Online Distance Teaching and Learning

Joane V. Serrano, PhD
Associate Professor
UP Open University

"It is NOT a good idea just to jump into it and hope to wing it. Teaching online is not rocket science but it does need a different approach from classroom teaching" [Tony Bates](#) 2020

Strategic Planning

- Where are we now?

- Where do we want to go?

- How do we get there?

Where are we now?

Internal Assessment

Target Learners

- Age

- Location

- Learning styles or preferences

- Access to technology

Nature of Academic Programs/Courses
- Competencies
- Conceptual
  - Knowledge
  - Values
  - Skills
- Practical skills

Available resources
- Human
  - Teachers
  - IT Staff
  - QA unit
-
Material
  - Financial
  - Facilities
  - IT infra
  - Other Technology
- Time

External Assessment

Public Health Environment

•Government-issued public health policies
- National
- LGU

•Student's health needs
- Physical
- Mental

Regulatory Framework

•Accreditation

•CHED/DepEd Directives

Assistive Programs

•Training

•Resources

Parental support
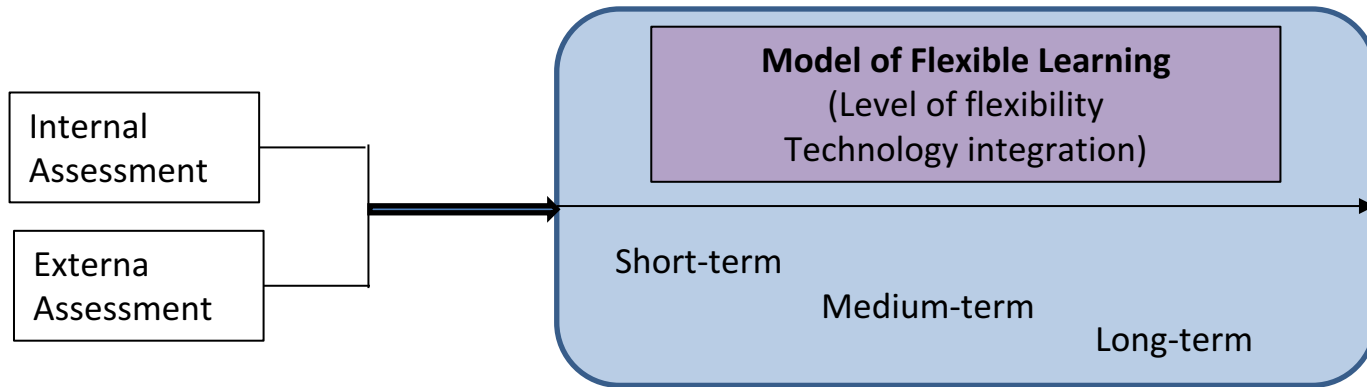
Institutional linkages

Academic offerings of other educational institutions

Where do we want to go?

Why are we getting into Online Teaching Learning?

•As a solution to public health emergency – emergency remote teaching?

•To respond to changes in the educational landscape?

- Promote lifelong learning
- Develop digital literacy
- Enhance 21st century skills

•To promote inclusion?

How do we get there?

Internal Assessment

Externa Assessment

Model of Flexible Learning
(Level of flexibility
Technology integration)

Short-term

Medium-term

Long-term

Course Design and Development

Teaching and Learning (Course Delivery)

Student Support

Organization and Management

Modes of Delivery

- Face-to-face or Classroom Teaching

- Online Learning - a type of distance learning that **takes place online** (thus requires connection to the Internet)
- It is not something new; this mode has been studied for decades and there are already existing research studies, theories, models, standards, and evaluation criteria that focus on quality online learning, online teaching, online course design, online student support, and online assessment

Categories of Online Course

Category	Description
Web presence	Using the Web to disseminate vital information about the course, such as the course description, requirements, references
Web-enhanced	Using the Web to support processes that occur in face-to-face classroom interaction; blended learning
Web-based (fully online)	Uses the Web as a communication hub, in addition to using it to provide access to digital resources

