

Peralta Equity Rubric – Bibliography of Research Citations Supporting Rubric Criteria – October 2020

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A wide range of factors affect student success, many of which can be improved by taking steps to improve equity:

- Academic factors: Generally, **students' level of preparedness for learning** and, specifically, **students' readiness for online learning** affect their success.
- Pedagogical factors: Your **course organization and design**, the quality and quantity of **interaction opportunities**, and **timely and effective feedback** all contribute to success.
- Psychological factors: Students' feelings of **social belonging** and ability to address **stereotype threat** improve success, as do students' perceptions of the course's **value relevance** and the teacher's **compassion**.
- Social factors: Students' feelings of **isolation or alienation** in an online course have a negative impact, while joining a **learning community** has a positive impact.
- Technological factors: **Access to and ability to use the technologies required** for online course--or lack thereof--affect students' success.

The following research references demonstrated a) the need for an equity rubric criterion based on the existence of an equity issue and/or b) how meeting a specific equity rubric criterion has been proven to improve online student persistence and/or success. Whenever possible, the literature referenced addresses these issues for disproportionately impacted students.

Technology

- Chen, P-S.D.; Lambert, A.D.; & Guidry, K.R. (2010, May). Engaging online learners: The impact of Web-based learning technology on college student engagement. *Computers & Education*, 54(4), 1222-1232. Retrieved from <https://doi.org/10.1016/j.compedu.2009.11.008>
 - **Positive impact of technology intervention** - Research shows “a general positive relationship between the use the learning technology and student engagement and learning outcomes.” Article also discusses “the possible impact on minority and part-time students as they are more likely to enroll in online courses.”
- Croft, M & Moore, R. (2019, February). *Rural Students: Technology, Coursework, and Extracurricular Activities*. [Report]. ACT Center for Equity in Learning. Retrieved from <https://equityinlearning.act.org/wp-content/themes/voltron/img/tech-briefs/rural-students.pdf>
 - **Negative impact of inadequate technology access** – Study of K-12 students provides relevant data about rural students’ access to technology and Internet, impact on coursework and extracurricular activities.
- Elliott, A. (2011). Equity, pedagogy and inclusion. Harnessing digital technologies to support higher education access and success. *The Journal of Community Informatics*, 6(3). Retrieved from <http://www.w.ci-journal.net/index.php/ciej/article/view/751>
 - **Positive impact of adequate technology access** – study of Australian higher ed students showed that students from low socio-economic groups were successful when they had access to technology and support.
- Office of Ed Tech. (2016, April 18). Building Robust Infrastructure as a Tool for Equity. *Medium*. Retrieved from <https://medium.com/@OfficeofEdTech/building-robust-infrastructure-as-a-tool-for-equity-7170a3cd8fda>
- Reich, J. (2019). Teaching Our Way to Digital Equity. *The Tech-Savvy School*, 76(5), 30-35. Retrieved from <http://www.ascd.org/publications/educational-leadership/feb19/vol76/num05/Teaching-Our-Way-to-Digital-Equity.aspx>
 - Article links digital equity to pedagogical and structural inequity more broadly.
- Smith, A. (2020, September 29). Equity in online learning is about much more than technology access. Hechinger Report. Retrieved from <https://hechingerreport.org/opinion-equity-in-online-learning-is-about-much-more-than-technology-access/>
 - Opinion article shares three elements for everyone to experience successful online learning

Student Support

- Bailey, T. & Brown, A. (2016). Online Student Services: Current Practices and Recommendations for Implementation. *Journal of Educational Technology Systems*, 44(4), 450-462.
 - Cites research supporting the **need for online student services**

