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Online learning as information delivery: Digital myopia

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Abstract: In business and commerce, the concept of *marketing myopia* has been a useful tool to predict, analyze and explain the rise and fall of businesses. In this paper, we question whether the concept can also be used to predict the ultimate downfall of online learning in higher education, if universities continue to confuse their key mission—education—with the much more product-oriented aim of information delivery. The proliferation of information-based online courses is examined within the context of the limitations imposed by widely used course management systems, institutional impediments and other factors that encourage teachers to adopt information delivery in preference for more innovative, authentic pedagogies. Data and findings are reported from teachers and instructional designers who have been successful in offering complex and sustained tasks online.

Introduction

Since the term *marketing myopia* was introduced in 1960 (Levitt, 1960), it has captured the imaginations of marketers who have used the concept to predict, analyze and explain the rise and fall of businesses. Even today, nearly half a century on, the idea that a narrow view of core business can ultimately be a death sentence for enterprise is a useful and effective lens through which to view success and failure in the manufacturing and service industries.

Can the concept be used to analyze and assess the future of online learning in higher education? Could the widespread adoption of internet technologies in a narrow and 'myopic' manner ultimately lead to the failure of a promising and potentially powerful form of learning? Could the internet be thrown on the 'scrap heap of educational technologies' along with the other technologies that have made a brief but doomed appearance in the classroom (Cuban, 2001)?

'Marketing myopia'

In 1960, Theodore Levitt published his seminal article entitled *Marketing myopia* in the *Harvard Business Review*. His thesis was simple but powerful. He proposed that businesses fail, not because of declining customers or obsolete products, but because they fail to accurately identify the business they are in, and they fail to adapt to changing circumstances. Levitt provided many examples to illustrate his argument, for example, the classic case of the manufacturers of the buggy whip, an industry with its eyes 'so firmly on its own specific product' that it did not see how it was being made obsolete:

> No amount of product improvement could stave off its death sentence. But had the industry defined itself as being in the transportation business rather than the buggy whip business, it might have survived. It would have done what survival always entails, that is, changing. Even if it had only defined its business as providing a stimulant or catalyst to an energy source, it might have survived by becoming a manufacturer of, say, fan belts or air cleaners. (Levitt, 1960, p. 30)

Similarly, Levitt describes the near extinction of the Hollywood movie industry in the 50s because of a myopic view of the business:

> Hollywood barely escaped being totally ravished by television; all the established film companies … got into trouble because of their own myopia. … Hollywood defined its business incorrectly. It thought it was in the movie business when it was actually in the entertainment business. 'Movies' implied a specific, limited product … Hollywood scorned and rejected TV when it should have welcomed it as an opportunity … Had Hollywood been customer-oriented (providing entertainment), rather than product-oriented (making movies), would it have gone through the fiscal purgatory that it did? I doubt it. What ultimately saved Hollywood and accounted for its recent resurgence was the wave of new young writers, producers, and directors whose previous successes in television had decimated the old movie companies. (Levitt, 1960, p. 25)

The usefulness of this distinction is still evident today, where businesses and organizations often fail to acknowledge their involvement in an *industry* rather than a more narrow definition of the supplier of a product. For example, in Australia's first criminal prosecution for internet music piracy, heard in the courts in November, 2003, three university students were charged for creating a website where users could

download pirated mp3 files free of charge. In a radio interview on the case (Carrick, 2003), a spokesperson for the Australian Recording Industry Association was asked:

> Why doesn't the music industry embrace this technology, have its own pay per download service, rather than fight the tide of technology?

He replied:

> Well I'll give you this example. There's two ways of getting money from people on an expressway. One is to bail them up with two pistols and a kerchief around your face, and the other is to build the road and put a tollbooth there. The record companies, the artists, and honest consumers embrace the legitimate technology and delivery means. The pirates who pass themselves off as the new business model, would want you to believe that the legitimate copyright owners and the artists, need to embrace their technology … We need the highwaymen to be taken out of the marketplace so that there is a fair and proper market for the legitimate consumers and the legitimate copyright owners. (Carrick, 2003)

