

Chatbot Use in an Online English Composition Course: A Mixed-Methods Study Proposal

Susan Suarez

Educational Technology Leadership, New Jersey City University

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Dr. Christopher D. Carnahan

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Introduction

This study will explore student and instructor perceptions of pedagogical chatbot implementation in an online undergraduate English Composition course. With the COVID-19 pandemic of 2020, many higher education institutions, along with K-12 educational systems, moved to exclusively online courses to maintain social distancing and provide safe virtual spaces for learning and teaching (Burgess & Sievertsen, 2020). Even prior to the hasty conversion to online education, there was already an increase in remote instruction in higher education with a rise in institutions providing online and blended courses and even full degree programs (Jarvie-Eggart et al., 2019).

While studies show that students enrolled in online courses actually prefer face-to-face courses, enrollment continues to increase (Tichavsky et al., 2015). This rise in registration may be attributed to increased availability through social distancing necessity, more course offerings, or because of the convenience that online schedules offer students. Most students who work full-time or have lifestyles that require versatility appreciate the flexibility and opportunity online education affords (Berry, 2018). The asynchronous communication inherent in online courses provides flexibility, but there are also issues in communication (Kelly, 2017). These issues in communication can impact students' affective learning, motivation, and cognition (Baker, 2010). Moreover, students enrolled in online courses often feel isolated (Berry, 2018; Forbes, 2019; Huang, 2019) and can lose motivation. The lack of immediacy in asynchronous communication may be solved by the use of a pedagogical chatbot for the course.

Statement of the Problem

The unavailability of instant access to the instructor leads to the impression of instructor absence and that the content must be self-taught (Tichavsky et al., 2015). Furthermore, students taking courses online may feel somewhat detached since they often work alone at a computer and have to wait more extended periods of time for feedback and responses than in a face-to-face course (Berry, 2018). Pedagogical chatbots may alleviate this issue by interacting naturally with learners and through scaffolding students' understanding, much like educators do (Winkler et al., 2020). While students enrolled in distance learning may feel isolated and prefer immediate feedback, research shows students prefer timely asynchronous communication over face-to-face meetings (Li, 2011). Pedagogical chatbots can offer instant feedback to questions while compiling a list of common inquiries for the instructor to act upon either through whole-class communication or revision of methodology.

Although studies do show mixed results for chatbot use in English language acquisition courses (Bii, 2013), the researcher found no studies presenting the perception of pedagogical chatbot use in English Composition courses. Particularly in the current pandemic climate where most courses are required to go fully online until social distancing is no longer required, a study to determine the perceived benefits of pedagogical chatbots is essential to the scholarship on online course communication. Such information may be used by higher education instructors to supplement or enhance their courses.

Description of the Study

The intention of this study is to explore the perceptions of students and their instructor of pedagogical chatbot use in an online undergraduate English Composition course. In order to generate substantive theory, this reflexive study will use a flexible, emerging design. Data will

be accumulated through surveys, chat transcripts, and nested saturation/redundancy sampling with open-ended interview questions that will take place through one-on-one virtual conferences. This study is necessary to explore the connections between a novel technology, the pedagogical chatbot, its utilization in the classroom, and user perception. Further research may develop the themes and find whether chatbots are effective at improving the learning experience or learning outcomes.

Mixed-method design “combines the quantitative and qualitative research techniques, methods, approaches, concepts, or language into a single study” (Johnson & Onwuegbuzie, 2004, p. 17). This study uses a sequential mixed-method approach, which is best suited for this study because of the contribution the qualitative and quantitative approaches make to each other. The qualitative data will be used to develop themes and theories and give deeper insight into the more generalized data explored during the quantitative phase. The exploratory, sequential, mixed-method approach offers the most successful means of integrating results from both qualitative and quantitative studies (Morgan, 2014). Both methods are used and their data analyzed to provide greater certainty to the overarching research question: How does instructor intent of pedagogical chatbot use affect user perception of the chatbots and of the course? The use of both provides additional coverage while one method informs the other (Morgan, 2014; Plano Clark & Ivankova, 2016). Because of the sequential approach of this design, there are two phases. The first phase is quantitative with data collected through a survey, followed by instrument design based on data analysis from Phase One. Once the instrument is designed, tested, and finalized, Phase Two will begin with structured, virtual face-to-face interviews and chatbot transcript collection and end with data analysis using open coding through the Atlas.ti tool. Finally, the study will integrate the results of the two phases.

