Student-Centered Perspectives on Learning in an Increasingly Online Age: A 2020 Vision for UC San Diego

Jackie Wung, James Levin, Carmen Jiamin Huang, Kendall Youngstrom, Sheryl Anne Testado, Rameez Khan, Sandro Jaeggi, Martin Rosas Jr., Natasha Hope Banchik, Lai Tat Szeto (Linda), Matthew James Van Densen, Alexandra Paris, Gabriel Lamanuzzi, Minh Anh Nguyen, Jordan Yoshihara, and M. I. Plascencia[1]

University of California, San Diego

April 9, 2014

http://tinyurl.com/2020-UCSD

Please reference as:

Wung, J., Levin, J., Huang, C. J., Youngstrom, K., Testado, S. A., Khan, R., Jaeggi, S., Rosas Jr., M., Banchik, N. H., Szeto L. T., Van Densen, M. J., Paris, A., Lamanuzzi, G., Nguyen, M. A., Yoshihara, J., & Plascencia, M. I. (2014). *Student-centered perspectives on learning in an increasingly online age: A 2020 vision for UC San Diego*. La Jolla CA: University of California, San Diego. Available online at http://tinyurl.com/2020-UCSD

[1] Author names are in a randomly selected order. Descriptions and contact information for the authors are at the end of this paper.

Executive Summary

During Winter quarter 2014, the sixteen members of the EDS 114 seminar "Cognitive Development & Interactive Computing Environments" (including 11 undergraduate students, 4 M.Ed. graduate students, and one faculty member) at the University of California, San DIego conducted a ten week long investigation into online learning, teaching, and education. We focused on the implications of online learning environments for UC San Diego over the next six years in the future, from now to the year 2020. We present recommendations for actions that UC San Diego and its faculty, staff, and students should take in order to improve education, along with supporting evidence for each recommendation.

While many recommendations have been made for how education should deal with advances in technology, including components of a strategic planning initiative currently underway at UC San Diego (UCSD, 2014), we have found no other set of recommendations created by undergraduate and graduate students themselves, the people whose education is the primary goal of higher education. We have written more detailed descriptions of different aspects of the most important online environments, which are listed in and linked from the References below. We present this set of recommendations from a student-centered perspective, in order to improve learning, teaching and education at UC San Diego, in higher education more generally, and for learning, teaching and education more broadly.

Our recommendations

1. **UCSD should both expand and reduce class sizes appropriately, using a mix of online and face-to-face learning environments.**

UCSD should pursue development of education both by expanding and reducing class size, for different purposes. In terms of expansion, larger learning environments incorporating mostly online learning would be better suited for general education classes that cover broad educational subjects. In terms of reduction, smaller classroom settings would allow for more personal connections with mentors and facilitate more intimate learning, which would be ideal for upper division and graduate classes involved with students' majors. So rather than pursuing one path over the other, we recommend that UCSD both expand and reduce classroom sizes depending on the needs of the students. We describe below ways in which different learning environments can be used appropriately at different levels and in different

domains.

2. **UCSD should expand experiential learning, by incorporating online learning environments to create hybrid experiential learning environments.**

We recommend that the undergraduate colleges at UC San Diego, the undergraduate majors in departments and programs, and graduate programs expand experiential learning. One way to do this, given student time and travel limitations and faculty supervision limitations, is to introduce more online activities into experiential/service learning/practicum programs. We suggest below a number of possibilities for doing this, even given current technologies, and we predict that the possibilities will expand as technology develops between now and the year 2020. It would be beneficial for all students to have hybrid experiential learning experiences to help them learn in settings outside of classrooms.

3. **Faculty, TAs, and students should learn how to learn and teach with online educational environments.**

    1. Teachers who use online educational environments should learn to use those environments before they teach using those environments. This learning-to-teach process should be continue over time as the learning environments themselves change.

    2. Incoming students should learn both the features of the online educational environments they'll use and also on the meta-skills necessary to being successful in these new online and hybrid learning environments. This learning-to-learn process should continue over time as the learning environments themselves change.

