

**UTILIZATION OF MICROSOFT TEAMS FOR ONLINE COMMUNICATION
AMONG UNDERGRADUATE RESEARCH STUDENTS**

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Abstract

Among the many options for a learning management system (LMS), Office 365 is one of the most popular among colleges and universities in the Philippines and abroad. While there are substantial studies conducted on the use of LMS for online communication in general, action research conducted to a specific higher education institution is still needed to produce immediate evidence that are readily applicable to a particular academic milieu. This study aims to generate a substantive grounded theory that can be immediately applied to the research writing courses in St. Jude College of Dasmariñas, Cavite (SJCDC). Twenty-two private conversations in Microsoft Teams were selected and analyzed using a grounded theory approach. The results revealed that “routes of online communication,” “functions of online communication,” “the role of the research instructor,” and “student feedback” constitute the dynamics of students-instructor online communication in Microsoft Teams. Therefore, consideration of the multiple aspects presented in the R2F2 model for online communication is necessary to achieve greater understanding of the dynamics of students-to-instructor online communication in research. As such, continuous use of Microsoft Teams, faculty training emphasis on effective online communication using Office 365, and verificatory studies for other courses beside research are recommended for SJCDC.

Keywords: Learning Management System; Microsoft Teams; Online Communication; Grounded Theory

Introduction

The use of learning management system (LMS) has become the norm in many higher education institutions (HEIs) during the post-pandemic world. Though there may be initial resistance to online learning as in the case of a university in Oman (Al-Farazi, 2023), it subsided later on because of the necessity brought out by the COVID-19 pandemic. In many cases, COVID-19 played a role in increasing the acceptance of online learning because of its restrictive effects on physical interactions. In lieu of this, Microsoft Teams (MS Teams) has become one of the most used and recognized online learning platforms during the period of COVID-19 pandemic. As shown from the study of Barry and colleagues (2021), the online meeting feature of MS Teams is familiar news in the academe and is often used by educators to conduct their real-time classes. However, despite the inclusion of instructors from different levels (i.e., pre-kinder, third grade, fifth grade, and tertiary) as examples of how various distance education applications function, MS Teams was only presented to have been used by only one university professor which suggests its limitation in terms of usability especially for learners below the tertiary education level. In contrast, Information and Communication Technology (ICT) students in India highly rated the usability of the MS Teams through the Technology Acceptance Model (TAM) and the System Usability Scale (SUS) with no statistically significant difference (Pal & Vanijja, 2020). Further, in a systematic review on the perception of students conducted by Shetty and Gurav (2023) which covers studies that feature various online communication tools such as MS Teams, the presence of both positive and negative feedback can be observed. Learning through online platforms is highly recognized for its low cost, flexibility, and compatibility with independent learning. Nevertheless, online learning has been criticized for lack of interaction and vulnerability against technical issues, and threats to security and data privacy.

MS Teams has been used for different functions by educators. Delivering instructions and online communication are the most common usage of the platform (see Anđelković, 2023; Al-Fazari, 2023). The popularity of MS Teams for online communication is consistent with its original function before it became a popular learning management system during the COVID-19 pandemic. However, MS Teams is less popular for conducting assessments because of the limited types of questions that can be made through Microsoft Forms (Anđelković, 2023). In one case, MS Teams has been used to facilitate asynchronous focus group discussion which the researchers found to be more effective in terms of less drop-out rate compared to traditional face-to-face focus group discussion (Frey & Bloch, 2023).

There is a consensus in previous studies that online learning cannot thoroughly replace face-to-face learning based on the opinions of students. The cited literature showed that MS Teams is an effective platform for delivering online communication in academic context. Previous studies showed that the platform was a popular choice for delivering instructional services but more so, for its online communication features. Nevertheless, there is little information on student-teacher communication using this platform. This study fills this gap by investigating 22 conversation logs in MS Teams that were retrieved from a higher education institution in Cavite.

Objectives of the Study

The aim of this action research is to generate a substantive grounded theory that can be immediately applied to the research writing courses in St. Jude College of Dasmariñas, Cavite. Pursuant to the agenda of an action research, the generation of the substantive theory will help improve professional practice in research education for the said college. In particular, this research will explain the dynamics of online communication between the students and their instructor in research as evidenced by the recorded conversations in MS Teams.