- Britto, M. & Rush, S. (2013). Developing and implementing comprehensive student support services for online students. *Journal of Asynchronous Learning Networks*, 17(1), 29-42. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1011371.pdf>
 - **Student support strategies to increase online student retention**
- Doyle, J. (2020, April 7). Fostering Student Success Outside of Online Classes. *Inside Higher Ed*. Retrieved from <https://www.insidehighered.com/advice/2020/04/07/whats-role-student-affairs-and-academic-support-staff-when-most-students-arent>
 - Drawing from research reports, this article provides 7 strategies to support students.
- Education Advisory Board. (2016). *The Evolving Role of Faculty in Student Success* [Report 33174]. Washington, DC: Author. Retrieved from <https://www.csun.edu/sites/default/files/33174-EAB-AAF-White-Paper-Faculty-Role-Student-Success.pdf>
- Education Advisory Board. (2015). *The Evolving Role of Faculty in Student Success* [Report 31278]. Washington, DC: Author. Retrieved from https://attachment.eab.com/wp-content/uploads/2019/07/31278_COE_Path-to-Persistence_92215DSS_FINAL.pdf
 - This study details 13 strategic interventions to monitor financial, academic, and engagement stop-out risk, encourage re-enrollment, and facilitate adult degree completion
- Peters, B.; Crawley, A.; & Brindley, J.E. (2017, September). *Student support services for online learning re-imagined and re-invigorated: Then, Now and What's to Come: Lessons Learned From the California Community College System (CCC), the Largest System of Higher Education in the USA*. Report by Contact Nord. Retrieved from https://teachonline.ca/sites/default/files/tools-trends/insights/pdf/student_support_services_for_online_learning_re-imagined_and_re-invigorated.pdf
 - **Evidence that online support services impact student success rate** – see p. 14
 - See **WCET web of student support services** – categories: academic, administrative, communications, student community, and student personal services
- Roddy, C.; Amiet, D.L.; Chung, J.; Holt, C.; Shaw, L.; McKenzie, S.; Garivaldis, F.; Lodge, J.M. and Mundy, M.E. (2017). Applying Best Practice Online Learning, Teaching, and Support to Intensive Online Environments: An Integrative Review. *Frontiers in Education*, 2(59).
 - Online environment: **Best practices in student support & well-being services for online learners** –services should include a) Online-friendly academic supports (an orientation, access to Library services); b) Assistance with navigating technology; c) Health and well-being facilities; and d) Sense of belongingness, or community
- Russo-Gleicher, R.J. (2013, January). Qualitative insights into faculty use of student support services with online students at risk: Implications for student retention. *Journal of Educators Online*, 10(1), 1-32. Retrieved from <https://eric.ed.gov/?id=EJ1004894>

- **Under-utilization of student support services can contribute to a low retention rate found in online courses** – discusses the need to educate and encourage online faculty about using the wide variety of student support services that are available to community college students
- Travers, S. (2016). Supporting Online Student Retention in Community Colleges: What Data Is Most Relevant? *The Quarterly Review of Distance Education*, 17(4), 49-61.
 - Cites studies that show **lack of student support resources negatively affects online student retention and success.**

Universal Design for Learning

UDL for all courses in general

- Brandon, A. & Nemeroff, A. (2016, October 26). Creating Inclusive Courses with Universal Design. [web article]. Retrieved from <https://sites.dartmouth.edu/edtech/2016/10/26/creating-inclusive-courses-with-universal-design/>
- Capp, M.J. (2017). The effectiveness of Universal Design for Learning: A meta-analysis of literature between 2013 and 2016. *International Journal of Inclusive Education*, 21(8), 791-807.
 - "Results from this analysis suggest that UDL is an effective teaching methodology for improving the learning process for all students. The impact on educational outcomes has not been demonstrated."
- Kelly, K. (2014, Fall). Fostering Inclusion with Universal Design for Learning. *Diversity & Democracy*, 17(4). Retrieved from <https://www.aacu.org/diversitydemocracy/2014/fall/kelly>
 - Describes how UDL supports multiple pathways for allowing students to show what they know (i.e., assessment). Provides UDL implementation suggestions ranging from simple to complex.