Participants

This study will employ combined purposeful sampling strategies (Patton, 2014). The complete target population for this study includes one online English Composition course in New Jersey City University, an urban university situated in the northeast of the United States. At the time of this proposal, the makeup of the class is unknown although the average class size is 25. The sample size is convenience sampling that is dependent upon the course roster and the option of the students to participate. The instructor will not know which students opted to participate in the study to avoid any preferential treatment. Consent forms will be required with parents/guardians signing for students under eighteen. This sampling is appropriate as it consists of participants who have the option to use a chatbot in their course (Morse et al., 2002).

According to datausa.io's (n.d.) college profile, 2017 acceptance rate is 91.9% with a full enrollment of 8283 students, 67% of whom are full time. The 2017 data show that students enrolled at New Jersey City University in full-time undergraduate and graduate programs are broken down as follows: 36.4% Hispanic or Latino, 25.3% White, 21.4% Black or African American, 7.62% Asian, 1.77% two or more races, 0.483% Native Hawaiian or other Pacific Islanders, and 0.338% American Indian or Alaska Native. The majority of undergraduates are Hispanic or Latino female (24.5%), Hispanic or Latino male (16.2%), Black or African American female (14.7%). The survey will be implemented using Qualtrics and open for two weeks at the course midpoint (typically, week 8 of a traditional semester). One of the questions will collect contact information if there is a desire to participate in further research. Based on the survey data, participants for Phase Two will be determined using criterion-based case selection (Patton, 2014). Students who are enrolled in the course and are willing to engage further will be selected for interviews. The main concern during both phases is a lack of interest in participating.

The over-arching methodology is summarized in Table 1, followed by the research questions used to drive this study in Table 2.

Table 1.

Exploratory Sequential Design Procedural Flowchart

Phase	Procedure	Product
Phase One: Data Collection	<ul style="list-style-type: none"> • Qualtrics Survey 	<ul style="list-style-type: none"> • Numerical data • Free text responses
Phase One: Data Analysis	<ul style="list-style-type: none"> • Coding free text responses 	<ul style="list-style-type: none"> • Coded themes • Statistics
Integrating Phase One and Two	<ul style="list-style-type: none"> • Purposive sampling frame determined by survey findings • Develop instrument to answer questions raised by survey findings and RQ3 	<ul style="list-style-type: none"> • Interview sample • Interview schedule
Phase Two: Data Collection	<ul style="list-style-type: none"> • Structured virtual face-to-face interviews • Chatbot transcript collection 	<ul style="list-style-type: none"> • Interview transcripts
Phase Two: Data Analysis	<ul style="list-style-type: none"> • Open coding of interview transcripts 	<ul style="list-style-type: none"> • Charted data • Mapped and interpreted data • Thematic framework
Integration of Phase One and Phase Two results	<ul style="list-style-type: none"> • Interpretation of survey data 	<ul style="list-style-type: none"> • Research discussion • Future research needs

Table 2.

Research Questions, Data Types, Data Sources, Question Types.

