

# Making AI *Generative* for Higher Education

Project title: Making AI Generative for Higher Education

Source of funding: Internal

Research site: East Carolina University

## *Research Purpose*

This study will assess the existing and emerging applications of generative AI that are most likely to impact teaching, learning, and research, as well as the needs of institutions, instructors, and scholars as they navigate this environment. The aim of this research is to formulate strategies, policies, and programs to ensure that universities, such as East Carolina University, can best harness AI technologies. This study's findings will contribute to the pressing discussions amongst university leaders and staff over how to best implement policies and support services related to AI.<sup>1</sup> It will also contribute to the growing conversations about how research practices and publishing regulations should adapt to the increasing prevalence of AI technologies.<sup>2</sup>

## *Research Design*

Participants will engage in a one-on-one semi-structured interview with an investigator listed in this protocol. The interviews will be approximately sixty minutes in length and will be conducted either in person or remotely via telephone or teleconference platform, adhering to East Carolina University's guidance on in-person data collection at the time of the interviews. If interviews are conducted in person, they will take place in a private space, such as the participant's or interviewer's office on ECU's campus.

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<sup>1</sup> Poppy Wood, "Oxford and Cambridge Ban ChatGPT over Plagiarism Fears but Other Universities Embrace AI Bot," *inews.co.uk*, March 2, 2023, <https://inews.co.uk/news/oxford-cambridge-ban-chatgpt-plagiarism-universities-2178391>. Rebecca Sweetman and Yasmine Djerbal, "ChatGPT? We need to talk about LLMs," *University Affairs*, May 25, 2023, <https://www.universityaffairs.ca/opinion/in-my-opinion/chatgpt-we-need-to-talk-about-llms/>. Leo S. Lo, "My new favorite research partner is an AI: What roles can librarians play in the future?" *College & Research Libraries News* 84, no.6 (2023): 209, doi: <https://doi.org/10.5860/crln.84.6.209>.

<sup>2</sup> Caleb Ziems et al, "Can Large Language Models Transform Computational Social Science?" *arXiv:2305.03514v1 [cs.CL]* (2023), doi: <https://doi.org/10.48550/arXiv.2305.03514>. Mohammed Hosseini and Serge P. J. M. Horbach, "Fighting review fatigue or amplifying bias? Considerations and recommendations for use of ChatGPT and other large language models in scholarly peer review," *Research Integrity and Peer Review* 8, no. 4 (2023), <https://doi.org/10.1186/s41073-023-00133-5>. Sample, Ian, "Science journals ban list of ChatGPT as co-author on papers," *The Guardian*, January 26, 2023, <https://www.theguardian.com/science/2023/jan/26/science-journals-ban-listing-of-chatgpt-as-co-author-on-papers>.

The collected data will be analyzed using grounded theory methodology, as per Strauss and Corbin.<sup>3</sup> As such, there will be no pre-existing codes; rather, a coding structure will be developed by investigators listed on this protocol in the process of reading through the data. During coding and analysis, attention will be focused on what the informants identify as their research support needs in order to develop ideas for improving services.

The study at East Carolina University is connected to a suite of parallel studies being developed locally at other higher education institutions. Ithaka S+R, a not-for-profit research and consulting organization that helps the academic, cultural, and publishing communities, has been hired by the researchers to coordinate this parallel effort and to provide guidance on research methodology and data analysis. The research project as outlined here will be implemented exclusively by the investigators listed on this protocol. The anonymized aggregated data and analysis may also be used by ECU and Ithaka S+R toward public outputs as discussed below. Ithaka S+R will have no access to the research subjects or their personal information. Ithaka S+R will only have access to de-identified interview transcripts and de-identified metadata about the transcripts, not the audio recordings.

### *Participant Selection*

The subject population will consist of approximately fifteen scholars and instructors (aged at least 21 years old) including tenured, tenure-track faculty, clinical, and fixed term faculty. Recruitment will consist of personalized email invitations sent directly by the investigators listed on this protocol to researchers at ECU. See Appendix A for the text of the recruitment email and recruitment follow-up email. Participants will be selected purposively to capture the breadth of AI-related teaching and research practices across a variety of disciplines at ECU.

Baker and Edwards highlight that qualitative researchers should consider both methodology (purpose of the research) and practical issues (time available, intended audience) when determining the sample size of an interview-based study.<sup>4</sup> The exact number of interviews for the sample was informed by Guest's, Bunce's and Johnson's research demonstrating that data saturation can be achieved at the point of about twelve qualitative interviews, as well as Creswell's suggestion that fifteen to twenty interviews be conducted when utilizing a grounded theory approach to qualitative analysis.<sup>5</sup>

Because the goal of the project is to generate insights that can be used to inform and improve strategies, policies, and programs at ECU, the project is designed to be exploratory, small-scale and grounded in approach.<sup>6</sup> This study does not purport to be

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<sup>3</sup> A. Strauss and J. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Los Angeles, 2014).

<sup>4</sup> S.E. Baker and R. Edwards, "How Many Qualitative Interviews Is Enough?" *National Center for Research Methods*, discussion paper, 2012, accessed Mar. 11, 2019, <http://eprints.ncrm.ac.uk/2273/>.

<sup>5</sup> Greg Guest, Arwen Bunce, and Laura Johnson, "How Many Interviews Are Enough?," *Field Methods* 18, no. 1 (2006): pp. 59-82, <https://doi.org/10.1177/1525822x05279903>. J.W. Creswell, *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research* (Upper Saddle River, NJ, 2002); J.W. Creswell, *Qualitative Inquiry and Research Method: Choosing among Five Approaches*, 2nd edn. (Thousand Oaks, CA, 2007). <sup>5</sup> Strauss and Corbin, *Basics of Qualitative Research*.

<sup>6</sup> Strauss and Corbin, *Basics of Qualitative Research*.

statistically representative nor are the recommendations meant to be prescriptive; rather, the report and its recommendations are intended to be suggestive of areas for further investigation.

### *Risks and Benefits*

There are no known risks associated with participating in this study. Subjects may experience benefits in the form of increased insight and awareness into their own research and teaching practices and needs.

### *Compensation*

Subjects will not be offered compensation for participating in the study.

### *Confidentiality*

Interviews will be recorded and stored as digital files by the investigator(s) on OneDrive. The recordings will be transcribed by the investigators listed or by a third party transcription vendor bound by a non-disclosure agreement. Audio recording files will be destroyed immediately following transcription. Pseudonyms will be immediately applied to the interview transcripts and the metadata associated with the transcripts. Public reports of the research findings will invoke the participants by pseudonym and not provide demographic or contextual information that could be used to re-identify the participants.

### *Dissemination*

The results of the research may be publicly disseminated by the participating institutions and Ithaka S+R, such as through convenings, conference presentations, scholarly articles and as part of publicly available reports published online through *The ScholarShip* institutional repository at ECU, ECU's website, and the Ithaka S+R website. Any public outputs published by Ithaka S+R will be issued using a creative commons license, which will enable them to be deposited in *The ScholarShip* as long as Ithaka S+R can be attributed.