



جامعة قطر
QATAR UNIVERSITY

مركز التميز في التعليم والتعلم
Center for Excellence in Teaching & Learning

Guide to Online Teaching and Learning (GOTL)



Contents

Overview	3
1. Introduction to Online Education	4
1.1 Overview of Online Education: History and Evolution.....	4
1.2 Key Differences between Face-to-Face and Online Education	5
1.3 What Works? Successful Online Teaching and Learning Practices	6
1.4 Preparing to Teach Online	8
2. Essential Online Teaching Skills	9
2.1 Core Online Teaching Awarenesses	9
2.2 Foundational Online Teaching Skills.....	10
2.3 Planning and Design	12
2.4 Student-Centered Learning	14
2.5 Interacting with Students	15
3. Essential Online Learning Skills	16
3.1 Core Online Learning Skills	16
3.2 Characteristics of Successful Online Learners	18
3.3 Supporting Students Online	21
3.4 The Critical Importance of "Community"	22
3.5 Faculty Responsibilities	23
4. Assessment	24
4.1 Best Practices in Online Assessment	24
4.2 Assessing Higher-Level Cognitive Skills Online	27
4.3 Suggested Combination of Online Assessment Methods	30
4.4 Mitigating Academic Dishonesty	31
5. Essential Educational Technologies	32
5.1 Essential Online Educational Technologies.....	32

Overview

The Guide to Online Teaching and Learning (GOTL) provides essential information needed to deliver a course online. It draws distinctions between face-to-face and online education while highlighting the skills needed by instructors and students. It also addresses online assessment methods and the challenges associated with their implementation. The GOTL places pedagogy before technology by outlining the core competencies needed for achieving a successful online experience. Nevertheless, instructors need to be aware of the technological skills required to facilitate synchronous and asynchronous modes of learning. As a result, the GOTL dedicates a section that underscores best practice in using technology in education.

It is important to note that the GOTL is a tool to help faculty members form an opinion or make a decision based on practical advice that can be applied to various disciplines. Faculty members will need to substantially reflect on their individual situations and access the challenges and needs that often come with this mode of learning.

1. Introduction to Online Education

1.1 Overview of Online Education: History and Evolution

Distance education and online education are often used interchangeably. However, there are differences that need to be explained. Distance education refers to students and faculty not being in the same place. This has been done historically via postal correspondence. The earliest initiative dates back to the year 1728. Distance education evolved into radio transmission in 1919 (Engel, 1936)¹ and then to television in the 1950's and 1960's (Kentor, 2015)².

Online education is a form of distance education, which relies on the internet to connect students and faculty. It was introduced in the late 1980's but it gained prominence in the 1990's with the emergence of the World Wide Web. After the year 2000, the percentage of online students increased rapidly as technological and telecommunication advances developed at a very fast pace. Recently, some universities have even started using Massive Open Online Course (MOOC) to deliver online courses to a large number of students from all over the world.

The following link provides a visual illustration of the timeline with respect to the “Evolution and History of Online Learning”: <https://bit.ly/2LePcfD>

¹ Engel, A. (1936). WHA, Wisconsin's pioneer. Unpublished manuscript. Madison, WI: Wisconsin State Historical Society.

² Kentor, H. (2015). "Distance education and the evolution of online learning in the United States". Curriculum and Teaching Dialogue. 17: 21–34.

1.2 Key Differences between Face-to-Face and Online Education³

- 1. Asynchronous Nature of Online Courses:** While face-to-face instruction could have asynchronous elements, it is most often conducted synchronously. However, online courses can be successfully offered in an asynchronous mode.
- 2. Expectations for the Learners:** Success factors for students in any learning activity usually include motivation, a high degree of discipline, active listening and engagement, and time management. Although a student in a face-to-face setting might succeed if these factors are not fully met, it would be extremely difficult for an online learner to excel in their absence.
- 3. Varied Engagement Methods:** In a face-to-face setting, it is possible for faculty to teach by relying solely on lecturing (although this is not recognized as a best-practice approach to teaching). However, this is not the case in an online learning environment. Multiple engagement methods are required when teaching online such as recorded videos, discussion boards, and peer-to-peer instruction.
- 4. Timely Feedback:** Depending on the level of interaction in a face-to-face setting, students can often obtain feedback from the faculty inside and outside the class. In the absence of physical interaction, feedback, provided in a timely manner, is paramount for student success. This feedback can be in the form of email, discussion board post, or recorded audio or video. More time and care have to be devoted to providing feedback. Unlike face-to-face interaction where students see the faculty's facial expressions and body language, online interaction is much less direct.
- 5. Technical Knowledge:** Face-to-face instructors need to be able to use Learning Management Systems (LMS) like Blackboard. However, they do not have to be experts in it. This is not the case in an online setting. Faculty that teach online also need to provide technical support to their students and thus must be able to troubleshoot and provide guidance to students.
- 6. Student-Centric versus Teacher-Centric Methods:** A student-centric approach can be adopted in face-to-face and online instruction. However, the asynchronous nature of online learning implicitly requires students to take charge of their learning process.

³ Brown, 2019, 13 Differences Between Online and Face to Face Courses, Miami University Regionals, viewed 28 April 2020, <https://bit.ly/2YQ0Cyb>

1.3 What Works? Successful Online Teaching and Learning Practices⁴

Online education is unique in the sense that it has clear success factors, which must be attained in order to secure a successful experience. The following are some practices:

- 1. Active and Engaging Course:** Similar to any activity that requires sustained commitment; online courses must be engaging and active to empower students not to lose interest and stay connected with the faculty.
- 2. Segmented:** A successful online course should have the content divided into small segments. This will allow for flexibility in the delivery of that content and help make learning more flexible.
- 3. Faculty Presences:** In an online setting, the faculty has to be "present" in the course. This does not simply mean that he/she should answer questions in a timely manner. It also refers to letting the students get to know the faculty. Posting information about yourself and background.
- 4. Efficient Time Allocation by the Faculty:** The faculty needs to be responsive but within reason. If not managed properly, online teaching can over consume the faculty's time and thus make it easy to be burned out.
- 5. Clear Communication:** Information about deadlines and expected outcomes should be clearly communicated. Faculty could depend on email along with other methods such as recorded video and other acceptable mediums.
- 6. Think Like a Student:** Put yourself in their shoes. Exercise compassion and develop an understanding for their situations. Do not take the position that they are not telling the truth or are exploiting any shortcomings with the system.
- 7. Incorporate Visual Material:** Visual appeal adds to the attractiveness of the course. Online courses need to have visual material wherever possible. This could include the course website, PowerPoint slides, videos, and other content.