Fully Online

- courses for credit, which will usually cover the same content, skills and assessment as a campus-based version;
- non-credit courses offered only online, such as courses for continuing professional education;
- fully open courses, such as MOOCs;
- open educational resources, available for free downloading online, which either instructors or students can access to support teaching and learning.
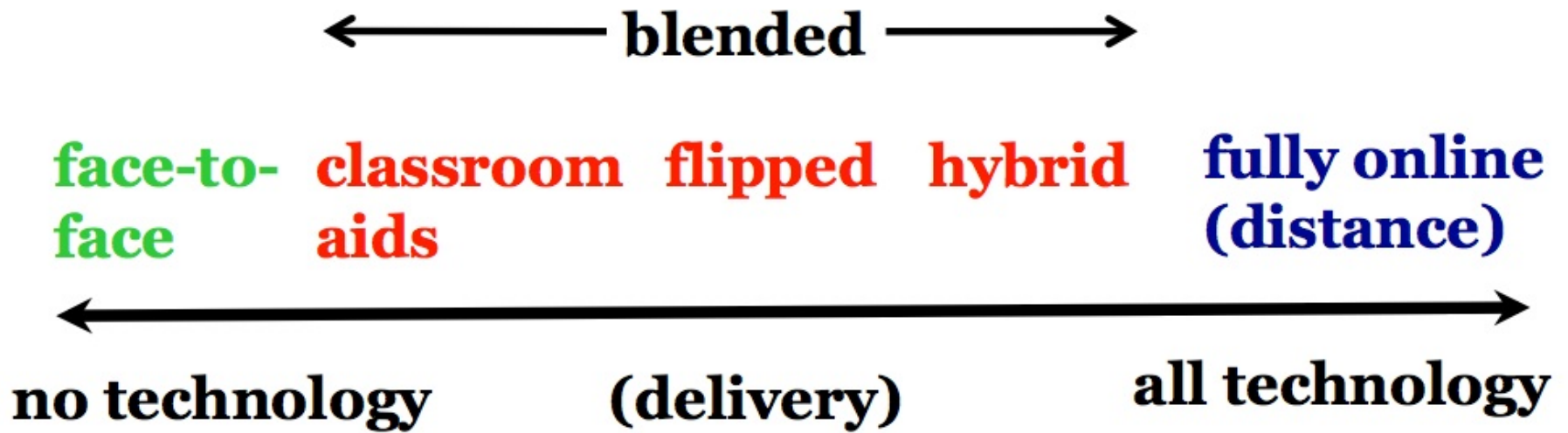
Blended learning

- Mix of eLearning and traditional teaching

Refers to a **strategic** and **systematic** approach to **combining times** and **modes** of learning, integrating the **best aspects** of face-to-face and online interactions using **appropriate ICTs**
(Saliba, Rankine @ Cortes, 2013)

- **Blended Learning** - encompasses a wide variety of designs

- Including technology-enhanced learning, or technology used as classroom aids
- The use of a learning management system (LMS) to support classroom teaching, for storing learning materials, set readings and perhaps online discussion;
- Flipped classrooms - type of blended learning wherein students gain necessary knowledge before class through the materials uploaded online and instructors guide students to actively apply that knowledge during class.
- One semester on a residential-type campus and two semesters online
- A shortened time on campus spent on campus hands-on experience or training preceded or followed by a concentrated time spent studying online;
- *hybrid* or *flexible* learning requiring the redesign of teaching so that students can do the majority of their learning online, coming to campus only for very specific face-to-face teaching, such as lab or hands-on practical work, that cannot be done satisfactorily online. In hybrid learning the whole learning experience is re-designed, with a transformation of teaching on campus built around the use of technology.

← blended →

face-to-face   **classroom aids**   **flipped**   **hybrid**   **fully online (distance)**

no technology   **(delivery)**   **all technology**

The continuum of technology-based teaching

Remote Teaching and Learning (RTL)

- Flexibility

- Students and teachers are physically separated from each other in some parts or throughout the course
- Interaction is both synchronous and asynchronous and technology mediated
- Learners have increased choice, convenience and personalization
- Provides learners with choices about where, when and how learning occurs
- Courses are activity and outcomes-based

Open Learning

- A vision of an educational system in which education is accessible to every individual and with minimal restrictions

- Emphasizes the flexibility of a the system to eradicate problems caused by barriers like age, geographical locations, time constraints and economic situation

Distance Education

- Learner and teacher are separated from each other for most, if not all throughout, the learning process

- Technical media (print, audio, video, or computer) are used to deliver the learning content