UDL applied to online courses

- Crosling, G.; Thomas, L.; & Heagney, M. (2008). *Improving student retention in higher education: The role of teaching and learning*. New York, NY: Routledge.
 - **Research identified UDL benefits to learners:** UDL "adjustments to teaching practice improve the learning experiences and retention rates of students with a disability and those from other underrepresented groups such as non-English-speaking-background students as well. Inclusive adjustments to the intellectual environment work to improve all students' experience of [the] university" (p. 24)
- Downs, L.R. (2018, June 7). UDL in Action in College Online Courses. WCET Frontiers. Retrieved from <https://wcetfrontiers.org/2018/06/07/udl-in-action-in-college-online-courses/>
 - Article provides **examples of UDL applications** in online higher ed courses.
- He, Y. (2014). Universal Design for Learning in an online teacher education course: Enhancing learners' confidence to teach online. *Journal of Online Learning and Teaching*, 10(2), 283-298.

- **Research identified UDL benefits to learners**
- Rao, K. (2012). Universal design for online courses: Addressing the needs of non-traditional learners. *2012 IEEE International Conference on Technology Enhanced Education (ICTEE)*, 1-8.
 - **Research identified UDL benefits for non-traditional learners**
- Rogers-Shaw, C.; Carr-Chellman, D.J.; & Choi, J. (2018). Universal Design for Learning: Guidelines for Accessible Online Instruction. *Adult Learning*, 29(1), 20-31. doi:[10.1177/1045159517735530](https://doi.org/10.1177/1045159517735530)
 - Article describes how UDL principles were applied “to improve an existing online course offering for adult learners.”
- Smith, F. (2012). Analyzing a college course that adheres to the universal design for learning (UDL) framework. *Journal of the Scholarship of Teaching and Learning*, 12(3), 31-61.
 - **Research identified UDL benefits to learners:** Results suggest that when faculty use the UDL framework to help design courses, goals are more clearly aligned with instructional practices; there is a positive relationship to student interest and engagement; and students are positively engaged in the course
- Tobin, T.J. (2014). Increase online student retention with universal design for learning. *The Quarterly Review of Distance Education* 15(3), 13-24.
 - Provides 5 overarching **strategies for incorporating UDL**, along with what online instructors can do in the next 20 minutes, 20 days and 20 months.
- UDI Online Project. (2009). *Examples of UDI in Online and Blended Courses*. Center on Postsecondary Education and Disability, University of Connecticut, Storrs. Retrieved from <http://www.udi.uconn.edu/index.php?q=content/examples-udi-online-and-blended-courses>
 - Article provides **examples of Universal Design for Instruction in online courses**.
- Hollingshead, A. (2018). Designing engaging online environment: Universal design for learning principles. In K. L. Milheim (Ed.), *Cultivating Diverse Online Classrooms through Effective Instructional Design*. Hershey, PA: IGI Global.
- Lowrey, K. A., Smith, S. J., and Khoo, J. (2016). Multiple means of representation in distance education. In L. A. Scott and C. A. Thoma (Eds.), *Universal Design for distance education: A guide for online course development* (pp. 29-43). Acton, MA: XanEdu.
- Rao, K., and Tanners, A. (2011). Curb cuts in cyberspace: Universal Instructional Design in online courses. *Journal of Postsecondary Education and Disability*, 24(3), 211-229.
 - **Case study describes universal design features that students valued** in an online course.

Diversity & Inclusion

- Brandon, A. & Nemeroff, A. (2016, October 26). Creating Inclusive Courses with Universal Design. [web article]. Retrieved from

<https://sites.dartmouth.edu/edtech/2016/10/26/creating-inclusive-courses-with-universal-design/>