⁴ O'Malley 2017, Effective Teaching Online, Inside Higher ED, viewed 28 April 2020, <https://bit.ly/2YSQLIc>
Darby, 2019, How to Be a Better Online Teacher, The Chronicle for Higher Education, viewed 28 April 2020, <https://bit.ly/2zuhjVe>
Luskin, 2019, 12 Best Practices in Online Teaching and Learning, Psychology Today, viewed 28 April 2020, <https://bit.ly/3dwcXMf>

8. **Patience in Every Step:** For some faculty, not being able to teach face-to-face can be very frustrating. Especially if they are accustomed to using body language and tone of voice to reinforce a particular concept. In such cases, it is recommended that they utilize synchronous communication tools so that they feel as if they are actually delivering the material. However, what is more important is to exercise patience, which will in return prompt students to reciprocate patience as well.

1.4 Preparing to Teach Online⁵

- 1. Planning well before the Start of the Semester:** Planning is critical for the success of online education. Students studying online might require more structure and clarity than others might. This means that the syllabus and all the learning materials will have to be ready and finalized by the start of the semester. This includes detailed descriptions of the assessment methods used in the course along the respective due dates. Sudden changes should be avoided at all cost. If changes are to be made, then an announcement should be made to explain the reason behind them.
- 2. Technology-Readiness:** Understating the basic (and even intermediary) components of the technology that will be used in the delivery of the online class is necessary. If using Blackboard, then one has to know how to use the functions needed to achieve the course objectives. For example, if the faculty needs to use online testing, then she/he must invest time to learn it prior to the start of the semester. Faculty should note any possible challenges in order to address them prior to the commencement of the online course. If other technology or web-based application will be integrated with Blackboard (Kahoot, Socrative, etc.), then trials should be done before involving the students.
- 3. Let Students Know You:** Unlike face-to-face interaction, teaching online can be impersonal. One way for students to connect is to let them know you. Provide an introductory video about yourself at the start of the semester. This could help them relate to you and your style of communication.
- 4. Constant Structured Communication (CSC):** It is important to enable and encourage your students to seek for help and guidance when needed. However, it is unrealistic for students to assume that faculty will respond to their communications at all hours of the day. Choose specific times in the day to check and respond to emails. Let students know that it is difficult to respond instantaneously and that a specific time will be available during on certain days for them (for example, each day from 1pm to 2pm). Encourage the use of discussion boards and ask other students in the course to participate in replying to queries posted by their classmates.
- 5. Elicit student Feedback:** Just because students are not complaining, does not mean that they do not have suggestions to give on how they can learn better. It would be worthwhile to select a few students in the class to ask for their feedback. This allows the faculty to examine things from the student's perspective and prompt changes the benefit all parties.

⁵ Phillips, 2016, 7 Tips On How To Prepare For Teaching Online, eLearning Industry, viewed 28 April 2020, <https://bit.ly/2WJ9d3h>

2. Essential Online Teaching Skills

2.1 Core Online Teaching Awarenesses

"There is nothing so confining as the prisons of our own perceptions." -William Shakespeare

Although online education did not exist when Shakespeare wrote these words over 500 years ago, they contain significant and highly pertinent advice for modern-day educators and students. Our first reactions when approaching teaching and learning online are, naturally, based largely on established perceptions developed over years of experience teaching and learning in traditional classroom settings.

The most important first step in preparing to teach or take an online course is to acknowledge that teaching and learning online involves different skills and practices than either faculty or students likely expect. While some established teaching techniques and learning practices can be used in online classes, many cannot or will not work well without drastic modification. In order to make a successful transition from in-class teaching to online teaching, educators must work to actively tune, adapt and strategically expand their skills to meet the special requirements that characterize successful teaching and learning online.

For an excellent overview of online teaching, begin by consulting:

[How to Be a Better Online Teacher](#)

2.2 Foundational Online Teaching Skills

1. Good Teaching Matters: First and foremost, faculty planning to develop and teach courses online should be capable, confident, and highly experienced classroom educators. They should have a documented history of excellent teaching in traditional on-campus courses and a genuine desire to work hard to help students learn online. If you are new to the professorate or if you have specific challenges or weaknesses in your ability to teach effectively in person, teaching online will only magnify those problems--likely creating a difficult and/or disappointing educational experience for you and your students.

The CETL has a vast catalog of professional-development resources and activities that can help you improve your teaching. Many of these have been recorded and are available online for your reference. You are encouraged to access this content to help improve and maintain your teaching skills.

[CETL Professional-Development Video Archive](#)

2. Time and Effort: Successful online education also requires a considerable investment of time and effort from the faculty member developing and teaching the course. If you are not able (or willing) to devote the time required to learn the tools and techniques needed to develop and teach your course and you are not equally willing to devote long hours to interacting with your students online via video and email, then you should not pursue online teaching. In a study conducted by Zuckweiler, Schniederjans, and Ball (2004), researchers collected and analysed data on the time it took to perform various tasks associated with teaching a traditional face-to-face class versus the time spent on those tasks when teaching the same class online. Zuckweiler et al. (2004) found it took 40% more time to teach a class online.

Over time and with practice, the amount effort that faculty must invest to teach an online course can logically be expected to decline somewhat. However, you should expect each new course that you teach online will need about three repetitions before you are able to realize any of the reductions in cost, time or effort that are often touted as inherent benefits of online instruction.

3. Communication Builds Community: Creating "community" in an online learning environment is perhaps the *single most important task for a successful online educator*. Teaching a class is not just a matter of "delivering content" for students to simply absorb and then repeat (perhaps word for word) on a quiz or test. The best educators recognize, create and nurture a classroom community of learners where students develop a sense of shared purpose, interest and

camaraderie as they are exposed to, and progressively engage with, a course's content. This is true for on-campus classes, but especially important in online course.