- Communication between teacher and learner

- Educational institution is involved in the planning, preparation, delivery, and accreditation of learning
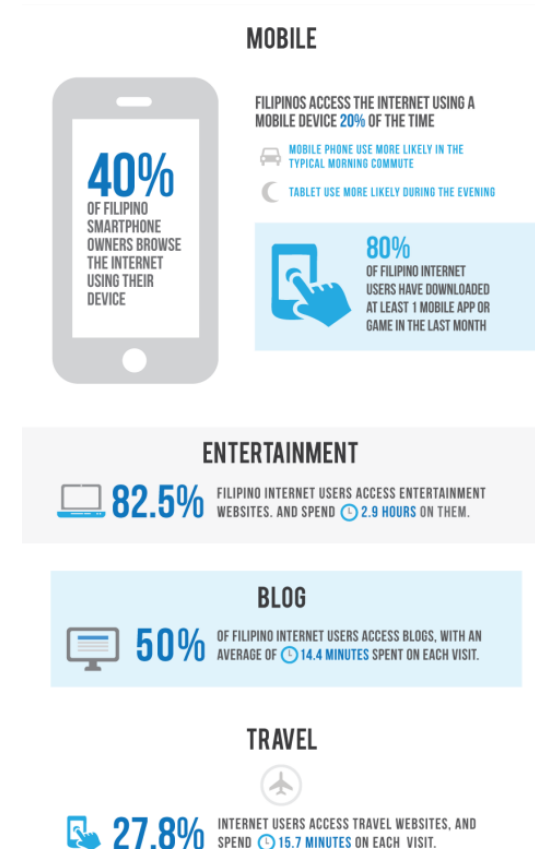
eLearning
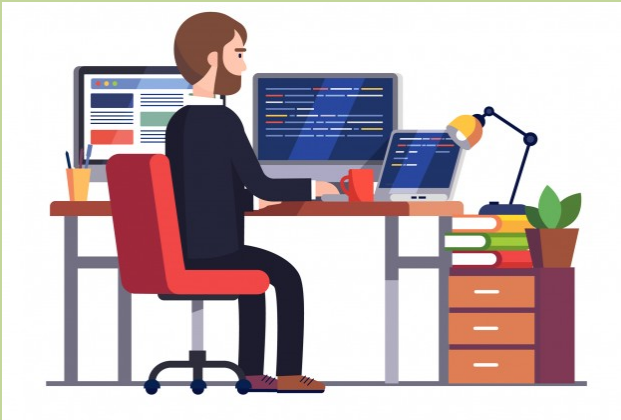
e-Learning is any technologically supported learning using teaching and learning tools that utilize **electronic media** (CHED, 2002)

Mobile learning

- E-learning through mobile devices such as smartphones or tablets.

MOBILE

FILIPINOS ACCESS THE INTERNET USING A MOBILE DEVICE **20%** OF THE TIME

🚗 MOBILE PHONE USE MORE LIKELY IN THE TYPICAL MORNING COMMUTE

🌙 TABLET USE MORE LIKELY DURING THE EVENING

40% OF FILIPINO SMARTPHONE OWNERS BROWSE THE INTERNET USING THEIR DEVICE

80% OF FILIPINO INTERNET USERS HAVE DOWNLOADED AT LEAST 1 MOBILE APP OR GAME IN THE LAST MONTH

ENTERTAINMENT

82.5% FILIPINO INTERNET USERS ACCESS ENTERTAINMENT WEBSITES. AND SPEND 🕐 2.9 HOURS ON THEM.

BLOG

50% OF FILIPINO INTERNET USERS ACCESS BLOGS, WITH AN AVERAGE OF 🕐 14.4 MINUTES SPENT ON EACH VISIT.

TRAVEL

✈

27.8% INTERNET USERS ACCESS TRAVEL WEBSITES, AND SPEND 🕐 15.7 MINUTES ON EACH VISIT.

Other Related terms

- correspondence education
- home study
- independent study
- external studies
- continuing education
- Self instruction
- adult education
- technology-based or mediated education
- Learner centred education
- flexible learning
- distributed learning

Correspondence education, home study, and independent study

- These distance learning methods are:
- well over a century old;
- based on stand-alone, self-study materials. Learners do not have to leave their homes to study; and
- often print-based with communication through postal services or telephone. They can, however, use a variety of means for tutor–learner contact, including the postal system, telephone, electronic mail, television and radio broadcasts, and video and audio cassettes

External studies

- applies to instruction that takes place somewhere other than on a central campus, such as a classroom remote from campus; and
- includes a variety of delivery options like audio, video, or computer conferences or home study.

Continuing education
- usually applies to non-credit education;
- refers to courses that can be delivered on campus or at a distance; and
- has varied meanings.

Self-instruction refers to a process in which:

- materials take learners step-by-step through an instructional process;
- self-assessment exercises are a central feature; and
- instruction can be paper-based or computer-based.