- **Strategies for using Universal Design for Instruction**
- Clemson University. (2016, July 18). Creating an Inclusive Learning Environment for All Learners. [blog post]. Retrieved from <https://blogs.clemson.edu/online/2016/07/18/creating-an-inclusive-learning-environment-for-all-learners/>
- Gibbs, L. (2017, July 4). Designing for Equity: Growth, Slack, and Abundance (NOT Grit, Deficits and Scarcity) [blog post]. Retrieved from <https://community.canvaslms.com/people/laurakgibbs/blog/2017/07/04/designing-for-equity-growth-slack-and-abundance-not-grit-deficits-and-scarcity>
- Jones, M. & Sneed, O. (2016, January 12). Fostering an Inclusive Environment when Developing Online Courses. [web article]. *TeachOnline*. Retrieved from <https://teachonline.asu.edu/2016/01/fostering-inclusive-environment-developing-online-courses/>
- Kelly, K. (2014, Fall). Fostering Inclusion with Universal Design for Learning. *Diversity & Democracy*, 17(4). Retrieved from <https://www.aacu.org/diversitydemocracy/2014/fall/kelly>
- Kizilcec, R.F. & Saltarelli, A.J. (2019). Psychologically Inclusive Design: Cues Impact Women's Participation in STEM Education. CHI 2019, May 4–9, 2019, Glasgow, Scotland, UK. Retrieved from <http://rene.kizilcec.com/wp-content/uploads/2019/01/kizilcec2019pid.pdf>
- Saunders, S. & Kardia, D. (1997). Creating Inclusive College Classrooms. University of Michigan - Center for Research in Teaching and Learning. Retrieved from http://www.crlt.umich.edu/gsis/p3_1
- UDI Online Project. (2009). *Examples of UDI in Online and Blended Courses*. Center on Postsecondary Education and Disability, University of Connecticut, Storrs. Retrieved from <http://www.udi.uconn.edu/index.php?q=content/examples-udi-online-and-blended-courses>
 - Provides examples of Universal Design for Instruction in online courses.

Images and Representation

Internet-Based Image Resources

- Kay, M.; Matuszek, C.; & Munson, S.A. (2015). Unequal Representation and Gender Stereotypes in Image Search Results for Occupations. In *Proceedings from CHI '15: 33rd Annual ACM Conference on Human Factors in Computing Systems*, 18 - 23 April, Seoul, Republic of Korea (pp. 3819-3828). New York: Association for Computing Machinery. Retrieved from <https://dub.washington.edu/djangosite/media/papers/unequalrepresentation.pdf>
 - **Presence of bias** in image search results

- Mahdawi, A. (2017, September 10). Stock photo stereotypes are shifting, but the typical woman is still young, skinny and white. [Web article]. *The Guardian*. Retrieved from <https://www.theguardian.com/artanddesign/commentisfree/2017/sep/10/stock-photo-stereotypes-are-shifting-but-the-typical-woman-is-still-young-skinny-and-white>
 - **Presence of bias** in stock photo libraries

Textbooks & Educational Resources

- Acheson, G. (2020, July/August). The Representation of Women in the Photographs of Introductory Human Geography Textbooks. *Journal of Geography*, 119(4), 127-. Retrieved from <https://doi.org/10.1080/00221341.2020.1765408>
 - **Presence of bias** in textbooks; article discusses role of imagery in influencing students' impressions of a discipline
- Brandle, S.M. (2020). It's (Not) in the Reading: American Government Textbooks' Limited Representation of Historically Marginalized Groups. *PS: Political Science & Politics*, 1-7. Retrieved from <https://doi.org/10.1017/S1049096520000797>
 - **Presence of bias** in textbooks
- Brown, B. A., & Edouard, K. (2017). Looks Like Me, Sounds Like Me! Race, Culture, and Language in the Creation of Digital Media. *Equity & Excellence in Education*, 50(4), 400–420. Retrieved from <https://doi-org.jpillnet.sfsu.edu/10.1080/10665684.2017.1399097>
 - **Positive effect of addressing image and representation bias** – Study asked students to customize digital textbooks. Students “consistently chose images that reflected their racial, gender, and linguistic identities.” Implication: “...culturally authentic racial cues would spawn deeper engagement for students.”
- Danley-Scott, J. (2019, August). Simple Observations and Simple Data: Increasing Female Success in an Introductory Course. *Community College Journal of Research & Practice*, 43(8), 595-598. Retrieved from <http://ejournals.ebsco.com.jpillnet.sfsu.edu/direct.asp?ArticleID=417BBB05086AB4137146>
 - **Positive effect of addressing image and representation bias** - This study uses documented methods of stereotype threat-mitigation from the fields of science, math, and psychology and applies them to the political science classroom by using images of women serving in political office.
- Davis, D.; Barrick, A. & Talley, K. (2020). “What Does This Have To Do With Me?” Black Student Perspectives of Image-Based PowerPoints in BSW Classes. *Journal of Social Work Education*, 1-11. Retrieved from <https://doi.org/10.1080/10437797.2020.1713946>
 - **Negative effect of image and representation bias** – “Black students are less likely to find that image-based PowerPoints enhanced learning because of the lack of positive Black role models and culture in PowerPoint slides
- Good, J.J.; Woodzicka, J.A.; & Wingfield, L.C. (2010). The effects of gender stereotypic and counter-stereotypic textbook images on science performance. *The Journal of Social Psychology*, 150(2), 132-147. Retrieved from https://www.researchgate.net/profile/Julie_Woodzicka/publication/43180259_The_Effects_of_Gender_Stereotypic_and_Counter-Stereotypic_Textbook_Images_on_Science_Performance/links/0046352c9553eddcac00