Methodology

An action research design utilizing a grounded theory approach was used to inform the research procedure (Norton, 2009). For this study, the researcher is also the instructor for the research writing course for undergraduate research students. The college where this study took place offers bachelor's degree programs for nursing, psychology, business administration, accountancy, education, hospitality management, radiologic technology, and computer science. Although at the time of this study, there were no students of research under business administration and computer science programs due to the schedule of their course offerings as prescribed by their respective curriculum. The modality of instruction for research at the time of this study is face-to-face but the college retains the use of Office 365 as a learning management system. Conversation logs from 22 undergraduate research students were retrieved from the MS Teams of the researcher as theoretical samples. The conversations were coded numerically to protect the data privacy rights of the students according to Republic Act No. 10173 or the Data Privacy Act of 2012 (Data Privacy Act, 2012), then subjected to constant comparative analysis following the protocol of Glasser and Strauss (1968) who are the proponents of grounded theory research. The constant comparative analysis consists of four stages: (1) comparison of theoretical samples, (2) integrating categories and properties that emerged from the comparison of theoretical samples, (3) delimiting the theory by reviewing the generated categories and properties, and (4) writing the theory. Glasser and Strauss (1968) mentioned that there are two types of theory that could be generated from this approach, namely, substantive and formal. The former refers to a grounded theory that can be substantiated by the immediate setting of the theoretical samples. The latter refers to a grounded theory that can be generalized analytically to other essentially similar contexts. This study expects to generate a substantive type of grounded theory about the online communication dynamics of students and instructors of research at the undergraduate level.

Results and Discussion

Results of the grounded theory analysis performed on the 22 conversation logs generated four main categories that describe the dynamics of student-teacher online communication in MS Teams for undergraduate research writing course. These categories are the routes of online communication in MS Teams, its functions, the role of the research instructor as a giver, and student feedback. Each of these categories constitute the dynamics in which undergraduate research students utilize MS Teams for online communication with their research instructor.

Routes of Online Communication

This category presents two main directions in which conversation between research students and research instructor may lead to. The first route begins with an awareness of the ambiguities in various aspects of the research writing course. In taking this route, the research student acknowledges that there is a lack of understanding on his/her part pertaining to certain aspects of the course. These aspects include given directions in particular assignments, modes and schedule of classes, and joining a class in MS Teams. Table 1 presents some examples of messages from the conversation logs of undergraduate research students in MS Teams.

Table 1*Examples of Extracts Pertaining to the Ambiguities in Research Writing Course*

Assignment Directions	Modes and Schedule of Classes	Joining a Class in MS Teams
"Good morning, sir. This is Remi from BSP 3. I would just want to clarify the instructions for the assignment in Week 3 pertaining to the research proposal. According to the instructions posted in the assignment tab, our topics could either be qualitative or quantitative but during our Thursday class, you mentioned that our topics should be qualitative. I wonder which should we follow?"	"Good morning, sir. I'm Michaela, a 3rd year BSRT student in research. May I know if we're going to have a face-to-face class tomorrow? Thank you."	"Good morning, sir, this is Michaela from 3rd year BSRT. May I request to be added as member in our Teams for the Introduction to Research? Thank you."
"Hello sir! Good afternoon. I just want to ask if we really need to answer all the assigned forms in Research here in Teams, like the Week 1 Tracker for example. Thank you."	"Hello and good day sir! Are we going to have face-to-face class tomorrow for the Introduction to Research, 7AM-10AM, Thursday?"	"Hello and good morning, sir. I request to be added to the Teams for our class in Introduction to Research. Thanks."

The second route is taken by research students who anticipate their inability to comply with the research tasks within the given period of time. There is a recognition of one's limitations when it comes to one's own capacity to complete assignments which are often followed by excuses that the student deemed to be valid. Research students express their intention to go with this route by confessing their inability coupled with an explanation as to the confessed inability to comply with the requirement. They would say for example, "I only recently got my proposed topic approved which is why I'm one of those who would be submitting the introduction part late" or "I was not able submit [the requirement] personally because of fever." In any case, student who chooses to take this route for online communication with the research instructor always pair their confession with excuses however valid the latter may be perceived as such by the instructor.