Adult education

- emphasizes the principles of adult learning, often known as andragogy, as compared to pedagogy, or child-centered learning.

Technology-based or mediated education
- refers to systems of teaching and learning in which a technology other than print has a major role; and
- takes two major forms: stand-alone (for example, computer-assisted learning and computer-managed learning) and conferenced (for example, audio, video, or computer).

Learner-centered education
- flexible sequences of study;
- negotiated objectives and content;
- negotiated learning methods;
- negotiated methods of assessment; and
- a choice of support mechanisms.

Flexible learning - emphasizes the creation of environments for learning that have the following characteristics:

- convergence of open and distance learning methods, media, and classroom strategies;
- learner-centred philosophy;
- recognition of diversity in learning styles and learners' needs;
- recognition of the importance of equity in curriculum and pedagogy;
- use of a variety of learning resources and media; and
- fostering of lifelong learning habits and skills in learners and staff.

Distributed learning

- emphasizes the learning itself rather than the type of technology used or the separation between teacher and learner;
- makes learning possible beyond classrooms; and
- when combined with classroom modes, becomes flexible learning

Collaborative Learning

Easy to track progress

Accessibility

Lower environmental impact

Easy distribution

Cost - effective

Multimediality

Wider reach
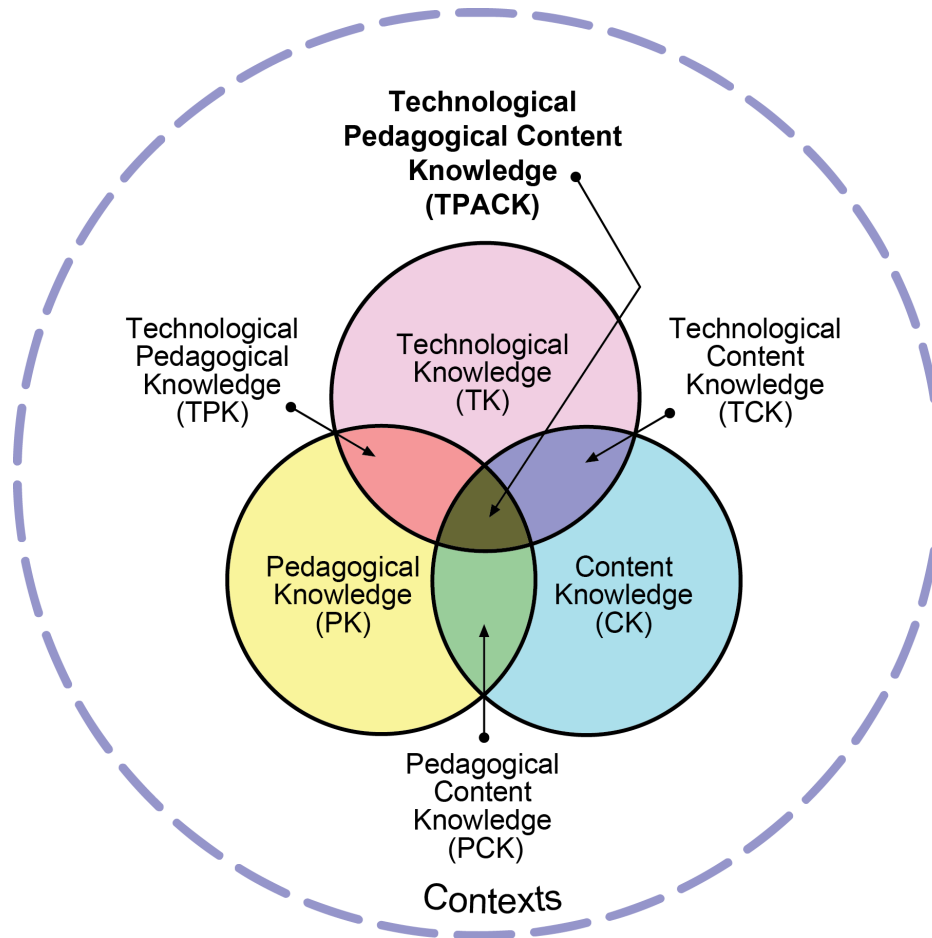
Customizable

Improves work productivity

Up to date content

Learner centered

Allows flexibility

Minimal disruption at work

Mishra and Koehler pointed out that this separation of discussion of pedagogy and technology leads to four problems:

1. The rapid changes in technology make it extremely difficult to keep up with all the latest advancements and apps. Everyday, hundreds of apps are being developed and the advances in technology lead to the development of technology that contributes to the rapid doubling of human knowledge. Futurist experts estimate that in 2020, human knowledge doubles every 12 hours.