Research Question	Data Type	Data Sources (Instruments)	Question Types
What is the intent and extent of pedagogical chatbot use by students in an online English composition course?	Quantitative	Survey	<ul style="list-style-type: none"> • Likert Scale • Mu • Opened Ended/Free text

What is the perception of the use of chatbots and feelings of isolation in an online English composition course?	Qualitative	Interviews Chatbot transcript	• Structured Open Ended
How does the intent and extent of pedagogical chatbot use by students in an online English composition course explain student perception of chatbots and feelings of isolation?	Mixed-methods	Integration of Qualitative & Quantitative Data	

Of course, it is necessary to address the validity of Phase 2's qualitative methodology with use of open-ended interview questions. The questions are structured, and while the interviewer is recoding the interview, she will create memos, and note ideas about the interviews and the categories. This is an important process of grounded theory as it helps to shape the analysis of extensive data (Creswell & Guetterman, 2019; Glaser & Holton, 2004). Detailing and coding the information accessed through the interviews and the chatbot use transcripts will help develop the themes. According to Creswell, "the value of qualitative research lies in the particular description and themes developed in the context of a specific site" (2018). This amount of detail allows for the generalizability of the study.

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Appendix A: Instrument

Qualtrics Survey Link: https://njcu.co1.qualtrics.com/jfe/form/SV_bd711pwmivtaafb

Export from Qualtrics:

Classroom Chatbot Use

Survey Flow

Block: Welcome (5 Questions)

Standard: Demographic Information (5 Questions)

Standard: Use and Perception (5 Questions)

Standard: More Information (2 Questions)

Start of Block: Welcome

Q1 Welcome and thank you for taking the time to complete this questionnaire.

The aim of this questionnaire is to collect the attitudes higher education students and instructors have towards the idea of classroom use of chatbots.

This data is collected by Susan Suarez, an Educational Technology Leadership doctoral student at NJCU, to examine the need for further study of pedagogical chatbots. Data will be reported anonymously, although participants will have the opportunity to opt in for interviews. This questionnaire will take approximately 2 minutes to complete.

If you have any questions, please contact Susan Suarez @ ssuarez5@njcu.edu

Q2 Do you consent to this survey?

- Yes (1)
- No (2)

Skip To: End of Survey If Do you consent to this survey? = No

Q10 Are you 18 years of age or older?

- Yes (1)
- No (2)

Skip To: End of Survey If Are you 18 years of age or older? = No

Q3 Please enter your first and last name.

Q4 Part 1 of 4

End of Block: Welcome

Start of Block: Demographic Information

Q5 Which best describes your enrollment status?

- Full-time student (1)
- Part-time student (2)

Q6 What is the highest degree or level of education you have completed?

- Currently an undergraduate student (1)
- Bachelor's Degree (2)
- Master's Degree (3)
- Doctoral Degree (4)

Q7 What is your age?

- 18-24 years old (1)
- 25-34 years old (2)
- 35-44 years old (3)
- 45-54 years old (4)

- o 55-64 years old (5)
- o 65-74 years old (6)
- o 75 years or older (7)

Q8 What gender do you identify as?

- o A. Male (1)
- o B. Female (2)
- o C. _____ (3) _____
- o D. Prefer not to answer (4)

Q9 Part 2 of 4 Halfway done!

End of Block: Demographic Information

Start of Block: Use and Perception

Q10 Chatbots, or conversational agents, are software applications that simulate written or spoken human speech. They allow humans to interact with digital devices as if they were communicating with a real person.

A pedagogical chatbot is a chatbot used in an educational setting to answer general questions in areas such as assignments and deadlines.

The following questions ask for your feedback on chatbots in general and the use of chatbots in education.

Q11 What is your overall experience with chatbots?

Encounter with Chatbot	Your Experience	
App such as Replika (1)	▼ Yes (1 ... No (2)	▼ Positive (1 ... N/A (4)
Customer Service Site (2)	▼ Yes (1 ... No (2)	▼ Positive (1 ... N/A (4)
Facebook Messenger (3)	▼ Yes (1 ... No (2)	▼ Positive (1 ... N/A (4)

KIK (4) ▼ Yes (1 ... No (2) ▼ Positive (1 ... N/A (4)

Google Assistant (5) ▼ Yes (1 ... No (2) ▼ Positive (1 ... N/A (4)

School setting (6) ▼ Yes (1 ... No (2) ▼ Positive (1 ... N/A (4)

Other (7) ▼ Yes (1 ... No (2) ▼ Positive (1 ... N/A (4)

Q12 How frequently do you use the following chatbots?