Here, the spokesperson was failing to recognize that the record companies and industry association see themselves as *producers of records and CDs* (product-oriented) rather than *providers of music* (customer-oriented). Apple Computer's move to provide consumers with a legitimate 99-cent download service for music files, recently awarded the Time *Invention of the Year* Award (Taylor, 2003), has proven that a less myopic view of a service, and a more customer-oriented focus, will ultimately lead to a more sustainable outcome. But to return briefly to Levitt—who could not have imagined the prospect of a computer company taking business from a record company but whose ideas nevertheless aptly explain the threat the new technology poses to record companies worldwide—here he gives an example of the decline of the railroads:

> The railroads did not stop growing because the need for passenger and freight transportation declined … They let others take customers away from them because they assumed themselves to be in the railroad business rather than in the transportation business. The reason they defined their industry wrong was because they were railroad-oriented instead of transportation-oriented; they were product-oriented instead of customer-oriented. (Levitt, 1960, p. 24)

Of course, there are examples of companies moving with the times and adjusting their products to reflect changes in technologies and societal needs. IBM and Adobe are

prime examples of successful corporations that have kept a customer rather than product focus. But it isn't easy, especially when a company has to play catch-up. Kodak, once a purveyor of film, chemicals and photographic media, now sells digital cameras and printing paper as key product items. But Kodak remains behind industry leaders such as Sony and Canon in digital cameras and to HP and Epson in photo printing paper. For too long, Kodak thought of itself as primarily in the photography business rather than the imaging business.

Will we ultimately see the failure of online learning, not because the need for quality and flexibility in higher education is declining, but because universities have mistakenly identified themselves as being in the information industry rather than in education? Have education providers generally made the mistake of offering education as a *product* (product-oriented) rather than as a *process* (customer-oriented)? Do higher education institutions see themselves in the degree-granting business rather than in the learning business?

Information vs. education

In 1974, Olson and Bruner contended: 'The acquisition of knowledge as the primary goal of education can be seriously questioned' (Olson & Bruner, 1974, p. 150). Nevertheless, more than a quarter of a century on, the rush for universities to place information-based educational units and courses on the internet is evidence that the acquisition of knowledge remains paramount as a goal for many educators. It is easy to see, in the age of course management software (such as WebCT and Blackboard), why universities might think they are in the information industry.

Miller (2000) defines the information industry by its focus on the four Gs: 'Firms in this industry *generate*, *gather*, and *group* information, and then *give* (sell) information to other firms' (p. 2). Rather than the authentic learning environments prompted by advances in cognitive and constructivist learning theories, it is possible to identify this information industry model in the presentation of many online courses today. In such courses:

- teachers *generate* the content that they decide is appropriate for the students to know;
- they *gather* appropriate and specific resources that are relevant to the content area;
- they *group* the information into weekly portions or modules; and
- they *give* the information to the students.

What is wrong with this approach? To quote Mioduser, Nachmias, Oren and Lahav (1999), the approach represents ʻOne step ahead for the technology, two steps back for the pedagogyʼ (p. 757). A move to teaching online using a course management system, when one has previously built up a great deal of experience in a face-to-face situation, often represents a major challenge to a university teacher. Coping with the technology itself is difficult, and teachers often forget the sometimes innovative pedagogy they use in the classroom when designing their online courses. They often yield to the seductive appeal of a course management system, where it is easy enough to populate a weekly schedule with static resources and decontextualized tasks. In an effort to survive, teachers focus on content (the *product* orientation*)*, rather than the process of educating the student (the *customer* orientation).

The pace of the course is also likely to be placed in a straight-jacket, as the web environment or course management system encourages teachers to place the content into weekly reading lists or modules, moving in a linear pattern through the semester. Teachers often expect students to keep a regular study schedule that coincides with these weekly modules, despite a wealth of research in adult education that suggests adults do not necessarily prefer to learn that way (e.g., Knowles, 1984; Wenden, 1991). This pattern also belies the significant advances made in higher education over recent years—under the catch cry of ʻflexible learningʼ—that was meant to open up the academies to capable individuals who had previously been denied access to university because of a range of factors impeding their regular attendance on campus. Such factors (including irregular work hours, family commitments, community and work responsibilities) are once again ignored when a lock-step approach to online learning is adopted, arranged more to suit the needs of the teacher and the administrative requirements of the course than the learner.

