Factors influencing outcomes in collaborative writing:
An analysis of the processes

ABSTRACT:
Today’s commercially available word processors allow people to write collaboratively in the cloud, both in the familiar asynchronous mode and now in synchronous mode as well. This opens up new ways of working together. We examined the data traces of collaborative writing behavior in student teams’ use of Google Docs to discover how they are writing together now. We found that student teams write both synchronously and asynchronously, take fluid roles in the writing and editing of the documents, and show a variety of styles of collaborative writing, including writing from scratch, beginning with an outline, pasting in a related example as a template to organize their own writing, and three more. We also found that the document serves as a place where they share a number of things not included in the final document, including links or references to related materials, the assignment requirements from the instructor, and informal discussions to coordinate the collaboration or to structure the document. We computed a number of measures to depict a group’s collaboration behavior and asked external graders to score these documents for quality. This allowed us to examine the factors that correlated with high quality outputs. We then suggest system design implications and behavioral guidelines to support people writing together better, and conclude with future research directions.

BIO:
Gary M. Olson is Donald Bren Professor Emeritus of Information and Computer Sciences at the University of California, Irvine. Prior to 2008, he was the Paul M. Fitts Professor of Human-Computer Interaction at the University of Michigan. He, along with his wife Judy, studies how information technology can play a role in collaboration. Mostly this work focused on collaboration at a distance, and led to the often-cited paper in 2000, “Distance Matters.” Later they published an edited book on Scientific Collaboration on the Internet (MIT Press, 2008), and more recently, Working Together Apart (Morgan & Claypool, 2014). He is an ACM Fellow, as well as a Fellow of the American Psychological Association and the Association for Psychological Science. He was elected to the CHI Academy in 2003, and along with Judy Olson, received the SIGCHI Lifetime Achievement Award in 2006. He received the SIGCHI Lifetime Service Award in 2016.