Functions of Online Communication

There are four main functions which serve as the properties for this second category. These are "confirming information," "seeking guidance," "sharing reports on updates," and "requesting consideration." The first three connect to the first route of online communication, namely, "perceived ambiguities in the research writing course." Confirming information happens when the student is not sure about his/her interpretation of the given instructions in a particular assignment in MS Teams. For example, Riley messaged the research instructor with the instructor, "Good evening, sir. I just want to clarify if I get the instructions right. Do we just have to turn in the assignment in Teams and submit the printed copy on Monday?"

In addition, the research student seems to already have an initial understanding of what the instruction is telling him/her to do as evidenced by their inclusion of paraphrased assignment instructions in their messages. For example, "When selecting topics for proposal, do we just have to relate the topics to the research agenda of allied health sciences, or do we need to just link the topics exclusively to nursing?" This lack of certainty over one's understanding is mitigated by a confirmation that the student may receive from the research instructor. Often, research students will ask brief clarificatory questions such as, "Can I do quantitative research for this topic?" or "Can I propose this topic for approval?" These questions are intended to generate a clear and brief categorical response from the research instructor (i.e., "yes" or "no").

Another function of online communication in MS Teams for undergraduate research students is to seek guidance from their instructor. As opposed to confirming information, seeking guidance is more didactic as the research instructor is expected to provide clear directions on what to do over certain research scenarios encountered by the research students. These scenarios may include submission procedures of assignments, how to write certain parts of research paper, and obtaining updates on results of major research activities such as approval of research topics. In such cases, research students seek active guidance from their research instructor as to how to proceed to the next phase of their research writing. As a response, the research instructor provides detailed directions when there are no available ones to be seen in official posts or in the assignment instructions. For example, when asked to comment on the plausibility of some topics for the research proposal, the conversation between James and the Research Instructor goes like this:

James: "Good morning, sir! I was just wondering if you can comment on these topics for my proposal: (1) Exploring the social impact on student nurse in health care setting; (2) A qualitative inquiry into student nurse challenges with prioritization management; (3) Exploring the factors influencing the attention span challenges among student nurse; (4) Discovering the unspoken struggle of self- depreciation among student nurse; (5) Understanding the impact of poor communication skills among student nurse. Thank you.

Research Instructor: "Try to not limit your topics to the mental struggle of nursing students. In my opinion, that topic is already saturated. Among the topics you presented, Topic 1 seems to be the most plausible, but you need to clarify the aspect of social impact that you want to explore and remove 'healthcare setting' since it is already pretty obvious that that is the context of your study with the mention of 'student nurse.'"

Detailed response of research instructor like in the above-mentioned conversation, is common when the research instructor performs his role as a give of guidance. In comparison to merely giving information, giving guidance involves specific imperatives for the student to follow. However, when the source of information in which the concern of the guidance-seeking student rests was already available elsewhere, the research instructor only redirects the student to where he/she could find the answers to his/her questions. This is evident in the following conversation,

Angel: *If ever, can I propose a topic about nurse-patient communication since it seems to fit the research agenda for my program?*

Research Instructor: *Yes, you may try to propose it to the dean. Also, please follow the indicated instructions in our Teams when consulting him about your topics. Thanks!*

The third function is that of sharing updates on the resolution of student concerns. Unlike the two previous functions which are usually initiated by the research students, this one is initiated by the instructor. The difference lies in who will message whom first but at the core of this arrangement is the instructor's initiative to establish a quick update rule for his research classes. Thus, when the instructor commits to give updates to a certain student pertaining the status of his/her research topic proposal, it was the instructor who messaged the student first using MS Team chat feature. On the other hand, when the research student was instructed by the research instructor to give him updates on the development of a concern, it was the student who messages the research instructor to report. This may be illustrated in Table 2.