Effective communication practices are the building blocks of your class' educational community. The face-to-face communication that occurs in a typical classroom is facilitated by numerous socio/cultural advantages that are significantly reduced (or not present at all) when teaching online. In an on-campus class, we make eye contact. We use our hands when we speak to help convey emphasis. We use body language to convey confusion, interest, etc. These cues can be difficult to convey in typical online interactions, so educators need to pay special attention to how effectively everyone in an online course learns to communicate and be ready to actively assist by structuring student participation, asking for clarifications, calling on less-participative students, asking follow-on questions, etc.

Notice the phrase, "how effectively everyone in an online course learns to communicate" above. This was chosen to specifically highlight the fact that your students will not automatically know how to communicate effectively online. As you plan your online course, consider communication dynamics at every step. How will you help students learn the course content effectively? What communication practices and styles will facilitate this and which will not? How will students communicate their understandings and their challenges to each other and to you? The more opportunities that you create for your students to engage with you, the content and each other, the stronger and more vibrant your learning community will be.

Moreover, as you plan your online course, you must also plan to create and include several introductory, low-stakes activities that appropriately model the types of communication that you expect from your students. Do not assume that they can distinguish high-quality communication from poor-quality work. Do not assume they know how to initiate or sustain an online discussion. In addition, especially, do not assume that your students automatically know how to use the basic tools they need to use to communicate online in your course. Everything needs to be taught!

For more information, see:

[BEST PRACTICES FOR COMMUNICATING WITH STUDENTS IN ONLINE CLASSES](#)

2.3 Planning and Design

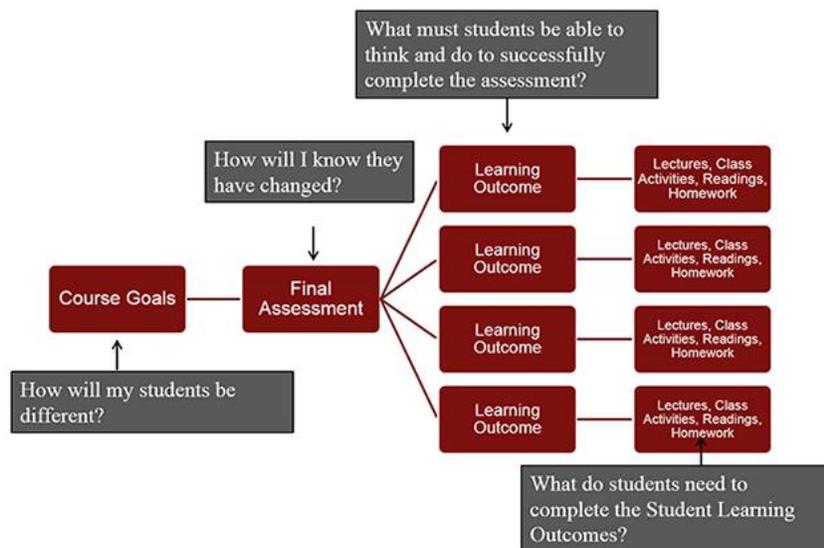
1. Work Backwards: Good teaching is never about simply having our students to memorize course content. We need students to understand the various topics we teach, but more importantly, we want our students to integrate new knowledge and skills into larger structures and to learn to apply specific skills in future situations. In short, we want our students to *operationalize* the knowledge and skills they gain from our classes. In order to achieve this, it is beneficial to start by working backwards--start with what goals (or outcomes) you want to your students to achieve and then develop and sequence the individual learning objectives needed for them to achieve these goals. Backward design is beneficial because it encourages intentionality and proper planning during the course-design process. It reminds and encourages the faculty to always consider the purpose behind doing something in the classroom before including it in a course.

[Seven Things to Consider Before Developing Your Online Course](#)

[How to Plan a New Online Course, Part 1: Establishing the Basics](#)

[How to Plan a New Online Course, Part 2: Goals and Assessments](#)

[Understanding by Design](#)



Bowen, Ryan S., (2017). Understanding by Design. Vanderbilt University Center for Teaching. <https://cft.vanderbilt.edu/understanding-by-design/>.

Stage 1 – Desired Results			
<p>ESTABLISHED GOALS</p> <p>The enduring understandings and learning goals of the lesson, unit, or course.</p>	<i>Transfer</i>		
	<p><i>Students will be able to independently use their learning to...</i></p> <p>Refers to how students will transfer the knowledge gained from the lesson, unit, or course and apply it outside of the context of the course.</p>		
	<i>Meaning</i>		
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>UNDERSTANDINGS</p> <p><i>Students will understand that...</i></p> <p>Refers to the big ideas and specific understandings students will have when they complete the lesson, unit, or course.</p> </td> <td style="width: 50%; vertical-align: top;"> <p>ESSENTIAL QUESTIONS</p> <p>Refers to the provocative questions that foster inquiry, understanding, and transfer of learning. These questions typically frame the lesson, unit, or course and are often revisited. If students attain the established goals, they should be able to answer the essential question(s).</p> </td> </tr> </table>	<p>UNDERSTANDINGS</p> <p><i>Students will understand that...</i></p> <p>Refers to the big ideas and specific understandings students will have when they complete the lesson, unit, or course.</p>	<p>ESSENTIAL QUESTIONS</p> <p>Refers to the provocative questions that foster inquiry, understanding, and transfer of learning. These questions typically frame the lesson, unit, or course and are often revisited. If students attain the established goals, they should be able to answer the essential question(s).</p>
	<p>UNDERSTANDINGS</p> <p><i>Students will understand that...</i></p> <p>Refers to the big ideas and specific understandings students will have when they complete the lesson, unit, or course.</p>	<p>ESSENTIAL QUESTIONS</p> <p>Refers to the provocative questions that foster inquiry, understanding, and transfer of learning. These questions typically frame the lesson, unit, or course and are often revisited. If students attain the established goals, they should be able to answer the essential question(s).</p>	
<i>Acquisition</i>			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><i>Students will know...</i></p> <p>Refers to the key knowledge students will acquire from the lesson, unit, or course.</p> </td> <td style="width: 50%; vertical-align: top;"> <p><i>Students will be skilled at...</i></p> <p>Refers to the key skills students will acquire from the lesson, unit, or course.</p> </td> </tr> </table>	<p><i>Students will know...</i></p> <p>Refers to the key knowledge students will acquire from the lesson, unit, or course.</p>	<p><i>Students will be skilled at...</i></p> <p>Refers to the key skills students will acquire from the lesson, unit, or course.</p>	
<p><i>Students will know...</i></p> <p>Refers to the key knowledge students will acquire from the lesson, unit, or course.</p>	<p><i>Students will be skilled at...</i></p> <p>Refers to the key skills students will acquire from the lesson, unit, or course.</p>		
Stage 2 – Evidence and Assessment			
Evaluative Criteria	Assessment Evidence		
<p>Refers to the various types of criteria that students will be evaluated on.</p>	<p>PERFORMANCE TASK(S):</p> <p>Refers to the authentic performance task(s) that students will complete to demonstrate the desired understandings or demonstrate they have attained the goals. The performance task(s) are typically larger assessments that coalesce various concepts and understandings like large projects or papers.</p>		
	<p>OTHER EVIDENCE:</p> <p>Refers to other types of evidence that will show if students have demonstrated achievement of the desired results. This includes quizzes, tests, homework, etc. This is also a good point to consider incorporating self-assessments and student reflections.</p>		
Stage 3 – Learning Plan			
<p><i>Summary of Key Learning Events and Instruction</i></p> <p>This stage encompasses the individual learning activities and instructional strategies that will be employed. This includes lectures, discussions, problem-solving sessions, etc.</p>			