This will reduce time wasted in class and will create a more effective and supportive learning experience for the students. We suggest below ways in which elements of online learning environments can be used (in conjunction with face-to-face environments) to help educate both students and teachers about learning and teaching online.

Discussion of each recommendation

1. **UCSD should both expand and reduce class sizes appropriately, using a mix of online and face-to-face learning environments.**

UCSD should pursue development of education both by expanding and reducing class size, for different purposes. In terms of expansion, larger learning environments incorporating mostly online learning would be better suited for general education classes that cover broad educational subjects. In terms of reduction, smaller classroom settings would allow for more personal connections with mentors and facilitate more intimate learning, which would be ideal for upper division and graduate classes involved with students' majors. So rather than pursuing one path over the other, we recommend that UCSD both expand and reduce classroom sizes depending on the needs of the students. We describe below ways in which different learning environments can be used appropriately at different levels and in different domains.

Massively Online Open Courses (MOOCs) have recently been created to provide a broader access to a wider range of learners. Motivated by these MOOCs, universities have been seriously considering the use of massively online learning environments for general education courses, for example those developed and now offered by UC Online (2014). Other University of California campuses have been exploring online environments for general education to a greater extent than UCSD (Testado, 2014).

A major advantage of offering general education courses online is that these courses would provide students with more flexibility in scheduling. They would also avoid the problem of students not being able to take required courses in a timely fashion, thus lengthening their time-to-graduation.

One concern about offering online courses as introductory courses for lower division students is the high drop-out rates of students in online courses who are not self-motivated (Ho et al., 2014). We recommend that UCSD implement workshops specifically aimed at students taking online courses, to provide them with the meta-learning skills necessary for them to learn successfully within those online environments - this is an important part of our Recommendation #3. We recommend that UCSD (along with other UCs and other higher education institutions investigate the development of "virtual learning assistants" for students and teachers (Rosas,

2014), which can help in online environments, in hybrid environments, and even in conventional face-to-face environments.

UCSD should also reconsider the design of classrooms and other learning spaces, given the shift toward the increase in online components of its courses. Informal learning will become an increasingly important element of learning and teaching (Lamanuzzi, 2014). More and more student learning will take place in spaces outside of rooms currently labeled as classrooms (Banchik, 2014; Huang & Youngstrom, 2014). Online learning environments are becoming ubiquitous, with students able to access their learning materials anywhere on campus and anytime (Paris, 2014). We recommend that any construction of new rooms or renovation of existing rooms at UCSD should take into account the changing nature of learning and teaching, as these new “uncommon learning environments” (Plascencia, 2014) become the new common by the year 2020.

Given the economies of scale with larger classes for general education courses, UCSD should then offer smaller courses to more advanced students (Huang & Youngstrom, 2014). These smaller courses can then explore more effective ways to engage students in learning, including both online learning activities and experiential learning, describe in more detail in our Recommendation #2.

2. **UCSD should expand experiential learning, by incorporating online learning environments to create hybrid experiential learning environments.**

We recommend that the undergraduate colleges at UC San Diego, the undergraduate majors in departments and programs, and graduate programs expand experiential learning. One way to do this, given student time and travel limitations and faculty supervision limitations, is to introduce more online elements to experiential/service learning/practicum programs. We suggest below a number of possibilities for doing this, even given current technologies, and we predict that the possibilities will expand as technology develops between now and the year 2020. It would be beneficial for all students to have hybrid experiential learning experiences to help them learn in settings outside of classrooms.

Experiential learning is becoming increasingly important in higher education. At UCSD, this importance has been recently highlighted by the recent Experiential Learning conference (Sixth College, 2014), which showcased the wide variety of experiential learning programs across a wide variety of colleges, departments, and programs. A limiting factor for expanding experiential learning is that it is expensive, both in terms of student resources (travel and time costs) and in terms of faculty resources (coordination and supervision costs).