	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Daily (5)	
Class Chatbot (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Customer Service Chatbot (2)		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q13 In your experience, how useful do you think the class chatbot is in a school setting?

Extremely useful (1) Moderately useful (2) Slightly useful (3) Neither useful nor useless (4)

Slightly useless (5) Moderately useless (6) Extremely useless (7)

Checks for Understanding (quizzes) (1)

Quick access to basic information outside of office or class hours (2)

Scheduling appointments between student and instructor (3)

Assignment formatting or requirements (4)

Content clarification (help with a lesson) (5)

Review of content (6)

Additional resources for course content (7)

Amusement (just for fun conversation on the course content) (8)

Q14 Part 3 of 4

Thank you for continuing with the survey. The survey is almost complete.

End of Block: Use and Perception

Start of Block: More Information

Q15 Please share any additional information or comments.

Q16 Please enter your email if you are willing to participate in an interview on this study.

End of Block: More Information

Appendix B: IRB

NJCU Institutional Review Board
Email: IRB@njcu.edu

Investigator's Checklist for IRB Submission

Please make sure that your application is complete prior to submitting it to the NJCU IRB. Please save the entire application and all supporting documents in one file using a file format such as DoeJ_ddmmyy_ver_1.pdf. Please make sure that your file name includes your full name and please do not use “final” in the file name, as there may be revisions of the original application. Please be certain that your consent form (or procedure), if applicable, includes all of the information provided below.

All applications must be submitted by the NJCU faculty or staff member listed as the Principal Investigator (PI). Neither students nor external researchers may submit an application. (For all students, a faculty/staff member must serve as the PI. All external researchers must have an NJCU faculty/staff member as a sponsor.)

Submit the completed application and accompanying documents as one document or pdf to IRB@njcu.edu and kresch@njcu.edu.


Application

- Completed and signed Proposal Submission Form
- Protocol Summary (5-page limit) that identifies the research question and describes methods
- Copies of data collection instruments that coincide with the study described in the Protocol Summary
- Recruitment materials (as applicable)
- Consent document(s) or the rationale for deviation from written consent
- Certificate of training in protection of human subjects from the Collaborative Institutional Training Initiative (CITI Program) (<https://about.citiprogram.org/>) for **all** researchers involved in the project. A separate guidance is available on CITI certification programs.

Please ensure that **all consent forms** are written for a general audience; are specific to subjects (and/or their parents/guardians); identify the researcher, the researcher's position, and his/her institution; and:

- Describe the study and the procedures (activities, duration, and/or audio, photographic, or videotaping*) in lay terms
- Clearly state that there are no benefits or known risks or clearly explain the precautions that will be taken if there are risks (Monetary payment does not constitute a benefit.)
- Include a statement that participation is voluntary and that all subjects have the right to skip any questions or activities and to opt out at any time without penalty
- Provide the names of all contact persons for the study, including the Principal Investigator and, for external researchers, the NJCU sponsor
- Include this statement: “If you have questions about your rights as a participant in this study, please contact Dr. Ashok Vaseashta, chair of the NJCU IRB, at (201) 200-2453 or avaseashta@njcu.edu.”
- Include a statement of confidentiality**
- Have places for signatures and the date.

* Furthermore, for any study using audio, photographic, or video recordings, the researcher must also completely explain the use of these recordings, the plan for their storage, and also, if and how this information will be protected and disseminated.



** If the research project is planned to deviate from complete anonymity, the researcher may include a waiver to use the names of respondents, but the researcher must specify how all data will be used and disseminated.

Please expect acknowledgement of your submission within 5 working days. If there is no acknowledgement, please email kresch@njcu.edu and avaseashta@njcu.edu.

**NJCU Institutional Review Board Application for
Review of Research Project**

Email all materials in one file to:
IRB@njcu.edu and
kresch@njcu.edu.