Bowen, Ryan S., (2017). Understanding by Design. Vanderbilt University Center for Teaching.

<https://cft.vanderbilt.edu/understanding-by-design/>.

2.4 Student-Centered Learning

Effective online teaching mandates that educators adopt significantly more student-centered teaching practices and assessment methods. If you have wondered about what being student centered is all about, now is the time to find out and begin making it a *centerpiece* of your teaching. Good communication practices and the creations of a strong learning community greatly facilitate student-centered approaches.

ELEMENTS	TEACHER-CENTERED	STUDENT-CENTERED
KNOWLEDGE	Transmitted from Instruction	Constructed by Students
STUDENT PARTICIPATION	Passive	Active
ROLE OF LECTURER	Leader/Authority	Facilitator/Partner in Learning
ROLE OF ASSESSMENT	Few Tests, Mainly for Grading	Many Tests, for Ongoing Feedback
EMPHASIS	Learning Correct Answers	Developing Deeper Understanding
ASSESSMENT METHOD	One-Dimensional Testing	Multidimensional Testing
ACADEMIC CULTURE	Competitive, Individualistic	Collaborative, Supportive

Nurturing student engagement through interesting, relevant content and linkages to real-world knowledge and skills is a critical element of student-centered teaching and active learning practices.

For more information, see:

[Active Learning in an Online Course](#)

[From Passive Viewing to Active Learning: Simple Techniques for Applying Active Learning Strategies to Online Course Videos](#)

2.5 Interacting with Students

Online learning is not “slapping classroom content online.”- O’Neil, Fisher, & Newbold, 2008

Research indicates that students in online courses who perceived that they had high levels of interaction with their instructor also had high levels of satisfaction with the course and reported higher levels of learning, compared to students who thought they had less interaction (Swan, 2001). Successful online educators strive to emphasize these highly interrelated aspects of the teaching/learning experience:

- Interaction
- Interest
- Relevance
- Engagement /Commitment
- Support

You should plan to encourage participation with challenging questions and thoughtful interactions. These can be conducted live via video chat or asynchronously via text-based discussion. In either medium, educators should strive to guide conversations, but not dominate them. Avoid recreating one-way lectures during "live" interactive sessions. Instead, focus on interacting with your students. If certain topics would benefit from an expository introductory lecture, consider recording it in advance so that student can watch it on their own time and then all join a live session to process and discuss the topics presented in the lecture.

Discussions generally benefit from short open- ended questions and comments from the professor. These encourage responses from students. Try to summarize and focus discussions with integrative comments that prompt follow up rather than statements that are authoritative and final. Be responsive--especially at the beginning of the course. Ensure that every student's comment gets a response. If no one else replies to a comment, either respond yourself or by restating the question/comment and soliciting follow up. Give credit for good participation.

There are many excellent resources available to help you increase your interactive teaching practices. Here are four of the best:

[4 Expert Strategies for Designing an Online Course](#)

[Five Ways to Make Your Online Classrooms More Interactive](#)

[INSTRUCTOR-TO-STUDENT INTERACTION ONLINE](#)

[STUDENT-TO-STUDENT INTERACTION ONLINE](#)

[SMALL-GROUP WORK](#)

3. Essential Online Learning Skills

3.1 Core Online Learning Skills

The following core skills enhance student communication, functionality, and collaboration not only in their academic lives but also in diverse workplaces⁶. Faculty might ask the following questions to ensure integrating these core skills in their offered courses:

- *Which core skills could be highlighted in the courses?*
- *How might students develop and practice these skills during the course?*
- *How will these skills be assessed?*

The following is a list of core skills for learning online with applied examples from different universities that faculty may use as a guide to incorporate the skills with practical cases:

- 1. Teamwork and Collaboration:** Ryerson University have established an online role-playing environment where students can create their own scenes and characters and interact in real time by using written communications after which it is compiled into a ‘movie’.
- 2. Critical Thinking and Problem Solving:** Centennial College have established a real-time online game. Using a crisis simulation technique, students were able to handle various issues like security, safety, wellbeing, and psychology.
- 3. Independent and Continuous Learning:** Nipissing University have asked students to develop a learning plan using the e-portfolio to record the learning process and its resources, including health related content, inquiry-based learning skills, interdisciplinary practice, and knowledge networking.
- 4. Effective Communication:** George Brown College have asked students to conduct action research projects to extend the learning language in a classroom by designing and testing mobile-assisted language learning initiatives. For example, one project has integrated eight mobile language-learning tasks including audio dictionaries, idiom definitions, scavenger hunts, on-the-go podcasts, and learning reflections posted on blogs.
- 5. Innovation and Initiative:** The International University of Languages and Media collaborate with companies and agencies to host professionals as guest speakers to the online sessions. Students were able to virtually present their ideas, projects, and innovations while having

⁶ Best Practices in the Use of Technology to Integrate Core Skills into Course Content. Ontario’s Distance Education and Training Network

access to professional feedback/or input and a chance to have their project acquired by a company.