The teacher's role can be trivialized to a great extent in online courses designed within course management systems. While the technology is available for the teacher to support students by providing meaningful and timely scaffolding and to organize appropriate collaborative learning opportunities, it is easy to become preoccupied with the summary statistics readily available in the system. Are teachers persuaded that learning has occurred because a student has frequently accessed the course site? Or that learning has not occurred when only sporadic access is evident over the semester? Such statistics may be distracting to a teacher who genuinely wishes to support students in a meaningful and effective way. Time-on-task (Chickering & Gamson, 1987), critical to any effective learning environment, is more likely to result in substantive learning when the tasks in which learners are engaged are aligned with the objectives of the course and supported by the scaffolding provided by an active instructor.

What can be done to place the emphasis rightfully back on the learner and the pedagogies that support learning? Over the past decade or more, a great deal of research and theory development has occurred in the area of constructivist learning environments (e.g., Dunlap & Grabinger, 1996; Jonassen, 1994; Reeves & Okey, 1996; Wilson, 1996). Many papers have been written describing the attributes of effective learning in higher education (e.g., Chickering & Ehrmann, 1996; Ramsden, 1992) and effective learning in online learning settings (e.g., Carr-Chellman & Duchastel, 2000; Reeves & Reeves, 1997). Much has been learned about how to implement constructivist principles in the design of online learning environments, such as the importance of providing: meaningful contexts, realistic and complex tasks, opportunities for collaboration and reflection, coaching and scaffolding, and integrated assessment (cf. Herrington & Oliver, 2000). Our own recent research into the design of authentic tasks has shown that whole online courses of study can be designed around a single complex and sustained task that provides a meaningful context for student learning. While it is possible for such complex online learning environments to be designed within course management systems, it requires persistence and skill on the part of the teacher, and it remains a fact that few such environments exist within the course offerings of universities.

Whether an online learning course is product-oriented or customer-oriented is fundamental to its foundation, design, development and on-screen delivery. Table 1 compares an information-based approach with one that focuses more on education, across a range of dimensions affecting website design, teacher and learner activities, resources and assessment.

Table 1: Comparison of product and customer-oriented online courses

Dimension of web-based course	Information (product-oriented)	Education (customer-oriented)
Structure of webpage	Text-based hyperlinks, chapters, buttons; linear organization divided into weeks; typically embedded within course management software	Non-linear organization based on tasks rather than weekly content; metaphors for resources, e.g., a picture of a workplace environment related to the subject area
Pace of course	Weekly tasks, pace determined by teacher	Sustained tasks, students set pace
Course content	Presented in modules or chapters based on course scope and sequence; largely represents the teacher's knowledge and perspective	Encapsulated within complex activities and associated resources; no single view presented; a variety of perspectives
Resources	Specific, bounded resources and reference lists	Open-ended resources, web-based links, databases
Tasks/Assign-ments	Question and answer, essay	Complex, sustained activities that could take a number of weeks to complete; authentic products, reports, artifacts
Student activity	Completing weekly tasks, quizzes assignments, multiple choice tests	Case-based and/or student designed investigations
Students' cognitive activity	Reading, writing notes	Reflecting, analyzing, planning, problem-solving, collaborating
Teacher activity	Presenting information; monitoring progress; checking student access statistics (e.g., no. of times logged on to site, date of last access, etc)	Providing scaffolding, attending to students' inquiries, monitoring progress, stimulating discussion
Communication	Teacher to student, student to students, student to teacher; students respond to set questions and planned discussion topics; teacher moderates discussions among students and responds to queries for help	Student to students, teacher to student, student to teacher, students communicate to discuss issues of their choosing; the discussion generates solutions to problems and tasks; teacher participates where appropriate
Assessment	Quizzes and tests, essays, assignments	Integrated assessment of group activities
Potential learning outcomes	Memorization of knowledge, factual recall	Understanding, higher order learning, transfer

Our research provides ample evidence that the use of more authentic, constructivist approaches makes a better fit with a genuine attempt to educate students in online

courses than those that attempt to simply provide information (Herrington & Oliver, 2000; Herrington, Oliver, & Reeves, 2003).