FOR OFFICE USE ONLY – Please do not provide any information in this box	
Date Complete Application Submitted	
Review Type <input type="checkbox"/>	Expedited <input type="checkbox"/> Full <input type="checkbox"/> Exempt <input type="checkbox"/>
Principal Investigator*	

* For all student research, the faculty advisor is the Principal Investigator.

Date of Submission: 12/7/2020

Name (PI)/Sponsor Submitting Application:

Application Type: Original Previously Approved

Proposal Title	Chatbot Use in an Online English Composition Course: A Mixed-Methods Study Proposal
Proposed Start Date	9/1/2021
Anticipated Duration of Research	20 weeks
CITI Certification by all researchers (Certificates must be attached.)	Yes

Type of Research

- Student/Classroom project
- Faculty research project
- Staff research project
- External researcher project (All external researchers must have an NJCU faculty/staff sponsor.)

NJCU Investigators (Please list additional investigators as necessary)

Name: **Dr. Christopher Carnahan**
Department: **Educational Technology**
Telephone number: **201-200-2547**
Email address: **ccarnahan@njcu.edu**

Co-Investigator (including student researchers)

Name: **Susan Suarez**
Department: **Educational Technology**
Telephone number: **862-812-4839**
Email address: **ssuarezz5@njcu.edu**

Co-Investigator (including student researchers)

Name: Click here to enter Name.
Department: Click here to enter Department.
Telephone number: Click here to enter Telephone number.
Email address: Click here to enter Email address.

Co-Investigator (including student researchers)

Name: Click here to enter Name.
Department: Click here to enter Department.
Telephone number: Click here to enter Telephone number.
Email address: Click here to enter Email address.

*Any NJCU investigator who plans to work on this project either with or for a Principal Investigator or a Co-Investigator at another institution must identify those investigators and their institutions below.

External Investigators

Name: Click here to enter Name.
Department: Click here to enter Department.
Telephone number: Click here to enter Telephone number.
Email address: Click here to enter Email address.

Name: Click here to enter Name.
Department: Click here to enter Department.
Telephone number: Click here to enter Telephone number.
Email address: Click here to enter Email address.

Name: Click here to enter Name.
Department: Click here to enter Department.
Telephone number: Click here to enter Telephone number.
Email address: Click here to enter Email address.

Name: [Click here to enter Name.](#)
Department: [Click here to enter Department.](#)
Telephone number: [Click here to enter Telephone number.](#)
Email address: [Click here to enter Email address.](#)

NJCU Sponsor (if the researcher is not affiliated with NJCU)

Name: [Click here to enter Name.](#)
Department: [Click here to enter Department.](#)
Telephone number: [Click here to enter Telephone number.](#)
Email address: [Click here to enter Email address.](#)

X


NJCU Sponsor

Data Sources

1. Number of participants: 25
2. How was this number determined (e.g., power analysis)? Average class size
3. Does this project require the collection of new data? Yes No
- 3A. If yes, how will participants be selected or recruited (<4-5 sentences)?

This study will employ combined purposeful sampling strategies. The complete target population for this study includes one online English Composition course in New Jersey City University, an urban university situated in the northeast of the United States. At the time of this proposal, the makeup of the class is unknown although the average class size is 25. The sample size is convenience sampling that is dependent upon the course roster and the option of the students to participate. The instructor will not know which students opted to participate in the study to avoid any preferential treatment. Consent forms will be required with

- 3B. Will subjects participate on a fully voluntary basis? Yes No
- 3C. Will subjects be compensated for their participation? Yes No



3D. If yes, please briefly describe the compensation:

Click here to enter text.

4. Does this project make use of human tissue or cell lines:

Yes No

5. Briefly describe the research methodology(ies) to be used in this study (e.g., focus group, participant observation, survey, experiment). (<4-5 sentences)

The survey will be implemented using Qualtrics and open for two weeks at the course midpoint (typically, week 8 of a traditional semester). One of the questions will collect contact information if there is a desire to participate in further research. Based on the survey data, participants for Phase Two will be determined using criterion-based case selection (Patton, 2014). Students who are enrolled in the course and are willing to engage further will be selected for video-conference interviews.

