Asynchronous Online Discussions

Some Current and Needed Research for Alternatives

Natalie B. Milman

An important characteristic of most asynchronous online courses is asynchronous online discussions, which are sometimes referred to as asynchronous online conferences. Asynchronous online discussions (AODs), a form of computer-mediated communication, are a popular and effective strategy for engaging students in asynchronous online courses (Swan et al., 2000) although some have noted that they are outdated, as Pendry and Salvatore (2015) emphasized in the following excerpt:

> Dwarfed in recent years by more prominent social media giants such as Facebook and Twitter, forums appear anecdotally to have assumed an unfashionable status in many organizations' eyes, being viewed as a primitive form of communication whose time has passed. (p. 218)

Although Pendry and Salvatore (2015) described AODs as primitive, it is through AODs that interaction occurs in many asynchronous online courses. Interaction, "commonly understood as actions among individuals" (Abrami et al., 2011, p. 86), is an important characteristic of distance education because students learn through student-student, student-instructor, and student-content interaction (Abrami et al., 2011; Bernard et al., 2009; Moore, 1989). Bernard et al. (2009) found that interaction positively affects student learning. How-

Natalie B. Milman,
Professor of Educational Technology,
George Washington University,
2134 G ST, NW, Washington, DC 20052.
Telephone: (202) 994-1884.
Email: nmilman@gwu.edu

ever, they caution that instructors should not focus on increasing the quantity of interactions, but rather focus on increasing the quality of interactions. This is precisely why it is important to understand how AODs are utilized in online education. In a prior article (Milman, 2017), I shared several suggestions for designing quality online discussions. In this article, I share some key AOD research areas and suggestions for future research.

What Are Some Key Research Findings About AODs?

There have been many studies investigating AODs where researchers have examined:

- factors that affect the quality of AOD (Spatariu et al., 2007; Vonderwell & Zachariah, 2005) such as the best ways to structure AOD (Cifuentes et al., 1997; Dennen, 2005; Gilbert & Dabbagh, 2005; Hew & Cheung, 2011; Kanuka, 2002; Nandi et al., 2012; Olesova et al., 2016; Xia et al., 2013),
- the role of instructor-facilitators (Mazzolini & Maddison, 2003; Winograd, 2003),
- the types of questions posed (Bradley et al., 2008; Olesova et al., 2016),
- participation patterns (Jo et al., 2017).
- students' socialization and identity (MacMillan et al., 2014; McDougall, 2015; Stevens, 2013; Tsai et al., 2015)
- students' roles (Wise et al., 2012)
- learning (Pulford, 2011; Snyder & Dringus, 2014; Strang, 2011)
- student perceptions of AOD (Du et al., 2008; Swan, 2001)
- the effects of AOD on students' critical thinking skills (Olesova et al., 2016; Pisutova-Gerber & Malovicova, 2009).

Although most of the research has demonstrated both benefits and challenges, Fehrman and Watson (2021) that their systematic review of literature found that having a clearly described purpose, instructions, expectations, and grading criteria such as rubrics (Fehrman & Watson, 2021) consistently provided needed structure for using AODs effectively in higher education, and also played an important role in the quality of AODs.

What Are Suggestions for Future Research?

Fehrman and Watson (2021) noted that there is a need for research examining alternatives to traditional, text-based AODs prevalent in many online courses. Although there is a growing body of research about alternatives, such as Flipgrid (https://info.flip.com/) and VoiceThread (https://voicethread.com/), discussion and sharing apps that use multimedia that can be used in lieu of AODs, there is very little research and no literature reviews investigating alternatives.

References

Abrami, P. C., Bernard, R. M., Bures, E. M., Borokhovski, E., & Tamim, R. M. (2011) Interaction in distance education and online learning: Using evidence and theory to improve practice. *Journal of Computing in Higher Education, 23*, 82–103.

Bernard, R. M., Abrami, P. C., Borokhovski, E., Wade, C. A., Tamim, R. M., Surkes, M. A., & Bethel, E. C. (2009). A meta-analysis of three types of interaction treatments in distance education. *Review of Educational Research, 79*(3), 1243–1289.

Bradley, M. E., Thom, L. R., Hayes, J., & Hay, C. (2008). Ask and you will receive: How question type influences quantity and quality of online discussions. *British Journal of Educational Technology, 39*(5), 888–900.

Dennen, V. P. (2005). From message posting to learning dialogues: Factors affecting learner participation in asynchronous discussion. *Distance Education, 26*(1), 125–146.

Du, J., Zhang, K. Olinzock, A., & Adams, J. (2008). Graduate students' perspectives on the meaningful nature of online discussions.

Journal of Interactive Learning Research, 19(1), 21–36.