Authentic approaches to online learning

Our current research entitled *Authentic activity as a model for web-based learning* has sought to explore examples of courses or units that embody complex and sustained tasks as a central defining characteristic. The study has investigated the characteristics of authentic activity that facilitate a whole course unit of study being encapsulated within complex tasks, and to determine the factors that contribute to the successful adoption and implementation of activity-based online course units. The courses we have investigated have a major online component, and do not simply comprise supplementary material to on-campus delivery. Identification of courses that met these criteria has been difficult, and seven cases have been examined. Teachers, authors, instructional designers, tutors and others associated with the design and delivery of the courses have been interviewed, and the course websites have been analyzed. Analysis has focused on the identification of conceptual themes and issues emerging from the data, using techniques such as clustering, and making contrasts and comparisons (Miles & Huberman, 1994).

The courses investigated comprise a variety of different scenarios designed to provide more meaningful learning across a range of disciplines, for example: a course in marine biology based on community objection to a proposed marina; a course preparing doctors for cervical screening set in a doctors' surgery; a course on North American fiction based on the production of an online literary journal; a course in biology set near a remote lake in Siberia where potential new life forms have been found; and a course in qualitative and quantitative research methods based on an investigation of the closure of a school. The teachers of these courses have been successful in overcoming the difficulties of presenting more authentic tasks as a design feature of their online courses, and they were questioned about the opportunities and also the impediments they faced as they designed and delivered these innovative, 'customer-focused' courses.

Difficulties implementing 'customer-focused' online courses

Teachers and instructional designers involved with the design and development of online courses based on complex authentic tasks had many ideas and opinions concerning the difficulties (and opportunities) offered by the approach. After coding the transcripts of our interviews with them, we found that their comments generally fell into four broad areas: *pedagogical issues, student expectations, technology issues,* and *institutional factors*.

Pedagogical issues

One of the central issues described by the participants was the notion of a set curriculum and the need for teachers to 'cover' the curriculum. One respondent felt this was reflected in many teachers content focus, and the reason why many resisted a more authentic approach to their online teaching:

> Most academics are very content-focused, their primary concern is on the kind of information that's being generated and that the kind of information that has to be delivered, that's their focus. (Interview with Daniel – pseudonyms used)

Often this emphasis on information has come about because there has been a separation between the design and the teaching of a course, that is, the writer/designer of the subject is not the teacher. In such situations the writer, who may have been employed on contract, focuses on the content of the course, possibly in an effort to be seen to provide value for money:

> If you look at the average university, when they hire someone they say 'we want you to write this course' and give them say $5000 but what they expect out of that is a block of information. (Interview with Daniel)

Another respondent thought that lack of knowledge of teachers' own pedagogies often prompted them to revert to presenting information:

> I think sometimes people who teach at universities aren't always aware of even their own pedagogy and when you are designing a unit you really have to be aware of pedagogical issues ... sometimes it's easy just to follow the track of

presenting material rather than creating a very complex environment. (Interview with Tracey)

As might be expected, many respondents mentioned the significant amount of time required to develop online courses using an authentic approach, and that this could be an impediment to its wider use:

> We are all terribly overworked and we don't have time to develop new things. I think that's one of the worst things about my job at the moment is that I really feel, as an academic, you have to have time to reflect and there is no time to reflect any more. I think that stops a lot of people. (Interview with Mary)

Similarly, several teachers pointed out that there is a great deal more work associated with teaching online, particularly with complex tasks. But the issues were also more complex than the amount of time required. One teacher who, as Head of Department, had encouraged others to adopt more authentic approaches was surprised to learn that some teachers believed if they were teaching useful skills, that the tasks they used *were* authentic, even if they were couched in very academic and decontextualized terms:

> I have had conversations with my colleagues where it is very difficult to persuade them that what they are doing already may not actually involve authentic tasks … moving them to doing more authentic tasks is proving more difficult because they think they are already doing that. (Interview with Kevin)

One instructional designer pointed out that even those teachers who have willingly embraced the idea of authentic tasks might still have difficulty maintaining the concept throughout the entire course. Such teachers may have a useful scenario or task to begin the course but quickly revert to more conventional methods as the course progresses. Some respondents also believed that fundamental teaching skills—developed over years of experience, and highly valued in a face-to-face classroom situation—could count for nothing in an online course, causing many teachers to avoid a possibly public display of deskilling:

> Some people are quite gifted lecturers and that is actually a double-edged sword because if you're going to stand up and you've got the gift of the gab, you can run a really interesting lecture. This can actually be an impediment to online learning. (Interview with Daniel)