6. Does this project use data that have already been collected for a non-research purpose or by another researcher?

Yes No

6A. If yes, what is the source of the data? (3-4 sentences)

Click here to enter text.

6B. Are the data accessible in the public domain?

Yes No

6C. If no, does the data include information that would allow identification of individuals, either directly or indirectly?

Yes No

6D. If yes, please explain briefly how participant confidentiality will be safeguarded. (3-4 sentences)

The data will be stored confidentially on the researcher's computer which is not accessed by any others. The information will NOT be on the cloud. Atlas.io data will be access by onely the researcher and remain password protected.

Participant Risks

7. Will participants be exposed to any stresses (e.g., anxiety, pain, etc.) or physical harm (e.g., injury infection, etc.) in connection with this research? Yes No

7A. If yes, please briefly explain what risks may be involved in the research, what specific steps will be taken to minimize and monitor the risk, and what will be done to compensate and/or treat participants who are harmed by the research. (4-5 sentences).

Click here to enter text.

8. Does the research design require that participants be deceived? Yes No

If yes, please briefly explain why deception is necessary and what steps will be taken to reduce potential harm from this deception. (<3-5 sentences)

Click here to enter text.

Potentially Vulnerable

9. Human Research Subject Populations – Please check if your research involves vulnerable populations:

Physically/Mentally Challenged Individuals: Yes No

Young children (ages 0 – 13): Yes No

Older children (ages 14 – 17): Yes No

Senior Citizens (over age 65): Yes No

Pregnant women: Yes

No

Prisoners:

Yes No

9A. If anything in Question #9 is checked **yes**, please briefly explain how the rights of this (these) population(s) will be protected. (<4-5 sentences)

Click here to enter text.

Informed Consent (Please attach your consent form(s).)

10. Consent form must contain the following in lay terms:

- The voluntary nature of their participation and the freedom to withdraw without penalty at any time: Yes No
- The purposes and procedures of the research: Yes No
- Any reasonably foreseeable risks or discomfort: Yes No
- Any benefits to them or to others from the research: Yes No
- The extent to which confidentiality will be maintained: Yes No
- Whom to contact for information about the research participants' rights and any research-related injury: Yes No

10A. If the answer to anything in Question 10 was checked no, please briefly explain why the research requires an alteration of the standard elements of informed consent.

Click here to enter text.

11. How will participants' informed consent be documented? Please check all that apply.

- Signature on a written consent document
- Signature on a document to be read to the participants and witnessed by another party
- E-signature on an electronic form/survey
- Written documentation of informed consent will not be obtained because one of more of the following criteria is satisfied (check all that apply):
 - The only link between the subject and the research would be the informed consent documentation and the primary risk is loss of confidentiality.
 - The risks to participate, including risks associated with the loss of privacy, are no greater than those ordinarily encountered in daily life and the research involves no procedure for which written consent is normally required outside of the research context.

12. Who will obtain the informed consent from the participants?

- Principal Investigator
- Co-Investigator
- Sponsor (in cases where the Principal Investigator is not affiliated with NJCU)
- Other
- Not applicable

13. Please include your protocol summary (5-page maximum) and your recruitment materials (as applicable). You are provided space to do this at the end of this application. Please see *APPENDIX A. Protocol Summary*.

External Reviews and Funding

14. Has this protocol been reviewed by an Institutional Review Board or Human Subjects Review Committee at any other institution(s)?

Yes No

If yes, at what institution(s)?

Click here to enter institution(s).

15. What is its status? Approved Rejected Pending (or provisionally approved)

16. Has this protocol been submitted for federal funding? Yes No

16A. If yes, list the agency or organization:

Click here to enter agency or organization.

Submission Date: Click here to enter a date.

Funding Start Date: Click here to enter a date. Anticipated

Actual

Contact Person: Click here to enter Contact Person.

Contact's Telephone Number: Click here to enter Contact's Telephone #.