- 6. Information and Media Literacy:** Queen's University have created an initiative for the public from other universities who are interested to take online courses about communications and digital media. This initiative takes the form of webinars, blog posts, online discussions, as well as social media channels such as Facebook and YouTube.
- 7. Intercultural Skills:** York University has established an online course on Global Environmental Change aiming at introducing intercultural experience by exchange knowledge with students from different countries. For example, York students were able to interact with refugee students on the Thai border to discuss climate change. This initiative helped both students and the university in achieving an effective intercultural communication that help in solving environmental issues.

3.2 Characteristics of Successful Online Learners

As mentioned in the previous section, online education offers an enhanced opportunity for the integration of core skills into the knowledge and content of the courses, providing an environment that supports learning, practice, and mastery of skills for lifelong learning and career success. According to Keegan⁷, there are three primary sets of characteristics that are distinguishing online learners as “successful”: **Personal Characteristics, Environmental Variables and Learning Characteristics.**

1. Personal Characteristics: Such as autonomy, responsibility, curiosity, self-efficacy and “an internal locus of control”. As the University serves a diverse population of students, faculty needs to understand the students (learners) characteristics and types:

- First generation students: They are first in the family to learn online.
- English language learners: could be a serious challenge especially if the medium used is in English and no Arabic language is available.
- International students
- Academically underprepared students: Some high school graduates, long absent students, and readmitted students.
- Students who are primary caregivers: to children or other family members
- Full-time employees
- Digitally savvy students
- Technology-phobic students
- Students with specific learning styles (visual, auditory, reading/writing and kinaesthetic)
- Students with disabilities (diagnosed and undiagnosed, disclosed or undisclosed)
- Students from lower socio-economic backgrounds who may not be able to afford the technology required.

2. Environmental Variables: Such as study environment, access to technology, access to support and materials, the learner’s role identification, and sense of connection or isolation.

- Creating space for learning: faculty should encourage students to identify a distinct space for learning that is not used for other activities and minimize distractions in both physical environment and digital environment. For example, close a web browser not relevant to the ongoing lecture and turning off notifications of other devices.
- Managing technology and accessing materials: Faculty should advise students to organize all the technology required as mentioned in the course syllabus or other materials provided.

⁷ Keegan, D. (1996). Foundations of distance education (3rd ed.). London, UK, and New York, NY: Routledge.

- **Accounts and Applications:** to ensure having the required software or applications downloaded (i.e. Zoom, MS Teams, etc.), and being enrolled in the correct course.
 - **Hardware:** for example, to have handy any power cords, USB cables and extra devices like a mouse, keyboard, etc.
 - **Wi-Fi:** to minimize reliance on Wi-Fi if possible by using a network cable and to download course materials ahead of time in case of losing the internet connection.
- **Access to support:** Faculty should encourage students to seek support as needed. Qatar University offer wide range of support for students whether academically or non-academically.
 - **Learner's role identification:** Students must be aware of their role in online education. The role of the learner is to learn how to learn. In fact, the most important long-term outcome of instruction may be the students' increased capabilities to learn more easily and effectively in the future, both because of the knowledge and skill they acquire and because they have mastered the learning process (Joyce and Weil, 1966). How teaching is conducted has a large impact on students' abilities to educate themselves.
 - **Ways to create a sense of connection:** Tinto's conceptual schema for dropout from college identifies a set of factors influencing student persistence and dropout, focusing in particular on the role of 'processes of interaction' between students, students and teachers, and students and their institutions. Tinto specifically identifies increased interaction and integration with the institution as vital factors in student persistence. His model predicts themes such as faculty and peer-group interaction, and social and academic integration⁸.
- 3. Learning Characteristics:** Which includes expectations for the course, experience with online instruction, self-regulation, time management, and management of information. To help students achieve goals in an online learning environment, faculty need to encourage them to employ strong self-regulation learning strategies such as metacognitive, motivational and behavioral strategies.
- **self-regulation**
 - **Metacognitive Strategies:** Refers to methods used to help students understand the way they learn how to 'think' about their 'thinking'. Faculty who use metacognitive strategies can positively help students with learning disabilities to develop an appropriate plan for learning information, which can be memorized and eventually made into a routine.
 - **Motivational and Behavioral Strategies:** Faculty should encourage students to set specific goals for the course, track their own progress, and seek support as required.

⁸ Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. Review of Educational Research, 45(1), 95.

- Time Management

- Creating a schedule: A benefit of online learning is flexibility, but this can also create challenges. Without the structure of an on-campus course schedule or in-person learning sessions, it can be easy to procrastinate learning tasks or lose track of assignment deadlines. Faculty has to set the tasks and other assessment deadlines clearly ahead of time to allow students to create their own study schedule and add important due dates to their calendar.
- Pomodoro Technique⁹: This time management technique is useful if faculty find student is easily distracted. Pomodoro sets aside time for focusing on a specific task and rewards the individual with small chunks of time to be used for short breaks. There are five steps in the original technique:
 - Decide on the task to be done.
 - Set a timer for 25 minutes.
 - Work on the task.
 - End work when the timer rings and take a (3-5 minute) break, put a checkmark to count the number of breaks.
 - After four Pomodoros (breaks), take a longer break (15–30 minutes), reset checkmark count to zero, then repeat.

⁹ Francesco Cirillo (2006). Pomodoro Technique.

3.3 Supporting Students Online

Following the previous section, faculty must devote time to assist students by motivating, counseling, offering support, monitoring their performance, and providing one-on-one and differentiated tutoring. Faculty need to provide the right amount of support and encouragement on an ongoing basis. Students learn better, when they feel **welcomed, valued, and supported** in their learning environment. Following are key elements for faculty support: Communication, Participation, Performance and Transparency¹⁰.

- **Communication:** Is a key when it comes to bridging the distance between the faculty and student. As most online classes are asynchronous in nature, it is recommended that faculty make note of who could not attend, and try to reach out to those students. Moreover, if faculty find that a student is asking many questions and does not appear to understand the materials, then faculty may consider scheduling a quick virtual meeting to go through the student questions with sharing the required tools such as audio, video, files, etc. making it easier to accommodate students' various learning styles.
- **Participation:** Blackboard offers ways to track both the students' attendance and their discussion-board postings; this will help faculty identify which students are active. However, if inactivity is becoming a pattern for certain students, faculty should follow up with that student, and/or notify the Student Counseling Center. It is critical to identify these patterns early to offer the right support.
- **Performance:** Faculty should track students' performance. If a certain student has a low grade, faculty should reach out to that student with some additional constructive feedback and guidance. If faculty notice that many students have low grades on a certain assignment, then it is recommended to take time out of their next virtual class meeting to discuss this matter.
- **Transparency (Be Explicit)**
 - Articulate why a particular item or skill is important
 - Use assignment sheets and/or rubrics that clarify expectations and criteria
 - Help address and reduce confusion and anxiety
 - Encourage students to reflect on what they have learned
 - Remind students about course and campus resources and online office hours.