Another respondent linked this same idea to the necessity for online teachers to be much more thoroughly prepared in advance, and that the concept of 'winging it' is much more difficult in an online course:

> One of the advantages of teaching in a classroom and being a 'talking head' is you have got all this knowledge in your head and so you can wing it … you know all that stuff anyway. But when you are doing it online and you know students are going in to prepare for next week or the week after … you need to try and have the whole course there right from the word go. (Interview with Kevin)

The facility of course management systems to distract teachers from focusing on the important pedagogical aspects of their courses was also mentioned by several respondents. One suggested that many teachers could not see beyond the often limited functions that are offered within the packages:

> I think it's distracting them … people are being more blinkered these days in the sense that we've got these learning environments that offer certain functions and so they often don't think outside those functions. It's a kind of a seduction. It's a very easy way to go. (Interview with Carlo)

One of the instructional designers interviewed, although expressing reservations about the approach, thought that course management systems provided a much appreciated template for many online teachers, who are seeking a model in an area that for them holds many unknowns:

> The biggest problem I've found is that it's quite hard for [teachers] to come up with ideas that they can use and the first thing they say is 'show me what it is that you want and I'll do it exactly like that' so they want a kind of model that you can plonk in front of them and then they just put all their bits and pieces into the holes which is quite the wrong thing to do. (Interview with Daniel)

Student expectations

Another theme that emerged from the interviews with online teachers and instructional designers was that of student expectations, and how these can influence teachers strongly in how they present their online courses. For example, several

respondents mentioned that students expect to be 'taught' rather than facilitated to learn, and that students have set ideas about what they will receive in fee-paying courses:

> Some [students] totally rebelled and wanted a much more structured approach. They wanted to be told which readings to do each week … I occasionally find when teaching on-line, I'll have students who write emails about 'what am I getting for my money?' They want the weekly readings and things like that. (Interview with Violet)

Another respondent pointed out that she tried to encourage the students towards using more self-directed means of learning:

> At other times, [students] were wanting more guidance than I was willing to give them, and rather than put a message on the discussion board, they would email me personally. I always gave them an answer but I said, 'look, in future can you put it on the board because other students have probably already dealt with this problem'. So it was a bit difficult to wean them off me. They were looking for a teacher and I didn't want to be a teacher. I wanted to be a scaffold and a coach and it took them a little while to feel OK about that. (Interview with Mary)

While one respondent claimed that the use of authentic approaches, particularly in an online learning environment, required courage—'courage from the designers and the teachers who create the unit but it's also courage for the teachers who deliver it' (Interview with Tracey), another pointed out that it was not necessary to be concerned about complexity per se:

> It's interesting that the students don't have any problem with complexity. They're used to computer games that are so complex I couldn't even begin to understand, where they have to carry so much in their mind to go through and finish the quest. But our own learning materials that we set up by contrast are quite sterile. (Interview with Brooke)

Technology issues

Although possibly an indicator of their 'early adopter' status, all interviewees spoke of problems with the technology as a major deterrent to the use of complex tasks online, for example: 'It was absolutely disastrous', 'I haven't been that stressed in my entire life', 'Co-ordinators couldn't get into the unit; students couldn't get into the

units and this was two and three weeks into the semester'. Technology problems plagued all the teachers, including those using course management systems (usually system/university wide problems with major implications for the university's online offerings) and those not using them (usually lack of appropriate procedures in place and lack of technical support).

Although most respondents reported that an acute awareness that the learning environment was going to be dependent on technology was foremost in their minds as they designed their courses, one respondent reported his belief that fear of technology and its reliability was not really an issue in the design phase:

> I don't think the reliability [of the technology] is an issue for the people who make the fundamental decisions about what the design's going to be. It may be an issue for the people who actually have to teach with the stuff and [if it fails] it can … convince them that they shouldn't do it ever again. (Interview with Carlo)

Institutional issues

Decisions made at an institutional level seem, from the comments of the interviewees, to have an inordinate influence on individual teachers' use of innovative and authentic pedagogies in online learning environments. Interestingly, the point was made by two respondents that possibly those institutions with a long history of distance education may be more predisposed and amenable to innovative ideas in an online delivery mode:

> We have a huge distance education history and it really has been a good way to move seamlessly online. People have been experimenting with online courses for quite some time. (Interview with Kevin)