Table 2

Two Examples of Update-Sharing Between Students and Instructor

Student to Instructor	Instructor to Student
Friya: Good day sir. I'm sending you an image of my approved topic signed by dean.	Research Instructor: I already corrected the spelling of your name in the spreadsheet.
Research Instructor: Okay this is noted.	Zia: Thank you, sir.

The fourth function pertains to the request for consideration. This function is exclusive for research students who take the second route of online communication in MS Teams, that is, the inability to comply with the requirements at a given time period. The process of requesting consideration involves the giving of excuse regardless of its perceived validity, the appeal to the instructor's pity, and the waiting time for the instructor's verdict.

The Giving Role of the Research Instructor

The third category of the dynamics in online communication between the research students and the research instructor is that of the giving role of the research instructor. This category directly connects to the second category as the means in which the intended functions are achieved by the research students. In responding to the online messages of research students, the research instructor plays the three-fold role of giving information, instruction, and/or consideration. Giving of information refers to the function of the research instructor in which he provides the students with the requested information by either sharing updates, giving of reminders, and/or confirming student's understanding. The giving of information fulfills two of the functions indicated in the second category, namely, "confirming information" and "sharing updates." The student-instructor communication turns to a strictly informative nature in the event when the research instructor assumes the role of information-giver. The content of information varies depending on the requested information as in the following excerpts:

"Proceed to the director for academic affairs for consultation and observe the indicated instructions in our most recent announcement in Teams."

"You may also request for a reassignment of approved topic from students who have more than one approved topic; just follow the instructions in the recent assignment."

"Make sure that you have completed all submission in the proper MS Teams class for section 2."

"Check the updates of topics proposal status to see if the topic you proposed can be classified as experimental."

On the other hand, the giving of instruction pertains to that role of the research instructor in which clear directions are provided to the students either before they communicate online through MS Teams or after it. Instances in which instructions are given before the student initiate online communication are seen in the assigning of tasks through MS Teams and when the research instructor redirects the student to the proper locus of answers to their questions. Statements like, "kindly check our recent post in Teams," "please proceed to the dean for consultation and observe the indicated instructions in our recent post," and "kindly check the indicated instructions in the assigned task in Teams" reflect this instructive pattern on the part of the research instructor.

In some cases, the research instructor may also provide fresh instructions as a response to the online message of the student, if no prior indicated instructions have been provided pertaining the student's concern. For instance, in this exchange between the research instructor and the student Kate reveals how the former provides additional instructions to the student as to how to proceed with her conceptual framework for mixed-method research,

Kate: *Good evening, sir. I apologize for this late message. I just want to ask how to proceed with my theoretical or conceptual framework for my topic about workforce issues in the nursing profession if I'm to use a mixed-method research design.*

Research Instructor: *In the conceptual framework, you should just focus on the variables of your study. In the diagram, try to present the relationship of the variables. There is not much distinction in the framework even if you're planning to use a mixed-method design for your study.*

By successfully performing this instructive role, the research instructor is contributing to the fulfillment of the function of online communication to seek guidance from the research instructor.

Finally, the "giving of consideration" which is exclusive to the second route of the online communication, fulfills the online communication function of requesting "for consideration." The requestor in this scenario is always the research students and the requests relate to their compliance on particular research requirements. As such, it often has to do with the submission of assignments or extension of due dates.

Student Feedback

The student feedback can be observed in the closing part of the student-instructor online communication in MS Teams. Based on the 22 conversation logs covered in this study, student feedback in online communication through MS Teams is predominantly positive as reflected through the recognition of shortcomings, expressed gratitude, and commitment to the research tasks by the research student. Recognition of shortcomings is articulated in phrases such as "I'm sorry for not submitting my manuscript draft," and "my apologies as I'm confused on how to proceed with the review of literature."

