.
- The most successful educational institutions worldwide already recognized that online learning can **transform people, knowledge, skills, and performance**. Other educational institutions will likely follow it sooner or later.



- While the world of online education is undoubtedly an exciting world to be in, **many students** who are uncomfortable with online learning still prefer the traditional live, in-person teaching methods which they are used to.
- All students have unique learning styles, and online learning will likely only partially solve education.
- Undoubtedly, we are at the beginning of a new era in education.
- What e-learning is right now will pale compared to online learning in the future.



- **Online** learning has numerous advantages and benefits over traditional learning methods. Some of these include:
 - Allowing students to use self-paced learning
 - Choose their learning environments.
 - E-learning is cost-effective and cost-efficient
 - It removes the geographical obstacles often associated with traditional classrooms and education.
- Considering these benefits and many more, it becomes evident why the current trends in e-learning show remarkable growth for the industry.
- Further, with the rise of online education, creating an online course can be profitable. However, the goal is to ensure your content is valuable and attracts a large audience.



- Worldwide e-learning revenue is expected to grow to **\$325** billion by 2025, which is remarkable because only one-third of this was \$107 billion in 2015.
- E-learning is certainly not without its disadvantages. The various types of e-learning all come with sacrifices in one way or another.
- Some of the challenges of e-learning that need to be addressed are listed below:
 - *Increased risk of cheating during assessments*
 - **Social isolation**
 - **Lack of communication skill development** in online students.

Which one is Right for You – In-person, online, or hybrid?



- Understandably, you don't always have the ability to select the course style for a specific subject matter. When you do have the option, however, it's important to choose the one that fits your learning style best.
- **For example:**
 - Do you have difficulty staying focused and motivated when working on assignments on your own time?
 - An online class may be challenging, while an in-person class may fit your needs.
 - Do scheduling flexibility and looser time constraints appeal to your lifestyle?
 - An online class may be the right match for you.
 - If you like both the personalized aspect of in-person classes and the flexibility of an online course, then
 - A hybrid course could set you up for success.
- Be honest when examining your strengths and weaknesses regarding class structures and determine what style of course will help you achieve your educational goals.



**Good Luck
and
Thanks for Being with my Couse**



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