However, in the main, teachers were resentful that institutional decisions impacted on their ability to create sustained authentic learning environments. For example, one teacher expressed her frustration at an assessment policy that included a mandatory examination as part of student assessment:

> I just read the policy on assessment and it sounded great! It has got lots of words like 'authentic' in it, which is fantastic, and then it says that every [course]

should have an exam. I was really starting to feel like, oh my gosh, they are onto something here, this is really great. And then wham! Every course should have an exam. How unauthentic, inauthentic—I don't even know what the word is— but an exam! I thought that's one step forward and five backwards. (Interview with Mary)

There were many complaints by the teachers of online courses that administrative procedures are not keeping up with the technology, and that while they were endeavouring to use technology well, they were thwarted by administrative requirements such as hard copy submission of assignments rather than electronic submission, no provision for electronic collection of student feedback on the course (course evaluation forms had to be posted), and late enrolment policies that impact on course design. One major issue that arose with a number of teachers, when applicable, was a mandatory requirement imposed by some universities to use a particular type of course management system, allowing teachers no choice in how their courses were presented to students. This situation was confounded further when a mandatory house style was also imposed to restrict not only the delivery, but also the way the learning environment was presented:

We are all stuck with using the one software package, we are all using X [name of package] … it is really limiting because the interface is boring and I would have liked to do some things that you just can't do in X. It's very text based whereas I would much rather have the sort of interface where you can go various places, that would be much more engaging than just a page with announcements. I felt frustrated that I couldn't make it more appealing. (Interview with Mary)

Such issues present the range of problems and impediments to a more 'customer-oriented' approach to higher education online. Importantly, the situations described here provide a timely caution for teachers and administrators, and a prompt to examine current practice in order to act to avoid a mistaken view of the purpose of university education.

Conclusion

Returning to the revolutionary insight of Levitt (1960), it seems reasonable to ask whether the myopia that has caused the downfall of the those companies who have failed to adapt to dynamic and changing markets, is characteristic of the state of online learning in higher education today. We believe that the response is 'yes'. There

is much evidence to suggest that universities and other educational institutions have failed to perceive the difference between educating learners and simply providing them with information and content. Most institutions of higher education appear focused on product issues such as content coverage, course structure, and pre-existing time arrangements such as semesters and hours of credit rather than customer issues such as learning and performance.

The time to adopt a different focus is now because enormous changes are on the horizon. For example, Arthur Levine (2003), President of Teachers College at Columbia University, predicts that higher education is shifting from teaching to learning, and that in the future 'Time will become the variable and learning the constant' (p. 21). He points out that traditional degrees will lose their importance, and that every learner will have an education portfolio that provides evidence of their learning. Such a change would catch much current practice in higher education by surprise.

Although a new approach is needed, it is not enough to put the burden of adaptation on individual teachers struggling to adopt improved pedagogical strategies with technologies that sometimes work against them. A concerted effort is needed by institutions to carefully examine the policies and procedures that many have put in place to provide quality and consistency, but which inadvertently constrain innovative pedagogies and customer-focused practices online.

Similarly, the producers of course management systems need to provide software that more appropriately guides online teachers to a range of innovative strategies reflecting contemporary constructivist philosophies and advances in learning theories. To assist these producers, the communities of educational technologists and learning scientists need to provide them with more intensive collaborative research.

In addition, professional development for online teachers might also take a multi-level approach, where the use of a course management system and instruction on using technology is seen as necessary, but not sufficient, preparation for online educators. Most of the instructors we interviewed required some level of support from

instructional designers, multimedia producers and other specialists to develop their authentic learning environments. Interestingly, the development of these learning environments did not require the huge expenditures reported to have been spent by some now defunct exclusively online institutions.

Finally, we have concluded that research into how people learn online is in its infancy, and that further research is required to provide insight into the design and production of online learning environments that provide engaging and effective learning in higher education. We recommend that the fundamental processes of research should shift from quasi-experimental studies of isolated variables to design-based research models (Kelly, 2003).

In conclusion, action must be taken to slow the proliferation of information-based courses on the Web and to replace such courses with more authentic tasks, based on recent constructivist principles and the guidelines derived from situated learning theory. The deep engagement of students with complex and realistic tasks is a preferable model to the information provision that is so characteristic of online courses today.

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