¹⁰ Nelson Hui. (2020). How faculty can spot and support struggling online students. Pearson Online Learning Services.

3.4 The Critical Importance of "Community"

Research has shown that functioning in a community can enhance the learning that occurs among community members. Below are elements of the community frequently identified¹¹:

- 1) A sense of shared purpose
- 2) Establishment of boundaries defining who is a member and who is not
- 3) Establishment and enforcement of rules/policies regarding community behavior
- 4) Interaction among members, and
- 5) A level of trust, respect and support among community members

A learning community can help students “achieve what they cannot on their own” especially when face-to-face interaction does not exist. Consistent with the traditional classroom, if online students are passive and choose not to engage in community, then the benefits they derive will be limited. Ideally, students will be eager about their learning and actively seek to build and sustain the learning community. However, the literature suggests that faculty plays a key role in motivating students to engage as learning community members.

Faculty in an online class are responsible for facilitating the personal and social aspects of an online community in order for the class to have a successful learning experience. However, facilitating these aspects is not without challenge because the online classroom involves technologies and media that can be less personal and can foster a diminished social presence. As a result, it is suggested that online teaching faculty need to be “seen” in order to be perceived by their students as present in their course. Faculty can foster students’ sense of belonging and community through some of the below ideas:

- Memorizing and using student names
- Offering peer-learning activities like “think-pair-share”
- Forming small group configuration
- Integrating group collaboration projects
- Setting netiquette rules and enforcing them
- Creating topic-centered social media groups
- Appointing learning community leaders
- Introducing some eLearning games
- Inviting students to share information or strategies with each other (what they know about a topic; tips for studying, writing a paper, tackling a problem, or other resources)

¹¹ Vesely P., Bloom L. and Sherlock J. (2007). Key Elements of Building Online Community: Comparing Faculty and Student Perceptions. MERLOT Journal of Online Learning and Teaching. Vol 3. No3. P 235-236.

3.5 Faculty Responsibilities

The previous section explained how online learning communities have the ability to connect students and make them feel like they are part of an effective peer network. It highlighted the importance of the faculty responsibilities to support and comfort students in order to improve their sense of community and create a healthy online learning environment. Below are some guidelines that can assist faculty with their responsibilities towards students:

- **Course Design**
 - Be proactive about creating accessible content (searchable PDFs, captions, formatting, color, etc.)
 - Choose materials to reflect the diversity of scholars.
 - If possible, choose materials that can be made accessible to students.
- **Syllabus**
 - Set clear expectations for learning goals, procedures, and communication.
 - Include support resources.
 - Be flexible
- **E-readiness**
 - Some authors recommend that a valid e-readiness tool is useful, reliable and improve retention rates and success of online learners¹². Therefore, without a skilled faculty (facilitator) and an active online community, students may find themselves isolated and lonely. This lack of familiarity with conventions of online learning and sense of isolation, coupled with technical or learning challenges, prompts many students, either officially or unofficially, to drop out of their online learning program.
- **Introduce Yourself**
 - What makes you excited about this course?
 - This is an opportunity to connect.
 - Get personal.
- **Set Classroom Norms**
 - ‘Ground rules’ everyone can refer to for how participants will share responsibility.
- **Let Students Introduce Themselves**
 - Foster classroom community.
- **Change the Environment not the Learner**
 - Design the environment so that all students can find a path to learning which works for them.

¹² Watkins, R., Leigh, D., & Triner D. (2004). Assessing readiness for e-learning. *Performance Improvement Quarterly*, 17(4), 66-79.

4. Assessment

4.1 Best Practices in Online Assessment

When planning for assessment in online education, the following factors must be considered:

1. **Validity:** The method of assessment has to be suitable to assess the course's learning outcomes. The learning objectives should be covered. For example, if the course aims for students to use critical analysis, then the method of assessment has to capture this outcome.
2. **Reliability:** The results of the assessment method (grades) have to reflect the student's academic attainment. It is possible that an assessment method could be valid, but may yield results that overstate/understate student's true learning in the course. For example, an online exam could show the student's average grade to be less than/ greater than grades obtained during normal face-to-face instruction. An important issue is the possibility of plagiarism and in case the assessment method was compromised. A related issue is the degree of plagiarism-related uncertainty that can be tolerated. For example, if the assessment is low-stakes, with a very low weight, then perhaps possible plagiarism could have less of an impact. However, if the assessment were a high-stakes final exam with high weight, then any degree of plagiarism would be distressing.
3. **Efficiency:** The time to prepare and grade an assessment and the time needed for a student to complete it should be realistic and doable. There is a trade-off between reliability and efficiency. Individual online oral presentation is reliable but also very time consuming.
4. **Understandability:** Students must understand the requirements of the assessment method, especially if they were not exposed to it in the past. For example, students that never had an open-book exam will need a great deal of guidance so that they can understand the requirements. This might call for mock trials to familiarize students with the new method.
5. **Online Connectivity and Technical issues:** If the assessment method requires online connectivity (such as online exams), you should expect this to pose some challenges. Technical issues could also occur--either from the faculty's side or from the student's side. Furthermore, it can be very difficult to determine the extent to which students actually experience problems or not. Some students may attempt to blame poor performance on exaggerated technical issues.

Qatar University has devised the “Best-Practices Guide to Evaluating Students in a Distance-Learning Setting” to assist faculty members in planning and executing their assessments. The guide offers nine methods for assessment used in an online setting. The guide can be accessed via the following link: <https://bit.ly/2Wjqh0K>

The following is a brief description of the nine assessment methods:

1. Open-book Examinations

These types of examinations attempt to assess students' higher-level thinking and learning skills by evaluating their abilities to actively apply their knowledge and skills to questions and problems via the ability to freely access their notes, textbooks, or any other print or digital resources officially permitted by the instructor during the test.