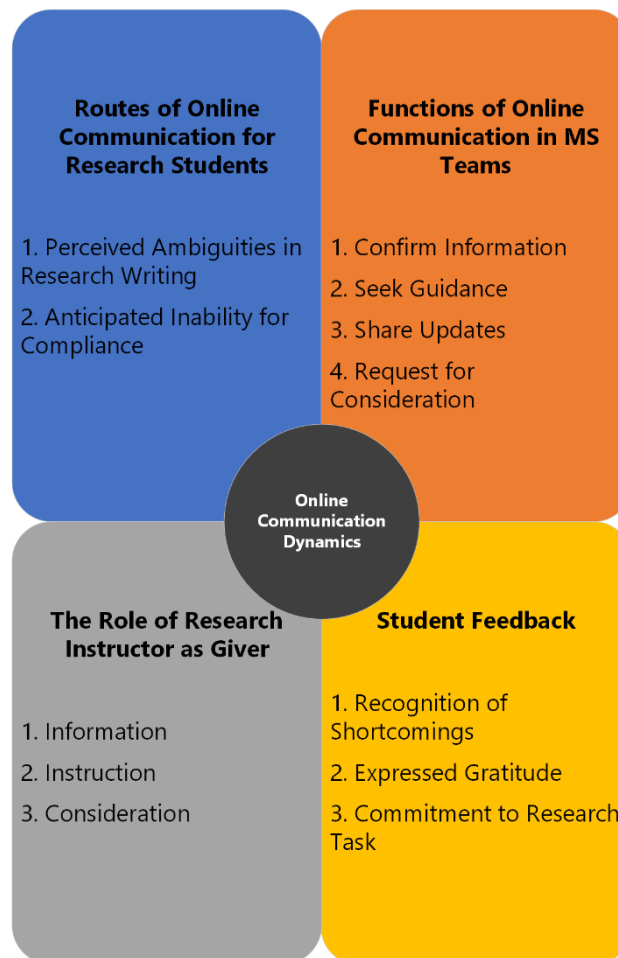
On the other hand, the expressed gratitude is observed regardless of the taken route of online communication. This is indicative of the transcendental quality of this feedback in the dynamics of online student-instructor communication in MS Teams. This property of student feedback is usually observed in the closing part of the conversation of the instructor and the student. As such, expressed gratitude functions both as a way to communicate the student's appreciation of the research instructor's help and also to formally end the conversation. Expressed gratitude is briefly stated in words such as "thank you sir," "thank you po," or "thank you so much." As a response, the instructor usually replies with "you're welcome," "no worries," "no problem," or simply by giving the thank-you message a heart or like response.

Finally, "commitment to research tasks" is expressed by the student as a response to the instructor's directions. Thus, this is exclusive feedback to the function of seeking guidance and the role of the instructor in providing instructions to the student. This is expressed by words like "Noted," "Thank you!" or "Will do." It is noteworthy to mention that the words "thank you," which is also used as an expression of gratitude, is also used here as a resolution to commit to the research tasks after receiving help from the research instructor in the form of additional information, further instruction, or consideration.

The categories and properties indicated above became the basis for a proposed conceptual model of online communication dynamics among undergraduate research students and instructor called R2F2 Online Communication Dynamics. "R2F2" is a mnemonic device to recall all of the dynamics of the generated conceptual framework. The "R2" refers to the first letter of two categories in the model, namely, "routes of online communication" and "role of the research instructor." The "F2" on the other hand, refers to the remaining two dynamics, "functions of online communication" and "feedback from students."

Figure 1

The R2F2 Dynamics of Online Communication for Students and Instructors of Research



Conclusion

The utilization of MS Teams for online communication between undergraduate research students and the research instructor is shaped by four dynamics consisting of the routes of online communication for research students, its functions, the role of the research instructor, and student feedback. Understanding how MS Teams is utilized by undergraduate research students requires the consideration of all the dynamics as they relate to one another through the types, processes, and conditions under which each of them operate. The absence of one of the dynamics may result into a collapse of successful online communication between the students and the research instructor.

Recommendations

Based on the conclusion, the following recommendations are hereby proposed:

1. Future faculty development trainings should focus on effective communication of information and instruction using online medium such as MS Teams.
2. On the part of the research instructor, online communication with research students should emphasize giving clear guidance to encourage commitment to the research task.
3. Continuous use of MS Teams for online communication in the research writing course is encouraged for providing quick resolution to the concerns of the research students.
4. Potential application of the generated model of online communication dynamics should be explored and verified in other undergraduate courses utilizing diverse learning management system.

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