[0000/The-Effects-of-Gender-Stereotypic-and-Counter-Stereotypic-Textbook-Images-on-Science-Performance.pdf](https://doi.org/10.1371/journal.pone.0165037)

- **Positive effect of addressing bias** - High school students – females showed higher science comprehension after viewing counter-stereotypic images (female scientists) and males showed higher science comprehension after viewing stereotypic images (male scientists).
- Kerkhoven, A.H.; Russo, P.; Land-Zandstra, A.M.; Saxena, A. & Rodenburg, F.J. (2016). Gender Stereotypes in Science Education Resources: A Visual Content Analysis. *PLoS ONE*, 11(11). Retrieved from <https://doi.org/10.1371/journal.pone.0165037>
 - **Presence of bias, suggestions for balance** – in online science education resources, men and women are portrayed in stereotypic ways
- Louie, P. & Wilkes, R. (2018). Representations of race and skin tone in medical textbook imagery. *Social Science & Medicine*. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/29501717>
 - **Presence of bias** in medical textbook images
- Otłowski, M. (2003, June). Ethnic diversity and gender bias in EFL textbooks. *The Asian EFL Journal*, 5(2). Retrieved from http://asian-efl-journal.com/june_03_mo.pdf
 - **Presence of bias** in English as a Foreign Language textbooks
- Parker, R.; Larkin, T. & Cockburn, J. (2017, May). A visual analysis of gender bias in contemporary anatomy textbooks. *Social Science & Medicine*, 180, 106-113. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/28343109>
 - **Presence of bias** in anatomy textbooks

Stereotype threat

- Appel, M. & Kronberger, N. (2012). Stereotypes and the Achievement Gap: Stereotype Threat Prior to Test Taking. *Educational Psychology Review*, 24(4). 609-635.
 - **Negative effect of stereotype threat on academic performance**

Human Bias

- Baker, R.; Dee, T.; Evans, B.; & John, J. (2018). *Bias in Online Classes: Evidence from a Field Experiment (CEPA Working Paper No.18-03)*. Stanford Center for Education Policy Analysis. Retrieved from <http://cepa.stanford.edu/wp18-03>
 - **Presence of bias** in how teachers reply to online learners in discussion forums
- Kruse, A.J. (2016). Cultural Bias in Testing: A Review of Literature and Implications for Music Education. *Applications of Research in Music Education*, 35(1), 23-31. Retrieved from <https://doi.org/10.1177/8755123315576212>
 - **Review of literature** about cultural bias in testing, with “meaningful implications for educators of any subject”
- McGlone, M.S. & Aronson, J. (2007). Forewarning and Forearming Stereotype-Threatened Students. *Communication Education*, 56(2), 119-133. Retrieved from <https://doi.org/10.1080/03634520601158681>