Fehrman, S., & Watson, S. L. (2021). A systematic review of asynchronous online discussions in online higher education. *American Journal of Distance Education, 35*(3), 200–213. 10.1080/08923647.2020.1858705

Gilbert, P. K., & Dabbagh, N. (2005). How to structure online discussions for meaningful discourse: A case study. *British Journal of Educational Technology, 36*(1), 5–18.

Hew, K. F., & Cheung, W. S. (2011). Higher-level knowledge construction in asynchronous online discussions: an analysis of group size, duration of online discussion, and student facilitation techniques. *Instructional Science: An International Journal of the Learning Sciences*, *39*(3), 303–319.

Jo, I., Park, Y., & Lee, H. (2017). Three interaction patterns on asynchronous online discussion behaviours: A methodological comparison. *Journal of Computer Assisted Learning, 33*(2), 106–122.

Kanuka, H. (2002). Guiding principles for facilitating higher levels of web-based distance teaching and learning in post-secondary settings. *Distance Education, 23*(2), 163–182

MacMillan, T., Forte, M., & Grant, C. (2014). Thematic analysis of the "games" students play in asynchronous learning environments. *Journal of Asynchronous Learning Networks*, *18*(1), 83–95.

Mazzolini, M., & Maddison, S. (2003). Sage, guide, or ghost? The effect of instructor intervention on student participation in online discussion forms. *Computers & Education, 40,* 237–253.

McDougall, J. (2015). The quest for authenticity: a study of an online discussion forum and the needs of adult learners. *Australian Journal of Adult Learning*, *55*(1), 94–113.

Milman, N. B. (2017). Designing asynchronous online discussions for quality interaction in asynchronous online courses. *Distance Learning, 14*(3), 61–63.

Moore, M. G. (1989) Editorial: Three types of interaction. *American Journal of Distance Education, 3*(2), 1–7.

Nandi, D., Hamilton, M., & Harland, J. (2012). Evaluating the quality of interaction in asynchronous discussion forums in fully online course. *Distance Education*, *33*(1), 5–30.

Olesova, L., Slavin, M., & Lim, J. (2016). Exploring the effect of scripted roles on cognitive presence in asynchronous online discussions. *Online Learning, 20*(4) 34–53.

Pendry, L. F., & Salvatore, J. (2015). Individual and social benefits of online discussion forums. *Computers in Human Behavior, 50,* 211–220.

Pisutova-Gerber, K., & Malovicova, J. (2009). Critical and higher order thinking in online threaded discussions in the Slovak context. *International Review of Research in Open and Distance Learning, 10*(1), 1–15.

Pulford, B. D. (2011). The influence of advice in a virtual learning environment. *British Journal of Educational Technology*, *42*(1), 31–39.

Snyder, M. M., & Dringus, L. P. (2014). An exploration of metacognition in asynchronous student-led discussions: A qualitative inquiry. *Journal of Asynchronous Learning Networks*, *18*(2), 1-19.

Spatariu, A., Quinn, L. F., & Hartley, K. (2007). A review of research on factors that impact aspects of online discussions quality. *TechTrends, 51*(3), 44–48.

Stevens, T. (2013). Who you know and what you know: Student interaction in online discussions. *Australian Educational Computing*, *28*(1), 47–60.

Strang, K. D. (2011). Asynchronous knowledge sharing and conversation interaction impact on grade in an online business Course. *Journal of Education for Business*, *86*(4), 223–233.

Swan, K. (2001). Virtual interaction: Design factors affecting student satisfaction and perceived learning in asynchronous online courses. *Distance Education, 22*(2), 306–331.

Swan, K., Shea, P., Fredericksen, E., Pickett, A., Pelz, W., & Maher, G. (2000). Building knowledge building communities: Consistency, contact, and communication in the virtual classroom. *Journal of Educational Computing Research, 23*(4), 389–413.

Tsai, M., Liang, J., Hou, H., & Tsai, C. (2015). Males are not as active as females in online discussion: Gender differences in face-to-face and online discussion strategies. *Australasian Journal of Educational Technology*, *31*(3), 263–277.

Vonderwell, S., & Zachariah, S. (2005). Factors that influence participation in online learning. *Journal of Research on Technology in Education, 38*(2), 213–230.

Winograd, D. (2003). The roles, functions, and skills of moderators of online educational

computer conferences for distance education. *Computers in the Schools, 20*(3), 61–72.

Wise, A. F., Saghafian, M., & Padmanabhan, P. (2012). Towards more precise design guidance: specifying and testing the functions of assigned student roles in online discussions. *Educational Technology Research and Development*, *60*(1), 55–82.

Xia, J., Fielder, J., & Siragusa, L. (2013). Achieving better peer interaction in online discussion forums: A reflective practitioner case study. *Issues in Educational Research*, *23*(1), 97–113.