2. Softwares and apps are mainly designed for business, not education. This means that students are learning how to use the program or tools and not learning the content of the class.

3. Situational nature of the class. A teacher can adjust a lesson to make sure it meets the needs of the specific group of students, but the technology cannot do this. Although there are now adaptive technology, it still cannot replace the judgement of a teacher.

4. The emphasis is on "what" and not "how." This means that the lesson becomes about what technology are we going to use, what does it say, what skills does it require, instead of how can I teach my students.

Pedagogical Knowledge (PK)

Pedagogical Knowledge or PK describes teachers' deep knowledge of the practices, processes, and methods regarding teaching and learning.

As a generic form of knowledge, PK encompasses the purposes, values, and aims of education, and may apply to more specific areas including the understanding of student learning styles, classroom management skills, lesson planning, and assessments.

Technological Knowledge (TK)

Technological Knowledge or TK describes teachers' knowledge of, and ability to use various technologies, technological tools, and associated resources.

It includes skills on how to use or operate certain technology.

Content Knowledge (CK)

Content Knowledge or CK describes teachers' own knowledge of the subject matter. It may include knowledge of concepts, theories, evidence, and organizational frameworks within a particular subject matter.

It may also include the field's best practices and established approaches to communicating this information to students. This will also differ according to discipline and level – for example, senior high school science and history classes require less detail and scope than undergraduate or graduate courses.

Pedagogical Content Knowledge (PCK)

Pedagogical Content Knowledge (PCK) is a concept proposed by Shulman in 1986 and which inspired the TPCK model.

It has to do with a teacher's knowledge of how his/her subject matter should be taught. It focuses on promoting learning and on tracing the links among pedagogy and its supportive practices (curriculum, assessment, etc).

Technological Content Knowledge (TCK)

Technological Content Knowledge or TCK refers to knowledge of how the use of technology impacts on the subject matter, including how it is represented, organized, and learned (Mishra and Koehler, 2006).

It involves understanding how the subject matter can be taught through the use of appropriate technology best suited for specific subject matters.

Technological Pedagogical Knowledge (TCK)

Technological Pedagogical Knowledge or TPK refers to knowing what technology to use for a particular teaching task, knowing how to use a particular technological tool to achieve a particular learning outcome or set of outcomes, and knowing what pedagogical strategies are appropriate and effective and using technologies according to these strategies (Mishra and Koehler, 2006).

Technological Pedagogical Content Knowledge (TPCK)

Technological Pedagogical Content Knowledge (TPCK) combines all of these types of teacher knowledge.

According to Mishra and Koehler, "TPCK requires an understanding of the representation of concepts using technologies; pedagogical techniques that use technologies in constructive ways to teach content; knowledge of what makes concepts difficult or easy to learn and how technology can help redress some of the problems that students face; knowledge of students' prior knowledge and theories of epistemology; and knowledge of how technologies can be used to build on existing knowledge and to develop new epistemologies or strengthen old ones."

In order for teachers to make effective use of the TPACK framework, you should be open to certain key ideas:

1.concepts from the content being taught can be represented using technology;

2.pedagogical techniques can communicate content in different ways using technology;

3.different content concepts require different skill levels from students, and edtech can help address some of these requirements

4. students come into the classroom with different backgrounds – including prior educational experience and exposure to technology – and lessons utilizing edtech should account for this possibility;

5. educational technology can be used in tandem with students' existing knowledge, helping them either strengthen prior epistemologies or develop new ones.