- **Positive effect of stereotype threat intervention**
- Morales-Martinez, G.; Latreille, P. & Denny, P. (2020). Nationality and Gender Biases in Multicultural Online Learning Environments: The Effects of Anonymity. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (pp. 1-14). Retrieved from <https://dl.acm.org/doi/abs/10.1145/3313831.3376283>
 - **Presence of bias** in student interactions: “being identifiable had a significant impact on how students accessed and rated content created by their peers; ... when identifiable, cultural differences became more prominent, leading some students to avoid content created by classmates of certain nationalities; ... when students interacted with their real identities, there were significant and negative gender effects which were absent when students were anonymous”

Content Meaning

- Abrahamson, C.E. (2011). Methodologies for Motivating Student Learning Through Personal Connections. Forum on Public Policy. Retrieved from <https://files.eric.ed.gov/fulltext/EJ969845.pdf>
 - Provides strategies for helping students make personal connections to course topics.
- Akcaoglu, M. & Bowman, N.D. (2016). Using instructor-led Facebook groups to enhance student perceptions of course content. *Computers in Human Behavior*, 65, 582-590. Retrieved from <https://doi.org/10.1016/j.chb.2016.05.029>
 - **Positive effect of content meaning intervention** – “students participating in a class Facebook group reported more interest in and perceived more value in course content”
- Brown University. (n.d.). Culturally Responsive Teaching. Retrieved from <https://www.brown.edu/academics/education-alliance/teaching-diverse-learners/strategies-0/culturally-responsive-teaching-0>
 - Article identifies and describes characteristics of culturally responsive teaching.
- Hammond, Z.L. (2014). *Culturally Responsive Teaching and The Brain: Promoting Authentic Engagement and Rigor Among Culturally and Linguistically Diverse Students*. Thousand Oaks, CA: Corwin.
- Hammond, Z.L. (n.d.). 3 Tips to Make Any Lesson More Culturally Responsive. [guest blog post]. *Cult of Pedagogy*. Retrieved from <https://www.cultofpedagogy.com/culturally-responsive-teaching-strategies/>
 - Strategies for making lessons more culturally responsive.
- Harackiewicz, J.M.; Smith, J.L. & Priniski, S.J. (2018). Interest Matters: The Importance of Promoting Interest in Education. *Policy Insights from the Behavioral and Brain Sciences*, 3(2), 220-227. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5839644/>
 - **Positive effect of content meaning interventions** – article shares intervention strategies and their usefulness in students’ interest development

- Kalaf-Hughes, N. (2019). Reaching Students with Low Interest: Subject Matter Interest and Perceptions of Open Educational Resources in an Introductory American Government Course. *Journal of Political Science Education*, 1-27. Retrieved from <https://doi.org/10.1080/15512169.2019.1694530>
 - **Positive effect of content meaning intervention** – students with low interest in subject matter reported greater interaction and engagement with a free, online textbook (Open Educational Resources) than with traditional textbook.
- Kruse, A.J. (2016). Cultural Bias in Testing: A Review of Literature and Implications for Music Education. [updated article]. *Applications of Research in Music Education*, 35(1), 23-31. Retrieved from <http://journals.sagepub.com/doi/full/10.1177/8755123315576212>
 - **Review of literature** on cultural bias in testing. Addresses (a) significantly different results for definable subgroups from apparently similar ability levels and (b) issues with the fair and equitable interpretation and use of test results.
 - Includes “suggestions for improved fairness consisting of addressing group differences, offering diverse ways to perform, discouraging misuse, and accommodating for differences.”
- McArthur, A. (2013, October 7). An assignment that helps students connect with course content. *Faculty Focus*. Retrieved from <https://www.facultyfocus.com/articles/effective-teaching-strategies/an-assignment-that-helps-students-connect-with-course-content/>
 - Brief article with **strategy to help students connect with course content**
- Priniski, S.J.; Hecht, C.A; & Harackiewicz, J.M. (2018) Making Learning Personally Meaningful: A New Framework for Relevance Research. *The Journal of Experimental Education*, 86(1), 11-29. Retrieved from <https://doi.org/10.1080/00220973.2017.1380589>
 - **Review of literature** related to learning motivation stemming from personal meaning.
- Saunders, S. & Kardia, D. (1997). Creating Inclusive College Classrooms. University of Michigan - Center for Research in Teaching and Learning. Retrieved from http://www.crlt.umich.edu/gsis/p3_1
 - **Strategies for choosing course content that increases inclusion**
- Schulten, K. (2017, December 7). Making it relevant: Helping students connect their studies to the world today. NY Times. Retrieved from <https://www.nytimes.com/2017/12/07/learning/lesson-plans/making-it-relevant-helping-students-connect-their-studies-to-the-world-today.html>
 - Article with **strategies to help students make real-world connections** to course topics
- Winkelmes, M. (2014). Transparency in Learning and Teaching Project. Retrieved from <https://www.unlv.edu/provost/transparency>
 - Description of intervention

