PAPER

Using digital tools to educate librarians in the digital age

Keywords: digital libraries, online education, digital communication

# Introduction

There is still relatively little understanding of online education, despite its accelerating popularity. Studies confine themselves to a narrowly defined digital classroom, and often to a single course, rather than analyzing learning through the course of multiyear, multicourse programs, or studying the cohort formation that undergirds most learning communities (Safipour, Wenneberg and Hadziabdic, 2017). There is currently a demand for increased digital tool use in the classroom, and teaching in an online context may become an inevitability at the university level regardless of subject (Salas, 2016). Teachers in digital library programs especially need to better understand what the online classroom means in practice, in order to improve those online courses already offered and implement new courses more successfully. This study will examine ways in which one Master’s program in digital libraries functions, in order to illuminate best teaching practices in digital classrooms, an especially important task given how digital tools are woven into the very fabric of this program.

**Theoretical framework**

Political science theorist Benedict Anderson’s concept of an “imagined community” identified a shared language cemented through accessible text as a fundamental building block of social belonging and collective identity (Anderson, 2006). Yet new research demonstrates that shared text may not be enough to bind a community together in digital environments (Melkun, 2012). Teachers may not be as familiar with how to use digital tools to create a productive learning atmosphere, even if they have digital technology competence. Further, studies of social media and digital learning disrupt previous theorizations of a common language and media for communication as the basis for creating a sense of community (Marlowe, Bartley and Collins, 2017). This paper examines the “digital classroom” as an educational community built within the distance Digital Library and Information Science (DLIS) Master’s program at the University of Borås in Sweden.

**Research questions**

The digital environment presents a new set of problems for assessing and improving education (Marlowe et al., 2017). Yet the prospects for creating meaningful and supportive learning opportunities is not a given in environments where (1) students are geographically dispersed, and (2) communication is limited, often disjointed, and potentially highly structured (Kehrwald, 2008). This study aims to identify how teachers and students involved in the DLIS program at the University of Borås use and creatively adapt communication tools for learning and group cohesion.

**Methods and data sources**

Collected empirical material for the development project includes program documentation, teachers’ discussion, background information on students from cohorts with start years from 2014-2017, and interviews with 16 program graduates. Collected in 2018 as part of a program review, the data is enough (76 students, in total) to draw some conclusions about the students the program tends to attract. This information is supplemented with interviews are with students who completed the program and obtained degrees, meaning that the information provided is representative of students who succeeded within the given constraints and demands of the program, rather than the entire DLIS student population.

**Research Results**

The DLIS program at the University of Borås was initially designed to appeal to an international audience of working librarians who wanted to develop their skills in digital librarianship. The program has gone through a number of changes since its start in 2008, including a transition from halftime pacing to fulltime studies during a two-year program and the 2010 shift to fees imposed on students from outside the EU. There were approximately 50 teachers involved in the program during the past ten years, 20 of whom function as the core group. The size of the student cohorts has landed between 30-40. The main education and communication tool throughout has been the e-learning platform PingPong.

The program attracts some librarians looking to expand their competencies, but the majority of students arrive with higher degrees (from undergraduate to graduate degrees) in other subjects. Geographically, cohorts were biased heavily towards immigrants to Sweden who wanted a degree to obtain a job. Students generally reviewed the program favourably, noting that it gave them a good overview of the topic “digital libraries” that went beyond their initial expectations. They also reported some problems with combining work, study, and home life – a key reason for enrolling in distance education. Students tended to be unfamiliar with Swedish university systems, be they digital, administrative, or cultural, requiring research. Digital tools inside and outside the online classroom were seen as a way of mitigating these problems by increasing communication between students and teachers, and within student cohorts. These tools, while time-consuming, facilitated a blurring of lines between personal communications about family and friends or travel, concerns about work prospects, and educational concerns and assignments. Many students credit their success in the program to the support they had from this external communication.

According to the teachers in the program, cohesion within the cohort is helped by synchronous and asynchronous online meetings in tandem with in-person residential weeks in Borås. The problem with both types of meetings is that about 40 percent of students do not attend them. Thus, students and teachers generally rely on communicating through and about the assignments and course tasks, via the PingPong platform. This approach is especially visible in reading-based courses like *Research methods* or courses, or courses that function as broad introductions to very large topics such as *Digitising cultural heritage* or *Digital library management*. Increased interaction between students and teachers is viewed as especially important for the courses where skills with computer programs are central and the gaps in knowledge affect the comfort level of students, which in turn affects course and program completion rates.

All of these activities, inside and outside the digital classroom, help to place the education in a context, so that students do not feel alone and can direct their energies as a group. Some students were especially sensitive to the risk of working in a vacuum, never finishing the program as a result.

**Discussion**

Geographical distance translates into social distance, and bridging that distance requires the strategic use of digital tools and in-person meetings, especially for cohorts dominated by individuals who have family and job commitments that reduce their free time (Bali, 2014). Teachers and program coordinators should encourage the development of groups outside the teacher-controlled digital classroom. Findings support the argument that social network formation plays a pivotal role in setting boundaries for work and placing study and academic achievement within a context (Marlowe et al., 2017). Students’ experiences at Borås demonstrate that increasing the variety of kinds of student interaction (as proposed in deNoyelles, Mannheimer Zydney, and Chen, 2014) increases the likelihood of group formation that supports learning. Teachers can collect and then share information on the digital platforms used by student cohorts, in order to increase cross-course knowledge and use of digital tools and ensure that all students have access to this information.

Teachers should keep in mind that university-provided digital tools bind students together within a teacher-controlled and time-limited structure. PingPong pages are divided up by course, and the courses have different teachers and are active for limited periods, creating dissonance in the learning experience. In the online classroom environment, activity is concentrated around more synchronized activities that may include or facilitate network-building but often are one-off events (Siemens, 2007). This is why a better option may be project-based group tasks that encourage students to engage with one another outside of university-operated platforms and involve the use of new digital tools. In particular, Oliveira, Tinoca, and Pereira (2011) note that the creation of clear guidelines that divide project work up into stages can help to create boundaries for this work and increase communication within student groups.

**Conclusion**

The online learning classroom is characterized by the need to bridge distance; this includes space between students and teachers, between students themselves, and between students and course materials. This distance can be bridged by varying the use of digital tools that are synchronous and asynchronous, text-based and non-text-based, offered within the digital classroom or outside it. Distance learning requires a learning environment that extends outside the bounds of the university-controlled digital classroom to encompass interactions supported by teachers but largely facilitated and handled by students. Distance education makes clear that the creation of bonds between students is a fluid process, rather than a spatially and substantively fixed event. This kind of education’s combination of synchronous and asynchronous communication and the greater reliance on text-based teaching alters the ways in which students are able to create social bonds that support a multi-year learning process and bridge what can be sizable geographic spaces. Such a process requires that teachers engaged in distance education shift their gaze from the online classroom they control to the wider Web, and how students use a variety of digital tools to build relationships with one another over the course of an entire education.

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