17. Has this protocol been submitted for any other types of funding: Yes No

17A: If yes, list the agency or organization:

Click here to enter agency or organization.

Funding Start Date: Click here to enter a date. Anticipated

Actual

Contact Person: Click here to enter Contact Person.

Contact's Telephone Number: Click here to enter Contact's Telephone #.



Proof of CITI Certification

Please provide documentation of current CITI certification in human subjects research for **all** researchers involved in this project.

Certificate of Agreement

The signatures* of all researchers involved in this project must be provided.

I/We certify that I/we agree to comply with the requirements of both NJCU and the Office for Human Research Protection (OHRP) of the United States Department of Health and Human Services as described in 45 CFR §46.

X

Principal Investigator

X

Co-Principal Investigator

X

Co-Principal Investigator

X

Co-Principal Investigator

X

Co-Principal Investigator

***Instructions for signatures:** First, save your application file and then open it. Sign the document by right clicking on the signature line and selecting "Sign." **DO NOT SAVE** the file, **simply CLOSE IT**. The signature will be automatically saved. If applicable, send the file as an email attachment to the next signatory. Every subsequent signatory must also follow these instructions.

Please submit the completed application, checklist, and accompanying documents as one document or PDF file to IRB@njcu.edu and kresch@njcu.edu.

All applications must be submitted by the NJCU faculty or staff member serving as the Principal Investigator. Neither students nor external researchers may submit an application.



**APPENDIX A. Protocol Summary*; Surveys,
including recruitment materials as applicable; and
consent forms.**

Please note: The protocol summary (5-page maximum) should only include the central elements of the project such as the rationale, objectives, methods, populations, and period.

The body of the paper will serve as the protocol summary.

Appendix C: Consent Letter

I agree to participate in a study entitled “Chatbot Use in an Online English Composition Course: A Mixed-Methods Study.” This study is being conducted by Susan Suarez, an Educational Technology Leadership doctoral student at New Jersey City University under Principal Investigator, Dr. Christopher Carnahan. The aim of the study is to determine whether the reasons for, or the frequency of, using chatbots in a class has an impact on student perceptions in an online English Composition course.

The study begins with a short survey administered during the 8th week of the semester, which is approximately 3 minutes. Students are able to opt in to further discuss their experiences with the class chatbot. Additional data is collected and anonymized from the chatbot transcripts. During week 14, those students who opted in will be involved in online video conferencing interviews with the researcher Susan Suarez. The audio of the videoconference will be recorded and transcribed. Each interview is not to exceed 45 minutes. The questions will have been developed based upon the survey responses and chatbot transcripts.

I understand that there are no physical or psychological risks involved in this study, and that I am free to withdraw my participation at any time without penalty.

I understand that my participation does not imply employment with the state of New Jersey, New Jersey City University, my professor, the co-investigator, or the principal investigator.

I understand that my responses will be anonymous, and I understand that all data gathered will be confidential. I agree that any information obtained from this study may be used in any way thought best for publication or education provided that I am in no way identified and my name is not used.

I understand if I have any questions about this study, you may contact the researcher Susan Suarez at ssuarez5@njcu.edu or the Principal Investigator, Dr. Chris Carnahan at ccarnahan@njcu.edu

If I have any questions or problems concerning this study, I may contact Dr. Ashok Vaseashta, chair of the NJCU Institutional Review Board, at 201-200-2453 or avaseashta@njcu.edu.

Participant Signature

Date

Principal Investigator Signature

Date

Appendix D: CITI Certification

Completion Date 14-Oct-2020
Expiration Date 14-Oct-2023
Record ID 38954218

This is to certify that:

Susan Suarez

Has completed the following CITI Program course:

Social & Behavioral Research - Basic/Refresher (Curriculum Group)
Social & Behavioral Research (Course Learner Group)
1 - Basic Course (Stage)

Not valid for renewal of certification through CME. Do not use for TransCelerate mutual recognition (see Completion Report).

Under requirements set by:

New Jersey City University

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?wb75873b7-4778-4591-b646-8ae5784d0ed1-38954218