Connection and Belonging

Personal Connections With & Among Students

- Bickle, M.C. & Rucker, R. (2018). Student-Student Interaction: Humanizing the Online Classroom Using Technology and Group Assignments. *The Quarterly Review of Distance Education*, 19(1), 1-11. Retrieved from <https://eric.ed.gov/?id=EJ1190065>
 - **Positive effect of fostering student-student connections** – Study “the use of VoiceThread technology within group assignments significantly influences students’ ability to learn, their feeling of a community, and their ability to communicate.”
- Catalano, F. (2015, March 25). 5 Elements to Better Connection and Communication With Online Students. [web article]. Retrieved from <https://elearningindustry.com/5-elements-better-connection-communication-with-online-students>
 - Brief article provides 5 strategies for teachers to connect with online students
- Touro College. (2013, August 8). 10 Tips for Making Personal Connections With Students in Online Courses. [blog post]. Retrieved from <http://blogs.onlineeducation.touro.edu/10-tips-for-making-personal-connections-with-students-in-online-courses/>
 - Brief article provides 10 strategies for teachers to connect with online students

Social Belonging (in both the course and the discipline)

- Boudreau, E. (2020, April 1). A place of (remote) belonging. Harvard Graduate School of Education. Retrieved from <https://www.gse.harvard.edu/news/uk/20/04/place-remote-belonging>
 - Provides ideas for fostering belonging in online courses
- Caligiuri, P.; DuBois, C.L.Z.; Lundby, K.; & Sinclair, E.A. (in press). Fostering international students’ sense of belonging and perceived social support through a semester-long experiential activity. *Research in Comparative and International Education*, 1-14. Retrieved from <https://journals.sagepub.com/doi/abs/10.1177/1745499920954311>
 - **Positive effect of social belonging interventions** for international students. Not limited to online courses.
- Cohn-Vargas, B. & Gogolewski, K. (2020, June 2). How to teach online so all students feel like they belong. *Greater Good*. Retrieved from <https://greatergood.berkeley.edu/article/item/how-to-teach-online-so-all-students-feel-like-they-belong>
 - Provides ideas for fostering belonging in online courses
- Harackiewicz, J.M. & Priniski, S.J. (2018). Improving student outcomes in higher education: The science of targeted intervention. *Annual Review of Psychology*, 69, 409-435. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6211287/>
 - **Positive effect of social belonging interventions**
- Hartman, E.M.(2020, September 11). How to cultivate belonging in online learning. Global Online Academy. Retrieved from

<https://globalonlineacademy.org/insights/articles/how-to-cultivate-belonging-in-online-learning>

- Provides ideas for fostering belonging in online courses
- Khan, S.R. (2020). Fostering Students' Sense of Belonging in Online Asynchronous Courses Through Social Media. *Culminating Projects in Information Media*, 27. Retrieved from https://repository.stcloudstate.edu/im_etds/27
 - **Positive effect of social belonging interventions** – The use of social media to foster a sense of belonging in asynchronous courses increased student motivation, retention and academic results.
- Kizilcec, R.F.; Saltarelli, A.J.; Reich, J.; & Cohen, G.L. (2017, January 20). Closing global achievement gaps in MOOCs. *Science*, 355(6322), 251-252. Retrieved from <https://science.sciencemag.org/content/355/6322/251>
 - **Positive effect of addressing social identity threat** – improved persistence and completion rates among learners in developing countries, eliminating global achievement gap
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