2. Essay Questions

They are often either open-ended, where students are encouraged to formulate and express their own opinions on broad course topics, or are tightly focused on a specific topic determined by the instructor. Essay questions are usually weighted more heavily (i.e., one question is worth many points) than individual multiple-choice questions which typically carry very low weights.

3. Blackboard "Automated" Tests and Quizzes

"Automated" tests and quizzes are evaluations that are given using a Learning Management System (LMS) like Blackboard. The faculty creates individual questions and groups them into tests using the LMS, which then displays them for students to answer.

4. Publisher-Provided Automated Tests and Quizzes

Publishers often create libraries of questions (or even entire tests) to supplement their textbooks. Faculty can use these questions to help develop their own online tests. Prepared questions can be individually selected (or omitted) and edited by the faculty to better align with their teaching style.

5. Segmented High-Stakes Assessment

A segmented high-stakes assessment approach divides a single high-stakes assessment into multiple, smaller, lower-stakes segments. For example, instead of one final exam worth 30% of a student's total grade, three smaller (and therefore lower stakes) tests (each worth 10%) could be given to students instead.

6. Course Projects (Or Capstone Projects)

An individual or group project generally encompasses major themes or issues raised during the course. Projects create an opportunity for students to apply higher-order thinking and learning skills that include critical thinking and problem solving.

7. Debates

These are discussions about a particular topic or issue in which students put forth and defend or refute supporting and opposing arguments. In this assessment method, students actively engage with and discuss their perspectives on topics and issues presented in class.

8. Student Presentations

Student Presentations involve students using their voice along with any visual aids needed (PowerPoint, real-world objects, posters, etc.) to explain and clarify one or more topics to an audience.

9. Student Portfolios

A portfolio consists of samples of student's work from the semester collected and assembled as evidence to show how the students have met specified learning outcomes or assessment criteria.

The following is a table that compares the nine methods based on reliability, efficiency and online connectivity and technical issues:

	Reliability	Efficiency	Online Connectivity and Technical issues
Open-book Examinations	Medium	Low	Low risk
Essay Questions	Medium	Low	Low risk
Blackboard Tests and Quizzes	Low	High	High risk
Publisher-Provided Tests and Quizzes	Low	High	High risk
Segmented High-Stakes Assessment	Medium	Medium	Low risk
Course Projects (Or Capstone Projects)	Medium	Low	Low risk
Debates	High (if live)	Medium	High risk (if live)
Student Presentations	High (if live)	Low	High risk (if live)
Student Portfolios	Medium	High	Low risk

4.2 Assessing Higher-Level Cognitive Skills Online

A course's learning outcomes should determine the type of assessments used--irrespective of whether the assessment is conducted online or face-to-face. If the learning outcomes call for higher-level cognitive skills such as analyzing, evaluating, and creating to be assessed, then the methods used should not focus on evaluating the student's ability to simply recall information. In such situations, it is recommended that evaluation methods such as open-book exams and student presentations be used.

1. Open-book Examinations

The format can range from quantitative questions to theoretical cases depending on the subject matter.

Preparation for open-book examinations

- Preparation required by the faculty member: The faculty can come up with problem-based scenarios where students need to interpret and apply knowledge. Students could be provided with quantitative or qualitative data, which require interpretation and analysis. Some examples of possible questions include:
 - *Why is a certain position different from another position?*
 - *Contrast and compare between ...*
 - *Out of the various arguments, which one is the most compelling?*
 - *If given the opportunity, what change would you make and why?*
 - *How would you assess the following situation?*
 - *What alternative treatments would you recommend if you were in this position?*
- Preparation required by the student: Students must be aware of the procedures involved in open-book examinations. They should have exposure to mock trials prior to any graded exam. They need to be aware that open-book exams are not easier than closed-book exams.

How to implement open-book examinations: Open-book evaluations can be distributed and collected via Blackboard (preferably also using Turnitin to help minimize possible plagiarism). Exams could be delivered synchronously (where all students start and end the exam at the same time) or asynchronously (where students are given several hours to complete the exam on a variable schedule). In case Blackboard experiences technical issues, email can be considered as an alternative way to distribute and/or collect the exam.

Advantages of open-book examinations: If they are properly constructed, open-book evaluations can encourage students to engage in higher-order thinking and learning tasks that

require critical thinking, analysis, and problem solving as opposed to more simplistic, closed-book tests that often focus on memorization skills. If students are adequately prepared in advance, open-book tests can include significantly more detailed and challenging questions than their closed-book counterparts.

Disadvantages of open-book examinations: Upon learning that tests will be "open book", students might wrongly believe that little or no preparation or studying is actually required. In order to overcome this potential misconception, faculty should give students clear examples of the types of questions (and skills) that the exams will feature in the form of a preliminary "sample" test featuring questions similar in difficulty and expectations to the actual evaluations.

For further resources on open-book exams, please refer to the following:

Guide for choosing a suitable method for remote assessment: <https://bit.ly/2YRb20B>

A Guide for Academics – Open Book Exams: <https://bit.ly/2Wlqj8f>

Open Book Examinations: <https://bit.ly/35SINjx>

2. Student Presentations

Student presentations assess what student learned by having students express themselves orally. In addition to using spoken words, students could use visual aids (PowerPoint, real-world objects, posters, etc.) to explain and clarify one or more topics to an audience. It is important to note that presentations (in this context) focus mainly on assessing student learning. Other issues, such the student's ability to speak confidently and maintain eye contact are of lesser importance.

Preparation for student presentations:

- Preparation required by the faculty member: The faculty needs to devise a rubric that clearly shows how the dimensions map with the learning outcomes. Furthermore, the rubric should provide a clear scale that can be used for grading. The rubric needs to be shared with students beforehand. The faculty will need to be free of bias towards anything but the content that is being examined. This includes student's language issues or overall shyness.
- Preparation required by the student: Students must aware of the procedures for the presentations. They need to have access to the presentation rubric along with full explanation with respect to the grading scale. Students must practice and manage their time.

How to implement student presentations: Presentations can be delivered "live" online via any of the platforms (WebEx, Collaborate, and Microsoft Teams). If the intention is to assess each student separately, then the faculty can create separate session for individual students or use breakout room. Another possibility (although less effective) would be for students to record and

then uploaded their presentations to Blackboard or YouTube as a "narrated PowerPoint" presentation.

