

# How Emerging Pedagogies Map onto the New Technologies

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## Understanding the Building Blocks of Online Learning: Part 3

Through the writings and research of pre-eminent online learning expert, Dr. Tony Bates

*For almost 50 years, Tony Bates has been a consistent, persistent and influential voice for the reform of teaching and learning in post-secondary education, notably through the effective use of emerging technologies. Author of 11 books and 350 research papers in the field of online learning and distance education, Tony Bates is also an advisor to over 40 organizations in 25 countries, and publisher of what is arguably [the most influential blog on online learning \(link is external\)](#) with over 20,000 visits a month. A Contact North | Contact Nord Research Associate, Dr. Bates has helped educators, academic administrators and policy makers grasp key concepts, trends and challenges in online learning. This posting is one of a series that looks at Tony's perspectives and advice on key issues in online learning.*

*This series was researched and developed by Contact North | Contact Nord Research Associates, Dr. Jane Brindley and Dr. Ross Paul.*

This consideration of Tony's work focuses on how online technologies are proving to be particularly well suited to supporting current and emerging pedagogies that call for engagement, active learning, and skills development.

Bates has observed that it is important to understand that technologies used for teaching are not pedagogically neutral but can be more or less suited to a particular teaching approach. The effective implementation of online learning requires you to consider your view of the nature of knowledge, what you believe constitutes effective teaching, how you apply these beliefs to your discipline, and the implications for choice of technologies and their integration into your practice.

## The Evolving Practice of Teaching

### 1) Changing views of the nature of knowledge

In discussing pedagogical approaches, Bates advises that you start by examining your philosophical beliefs about the nature of knowledge (epistemology) that determine the ways in which you teach. Educational philosophies are not static. The concept of knowledge as a collection of facts, theories and testable concepts is giving way to notions of it as dynamic and relative, being constantly constructed by individuals and groups in a process of adaptation to change and experience.

Even in the hard sciences, knowledge is seen more subjectively than it was in the past. Bates notes that such thinking has evolved not only because of the explosion of accessible knowledge, but also through recognition of the role that status and power play in controlling knowledge. As well as the shift toward viewing knowledge as more fluid and dynamic, he notes the influence of the Internet in giving rise to theories such as connectivism which describe knowledge as akin to collected wisdom being constructed through web-based networks and communities.

You make decisions about how to teach based on your view of what constitutes knowledge and the best way to help learners acquire it, but ways of teaching are not mutually exclusive. Bates observes that, although you may have a preferred way of teaching, you probably use a variety of approaches based on the nature of the subject matter and your learners' needs and characteristics.

What is critical is to make explicit your views and choices about the best approaches for teaching so that you can choose technology accordingly. Bates provides more detailed consideration of the relationships among the nature of knowledge, pedagogical approaches and online learning in [this blog post \(link is external\)](#).

## **2) Pedagogy with a focus on skill development and active learning**

Bates notes that the shift in views about the nature of knowledge leads to a more constructivist approach to teaching that places less emphasis on mastery of a specific body of knowledge and more on helping individuals acquire capabilities that enable them to successfully navigate rapid change and multiple contexts, both familiar and unfamiliar, confidently employing a wide variety of skills. Although concepts and theories form the backbone of a given discipline, desired learning outcomes are focused less on memorizing subject-based information and more on facilitating the student's intellectual and social development.

Bates describes current constructivist approaches to teaching as learner-centred, with the student fully engaged in a process of discovery based on exploration, dialogue, problem-solving and participation in knowledge construction. Case studies, collaborative inquiry and problem-based learning are used to engage students through experiencing, discussion, and reflection.

These teaching methods enable learners to become skilled critical thinkers, able to locate needed information among a plethora of resources and sources, organize it, analyze it, evaluate its credibility and usefulness, and skillfully apply it to a variety of situations individually or as part of a group. Bates emphasizes that the teacher's role is to challenge and stimulate students, ensuring that interaction, whether virtual or face-to-face, is of a quality that leads to learning demonstrated by social and intellectual development. He notes the importance of scaffolding, supporting learners in a way that facilitates their development from being dependent to independent and collaborative learners.

Bates emphasizes that skills development is not generic and must be embedded within a specific area of expertise. What is critical is that current pedagogical approaches require you to make thoughtful matches between desired learning outcomes and appropriate learning tasks and processes and then choose the technologies that will best support them.

## **3) Technologies that support active learning**

Bates notes that technologies such as video, PowerPoint, and computer-based resources have mainly been used within an educational model that is objectivist and teacher-centric. He observes that online learning has the potential to support many different approaches to teaching (including didactic), but is particularly suited to current and emerging pedagogies. For example, he describes the key capacity of Web 2.0 technologies as empowering learners to create, adapt, share, disseminate and apply knowledge, facilitating the shift to more learner-centred approaches.