We recommend that existing and new experiential learning programs investigate the uses of online activities to better support learning and allow the expansion of experiential learning. Specialized “virtual learning assistants” (Rosas, 2014) drawing upon augmented reality techniques can help support both learners and teachers in experiential learning environments. Learning analytics techniques can help with tracking and guiding experiential learners (Yoshihara, 2014). Uses of social media can help with the coordination of experiential learning, and can improve the interactions that support learning (Wung, 2014).

The uses of technology to improve and expand experiential learning at UCSD can provide rich interaction among students and between students and faculty (Jaeggi, 2014), and can help bridge the gap between what is learned at UCSD and what is needed when students graduate from UCSD (Khan, 2014).

3. **Faculty, TAs, and students should learn how to learn and teach with online educational environments.**

    1. Teachers who use online educational environments should learn to use those environments before they teach using those environments. This learning-to-teach process should be continue over time as the learning environments themselves change.

    2. Incoming students should learn both the features of the online educational environments they'll use and also on the meta-skills necessary to being successful in these new online and hybrid learning environments. This learning-to-learn process should continue over time as the learning environments themselves change.

This will reduce time wasted in class and will create a more effective and supportive learning experience for the students. We suggest below ways in which elements of online learning environments can be used in conjunction with face-to-face environments to help educate both students and teachers about learning and teaching online.

Some of the challenges for learning and teaching in online environments can be addressed in part by specialized online and hybrid learning environments aimed at helping them acquire both the specialized skills to use the specific online environments and the meta-skills involved in learning in these new online and hybrid environments. With developing technologies, change is the only constant, so the development of environments within which students and faculty learn to use online educational environments will be a continuing effort.

We recommend the development of workshops, formal and informal, online, hybrid, and face-to-face, for students and for teachers, focusing on how to learn and teach with online learning activities. We recommend that UCSD, in conjunction with others, work toward developing digital learning assistants that help support learning and teaching in online, hybrid, and face-to-face environments (Rosas, 2014). We recommend that social media (Wung, 2014) and augmented reality (Rosas, 2014) be integrated into the process of learning to learn; that the learning to learn draw upon the ubiquitous nature of online environments (Paris, 2014); that informal as well as formal approaches be used (Lamanuzzi, 2014); and that a variety of learning environments be used (Banchik, 2014; Huang & Youngstrom 2014).

References

The papers with hyperlinked titles were written to develop these recommendations, and provide support for them.

Banchik, N. H. (2014). Current learning environments at UCSD. Available online at https://docs.google.com/document/d/1VMOMZ2NaDht2RTbkJKX_L4xflg8xd4wtAAGmsNSXkFo/edit .

Ho, A. D., Reich, J., Nesterko, S., Seaton, D. T., Mullaney, T., Waldo, J., & Chuang, I. (2014). *HarvardX and MITx: The first year of open online courses (HarvardX and MITx Working Paper No. 1)*. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2381263

Huang, C. J., & Youngstrom, K. (2014). Learning at UCSD in 2020. Available online at https://docs.google.com/document/d/1mfAqcMR1rYNpXH_rZKQxxzwuBzYpX1dEAQ1nTbCon3I/edit .

Jaeggi, S. (2014). The future of learning at UCSD: Three student-centered recommendations. Available online at https://docs.google.com/document/d/1pHT9iKXVNL5w-DphWbMoEBehm4D6YWVOs9qJ-PQhRHs/edit .

Khan, R. (2014). Experiential learning and technology. Available online at https://docs.google.com/document/d/1ZzfTglwxqGiyL9QQ35OvBxpYuEdQbHuW1te-dIntTdc/edit .

Lamanuzzi, G. (2014). Informal online learning: How might it grow as competition? Available online at https://docs.google.com/document/d/1WKpQ7BmVY0nc0mhVXN3cpkV-BAvVrKR9BndrQO9OCnY/edit .