Interactions in online and distance learning
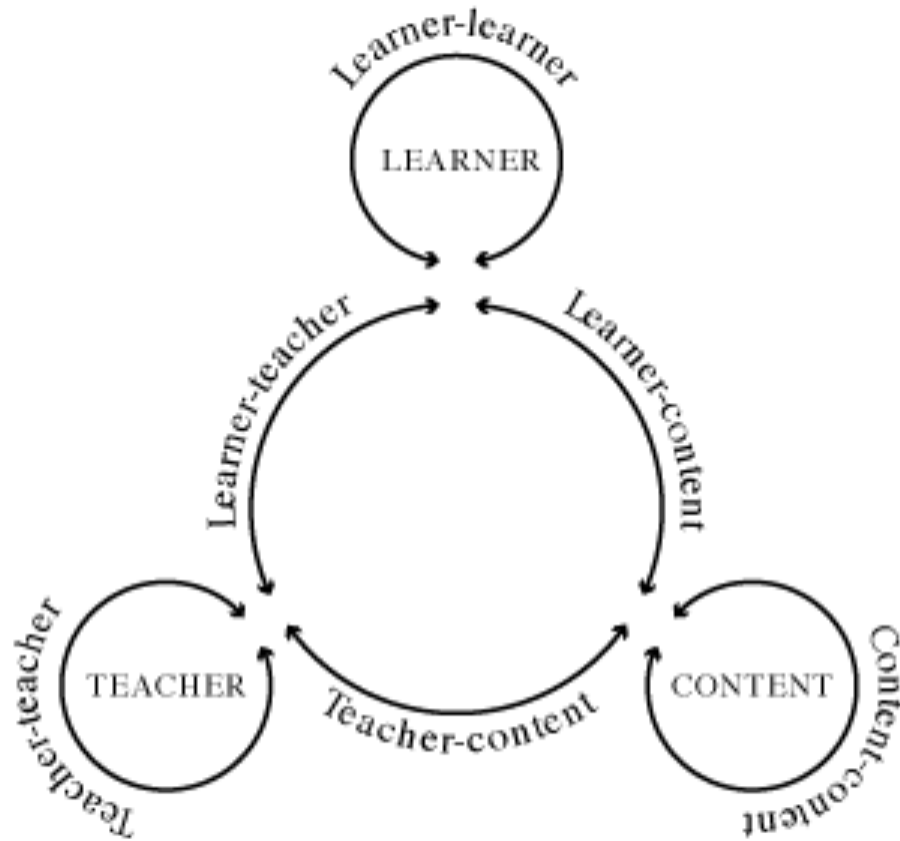
Learner-learner interaction

Learner-learner interaction can be organized in several ways. It could be 'one-to-many' as when a learner is asked to make a presentation to the class. Or it could be 'class-based' as when learners are asked to share their views and react to those of others. In online courses, this is usually done through chat sessions (which are synchronous) or through asynchronous discussion forums.

Learner-teacher interaction

There are also learning activities where the learner relies on a teacher for feedback. Written tests, oral examinations, and tutor-marked assignments are examples of this type of activity. The feedback provided by the teacher in these activities helps learners to learn more effectively, improves their motivational state, clarifies their understanding of the content, and facilitates their progress in the course.

Learner-content interaction

a learner interacts with content by undertaking a learning task independently, or by him/herself. Examples of this type of learning activity are answering self-assessment questions, reflecting on an assigned reading, and taking a quiz where feedback is automated, as in online quizzes. These activities allow students to ascertain their understanding of the content and immediately apply it to their immediate contexts.

Teacher-teacher interaction

This type of interaction can be in the form of professional development and support through a scholarly community of teachers. Teachers interact with other teachers to share best practices or experiences in terms of content, technology and pedagogy

Teacher-content Interaction

- focuses on the creation of content and learning activities by teachers.
- allows teachers to continuously monitor and update the content resources and activities that they create for student learning.

Content-content interaction

In this type of interaction, oftentimes content is programmed to interact with other automated information sources, so as to refresh itself constantly, and to acquire new capabilities.

PRINCIPLES OF
INSTRUCTIONAL DESIGN

1. Design for **learning outcomes**
2. Design for **learners**
3. Design with **digital resources** and technologies
4. Design for **dialogue** or **interaction** with others

Beetham (2020)

Role of Teachers in Online Teaching

Dimensions	Roles	Description of Roles
Pedagogical	Course designer	Design interactive learning experience, structure course materials; refine and update learning materials; sha
	Profession-inspirer	Promote professional dialogue among online learners; relate personal experiences and cases to the discipline; point to professional organizations
	Feedback-giver	Provide timely and high quality feedback; provide formative feedback for continuous learning engagement
	Interaction facilitator	Facilitate peer interaction in online discussion through a wide range of facilitation strategies

Managerial	Conference manager	Ensure equity in online discussion; provide rules and guidelines to augment online discussion; promote knowledge construction
	Organizer and planner	Provide clear instructions and organization of course structure; achieve a balance between structure and flexibility
Social	Social rapport builder	Build social rapport; establish online teams; build online learning community

Technical	Technical coordinator	Refer students to technical support; communicate technical issues
	Media Designer	Develop multimedia tools; identify and co-design efficient learning tools
	Technology integrator	Use highly interactive tools to facilitate high quality online interaction

Thank you!

Joane V. Serrano, PhD
Associate Professor
UP Open University