Technology itself has helped develop more active learners. The Internet, Web 2.0 tools, social networks and mobile devices provide instant access to vast libraries of expert- and amateur-sourced information, creating a society of seekers, communicators, and self-directed problem-solvers already using technology for reasons other than study. Bates stresses the teacher's role in harnessing this behaviour for traditional academic study by providing planned learning experiences, guidance, goals, feedback and criteria for assessment.

Bates has been a leader in establishing that different technologies have different affordances (capacities) that make them particularly suited for certain learning tasks. In learner-centred pedagogy, you use these tools in a framework that exploits their capacity to support active learning. If you choose a hybrid model of teaching (combining face-to-face with online), course content can be moved to the web in the form of text, audio and video, freeing class time for discussion, analysis, and practice. Class discussion and collaborative projects can also easily be accommodated by virtual classrooms and current web-based tools that support both synchronous (real time) and asynchronous (virtual

time) communication.

Building collaborative activities into your classes contributes to skills development through dialogue, testing of ideas, problem-solving and knowledge construction. Allowing for a combination of synchronous and asynchronous learning provides students some ability to pace their learning, and gives time for reflection both on content and their individual learning processes.

Social media extend the virtual classroom, providing opportunities for activities such as collaboration, networking and authoring. For example, collaborative workspaces such as wikis are free and simple to create, and allow students to work on joint projects; multimedia archives such as YouTube videos can be accessed as learning resources and created by students to demonstrate knowledge and skills; and virtual worlds, such as Second Life, enable knowledge construction through interaction and experimentation in real time.

## **Implications of the Convergence of Pedagogy and Technologies**

Bates believes that the convergence of pedagogy emphasizing active learning and skills development and the availability of technologies well-suited to supporting these is beginning to transform post-secondary teaching. Online learning can become a process of guided collaborative engagement in which students gain insight, understanding, increased capability and confidence through grappling with contextually-based questions and problems, challenging their own ideas and those of others, reflecting on their learning, and constructing new knowledge.

While consideration of educational philosophy, teaching approaches and choices of technologies traditionally resides with an individual instructor, these decisions have implications better considered on a program-wide scale. Bates offers six questions to consider in developing an overall teaching plan incorporating both curriculum design and delivery.

1. What are the characteristics and needs of learners that we want to reach (part-time, full-time, older, younger, experience in using technology for learning)?
2. What skills and disciplinary knowledge are we trying to develop in this program? How will an “A” student be defined?
3. What kind of content do we want the learners to access and from what sources? Is quality content readily available? Do we need to create any content? What guidelines, if any, do we need to provide for finding and evaluating content?
4. What is our overall educational philosophy and approach to teaching for this program? How will our teaching approach support achievement of the skills we have identified as desired learning outcomes? Do the early courses have to include significant content and begin with a didactic approach? How can we help students build on their existing experience and become independent learners?
5. How can technology help us achieve our program goals? How can we best match technology choice to learning activity? Will the use of technology change during the program and, if so, how? What tools should we use and why?
6. What support will we need in the use of technology, both for us and for learners?

The Internet and Web 2.0 tools represent a significant shift in the way technology can be used to support learning, one that appears to be in synch with current pedagogies and approaches to teaching that put more control in the hands of learners. Bates offers a vision and a practical framework for planning processes that can help you take advantage of the new technologies by using them in educationally meaningful ways.

## **FOR FURTHER INFORMATION**

If you are fairly new to online teaching, you might want to read the series of 10 posts on Quality Online Learning on

Tony's Blog which cover designing, teaching, and evaluating online courses in some detail. If you start with [the last one \(link is external\)](#), you will find links to all the previous ones. A condensed version covering all the main posts in the series can be found [here \(link is external\)](#). Experienced instructors might be interested in reading [Designing online learning for the 21st century \(link is external\)](#).

Bates, A.W. (2011). Understanding Web 2.0 and its Implications for E-Learning. In Lee, M. and McLoughlin, C. (eds.) [Web 2.0-Based E-Learning: Applying Social Informatics for Tertiary Teaching \(link is external\)](#). Hershey, PA: Idea Group Inc.

Bates, A.W. and Poole, Gary. (2003). *Effective Teaching with Technology in Higher Education*. San Francisco: Jossey-Bass, John Wiley and Sons.

Bates, A.W. and Sangrà, A. (2011). *Managing technology in higher education: Strategies for transforming teaching and learning*. San Francisco, CA: Jossey-Bass. More information about the book, including summaries of chapters, scenarios from the book and opportunities to discuss some of the issues, can be found at <http://batesandsangra.ca>

Tony Bates' blog ([www.tonybates.ca](http://www.tonybates.ca) [\(link is external\)](#))