Nguyen, M. (2014). Learning languages online. Available online at https://docs.google.com/document/d/149PkI_Ik3iZldCjvdPqNj-afh7PXmb1IcSYlpUIf8Vw/edit .

Paris, A. (2014). Ubiquitous media and learning. Available online at https://docs.google.com/document/d/1PXQXCky61tdxmg-lj7VFeRkAMY_1a_8pmdLhtbln4ml/edit .

Plascencia, M. I. (2014). Uncommon learning environments. Available online at https://docs.google.com/document/d/1Wah_PU_k384UVMOLIhoqUKhW2ykipg-jccMVSBIwpWo/edit .

Rosas Jr., M. (2014). The future of augmented reality in education. Available online at https://docs.google.com/document/d/1bKTzBuc5yj3Z4Vk0LV42sHTUYYbpZ00g8BaGgDXPyEg/edit .

Sixth College. (2014). High impact practices: Interdisciplinary collaborations and creative connections: An Experiential Learning conference. Available online at http://sixth.ucsd.edu/experiential-learning-conference/ .

Szeto, L. (2014). Predicted changes in the learning environment at UCSD by 2020. Available online at https://docs.google.com/document/d/1U5vtVkyRl3ff5tTaFazaWShR8d-52fqsaRN2z5Dm1J4/edit .

Testado, S. (2014). Competition among universities through formal online learning. Available online at https://docs.google.com/document/d/1GU5PwU0K3RxJ67ngdWBQLMEtHec0KTiwla-WaIg0F30/edit .

University of California Online. (2014). Available online at http://www.uconline.edu .

University of California, San Diego. (2014). Defining our future: UC San Diego's strategic plan. Available online at http://plan.ucsd.edu .

Van Densen, J. (2014). UCSD 2020 / Changes in diversity. Available online at https://docs.google.com/document/d/1Dm1PzWIlaAKFUrFxZ4aF-rhStsDHlnzjU8jyNoSKBw8/edit .

Wung, J. (2014). Social media and its impact on the educational and professional world. Available online at https://docs.google.com/document/d/1o1yNlK3xl0YJ5T5o1ek5f9CFuHs2v2kdj2XyyVhLI6g/edit .

Yoshihara, J. (2014). Learning analytics in an online environment. Available online at https://docs.google.com/document/d/1MBxmbIyPBU1qcg4EO2MAGaTQTPDWbSV5W4kH0LynKgE/edit .

Authors

Natasha Hope Banchik, Graduate, M.Ed., Education Studies, nhbanchi@ucsd.edu

Carmen Jiamin Huang, Muir College, junior, Cognitive Science, jch022@ucsd.edu

Sandro Jaeggi, Graduate, M.Ed., Education Studies, sjaeggi@ucsd.edu

Rameez Khan, Graduate, M.Ed., Education Studies, rkhan@ucsd.edu

Gabriel Lamanuzzi, Revelle College, senior, Cognitive Science, vlamanuz@ucsd.edu

James Levin, Sixth College, professor, Education Studies, jalevin@ucsd.edu

Minh Anh Nguyen, Eleanor Roosevelt College, senior, Sociology, man014@ucsd.edu

Alexandra Paris, Graduate, M.Ed., Education Studies, aparis@ucsd.edu

M. I. Plascencia, Warren College, junior, Political Science, mplascen@ucsd.edu

Martin Rosas Jr., Muir College, senior, Cognitive Science, mrosasjr@ucsd.edu

Lai Tat Szeto (Linda), Warren College, junior, Music, ltszeto@ucsd.edu

Sheryl Anne Testado, Eleanor Roosevelt College, junior, History, stestado@ucsd.edu

Matthew James Van Densen, Muir College, senior, History, mvandens@ucsd.edu

Jackie Wung, Marshall College, junior, Communication, jywung@ucsd.edu

Jordan Yoshihara, Sixth College, junior, Computer Science & Engineering, jayoshih@ucsd.edu

Kendall Youngstrom, Marshall College, senior, Cognitive Science, kyoungst@ucsd.edu

---