Advantages of student presentations: Student presentations are often an excellent way for faculty to "step aside" from a teacher-centric role in the classroom and create more student-centered approaches to teaching and learning. Presentations can give students important opportunities to actively process knowledge, attend to what others are thinking and better understand and formulate their own opinions. They allow follow-up questions that help determine the student's level of knowledge.

Disadvantages of student presentations: Presentations can be labor-intensive in terms of correcting and giving feedback. Students may incorrectly focus more on the "look" of their presentation's materials rather than its actual informational content. In order for presentations be educationally relevant and successfully executed, faculty must develop detailed presentation rubrics, which clearly specify the criteria and expectations for student work.

For further resources on student presentations, please refer to the following:

A short guide to oral assessment: <https://bit.ly/2SX9oqC>

Guidelines for (online) oral assessment: <https://bit.ly/2YSRIQM>

4.3 Suggested Combination of Online Assessment Methods

Qatar University advises that faculty members use multiple assessment methods during a course. The selection process will be discipline-specific as there is no single right or perfect combination. However, given the nature of online education, attempting to find a balance between validity, reliability, efficiency, understandability and connectivity is important. It is not advisable to use only one of the aforementioned assessment factors while ignoring the rest.

The following is an **example** of a balanced assessment combination along with suggested weights and deadlines:

Assessment Item	Notes	Higher Order Cognitive Skills	Suggested Weight	Suggested Due Dates
Open-book Examinations	Somewhat reliable, low risk in terms of connectivity, not efficient	Yes	35%	End of Semester
Blackboard Online Quizzes	Low reliability, high risk in terms of connectivity, highly efficient	No	20%	Throughout
Course Projects	Somewhat reliable, low risk in terms of connectivity, not efficient	May be	30%	Middle of Semester
Student Presentations	Highly reliable, high risk in terms of connectivity, not efficient	Yes	15%	Middle of Semester

Please note that the assessment items listed above could be replaced with other items based on the needs of the faculty member. To find out more details about CETL's Guide to Evaluating Student, please click on the following link: <https://bit.ly/3dDQL2R>

4.4 Mitigating Academic Dishonesty

Certain assessment methods are more risk-prone than others--especially when it comes to plagiarism. Methods such as open-book exams that leverage high-cognitive skills are the most plagiarism-proof vis-à-vis other methods. However, assessment methods that require students to simply recall information that can be either easily found in the course notes or online can result in more cases of cheating relative to others. They inappropriately overemphasize knowledge-level learning where students use simple recall-oriented memory skills to answer multiple-choice (or similar) questions. It is common to rely on automated testing (Blackboard online tests) for this type of assessment.

The following are possible steps that could reduce cheating in online exams:

- Create a large number of questions "test pools" for specific units, chapters or courses.
- If multiple choice questions are used, then make sure they are “context-rich” and require critical analysis.
- Present students with six answers to choose from rather than the typical four.
- The exam should be made available for a limited time (adaptive release).
- When a test or quiz is given, the order of the questions can be fully randomized.
- Prohibiting Backtracking.
- Use lockdown browser.
- If the University allows the use of webcam for proctoring, then it can be a viable option to reduce plagiarism.

5. Essential Educational Technologies

5.1 Essential Online Educational Technologies

Effective educators are confident communicators. They strive to actively engage their students in their course content. They are skilled at creating interesting, student-centered learning activities. They are able to develop informative educational materials on a whiteboard or in PowerPoint and they carefully select educational multimedia to enhance their teaching and further illuminate specific topics.

Successful online educators need many of these same skills, plus they must add significant expertise in a few well-chosen tools specific to online environments. It is definitely better to know how to use a few tools well rather than use many tools poorly. This is because, in online classes, faculty not only need to know how to use the tools themselves, they have to know them well enough (and have included the time needed in their syllabi) to be able to teach their students how to use these same tools in the context of their course. Despite youth today being labeled by the media as "digital natives" and regardless of students possibly having taken online courses previously, educators must "avoid the pitfall of assuming that their students possess talents and abilities that they do not actually have" (Kirschner and De Bruyckere, 2017). In simplest terms, if your students need to use specific tools in your class, you need to demonstrate, teach and practice their use beforehand.

[The myths of the digital native and the multitasker](#) [Skills for the Online Instructor](#)

At Qatar University, the minimum recommended set of tools and resources that faculty need to know how to use in order to teach online consists of the following:

Resources:

- The World Wide Web
- Google
- Google Image Search
- YouTube
- [Rules for Proper Netiquette](#)

Tools:

- The Blackboard Learning Management System (LMS)

- Blackboard's video-conferencing component, Collaborate Ultra
- MS Outlook email (as a backup)
- MS PowerPoint (or similar presentation tool)
- MS Excel (or similar spreadsheet tool)
- MS Word (or similar word-processing tool)
- Adobe Acrobat (for cross-platform document distribution)
- Echo360 Universal Capture Video Recording Tool
 - or a similar video/screen recording tool like:
 - [Appsoft Free Online Screen Recorder \(Win/Mac, free\)](#)
 - The Camera App (Win, free)
 - QuickTime (Mac, free)
 - Camtasia (Win/Mac, license required)
 - Adobe Captivate (Win/Mac, license required)

Faculty teaching online will use these tools and resources to:

- Design, Create, Upload, Organize, and Manage Course Content
- Communicate with Students Publicly and in Private
- Create, Organize, Facilitate, and Manage Text-based and Live-video Interactions
- Enable Students to Submit Work
- Evaluate and Grade Assignments
- Provide Feedback on Assignments
- Return Assignments to Students
- Maintain Grade and Attendance Records

Student in online courses will use these tools and resources to:

- Design, Create, Upload, Organize, and Manage Course Work
- Communicate with Faculty and Other Students
- Contribute to Text-based and Live-video Interactions
- Submit Work
- View Graded Assignments
- View Feedback on Assignments
- Check Grade and Attendance Records

*Note: Echo360 Universal Capture has been licensed by Qatar University and technical support is available on campus; however, students are not currently able to use this tool. It is currently only for faculty use. In comparison, Appsoft Free Online Screen Recorder and similar cross-platform tools can be used by faculty and students alike and may, therefore, be easier to integrate into online courses where students are required to submit video recordings in order to fulfill

specific work/project requirements since faculty can concentrate on learning/teaching fewer tools overall.

There are numerous resources available online to help you learn these tools. Here are some resources developed at the CETL: <https://bit.ly/2LeZsV9>