

What is the purpose of student WhatsApp group communication: a speech act categorisation approach

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Abstract

Students commonly use instant messaging apps, such as WhatsApp, to coordinate group activities. While universities encourage this practice, which mirrors practice in real world teams, little is known about how students use these communication tools. Building understanding of student communication behaviour in this medium would support pedagogical design to develop students' employability skills. This paper proposes a research design for collecting and analysing realistic student responses using a vignette survey delivered online.

Keywords: IS in Teaching, Speech Acts, Vignette Method, Communication

1.0 Context

Students are well accustomed to using social media networking sites to communicate in their daily lives and are encouraged to use the same tools to help coordinate groupwork activities in higher education. As the importance of similar communications grows in the workplace, developing the skills for effective communication is important for employability of graduates. To understand how to support students in acquiring these skills we need more insight into their behaviour. Currently, there is a lack of data on how students communicate in these media, and how well they make the transition from purely social to task/project-oriented communications instant messaging and social media apps.

Understanding communication requires analysis of the purpose of utterances. In the proposed study, we are particularly interested in students' use of WhatsApp, an end-to-end encrypted instant messaging app, to coordinate group project activities, a skill which is directly transferable to the workplace (Ferdous and Ikram, 2017). We propose to examine the purposes for which students use instant messaging taking a speech acts perspective, because speech acts provide a general definition of 'purpose'

in communication which, while not tied to specific tasks, disciplines or contexts, does speak directly to influencing the actions of others.

This work in progress paper presents a proposed research method to answer the question: “What speech acts do students use in social media chats (WhatsApp) about collaborative work?”

2.0 Literature

Social media has had a Jekyll and Hyde reputation within higher education. It was initially perceived as a distractor, with negative impacts on students’ focus and performance (Junco, 2012; Bellur, Nowak and Hull, 2015). However, increasingly educators seek to engage students with learning by approaching them through their preferred media and devices (Crompton and Burke, 2018; Fu and Hwang, 2018).

Subramaniam et al (2013), considered the idea of 'virtual co-presence' to understand and propose how social media can be harnessed. They showed how social media can be used for the successful completion of tasks and that the use of virtual co-presence can embed relationships. This can help form and reinforce interaction of people and their roles. They suggest that social media can be an effective alternative to on-site working and learning. In the world of work, organizational social media and messaging apps are an important communication medium between colleagues (Bartlett and Dennis, 2014; Leidner, Gonzalez and Koch, 2018; Ma et al., 2020); a trend reinforced by the covid-19 pandemic (Oksanen et al., 2021). Furthermore, being aware of your social media enabled communication has been shown to enhance project team performance (Krancher, Dibben and Mayer, 2018). Learners and workers alike need to make sense of large amounts of information from multiple channels or information tools (Grasso & Convertino, 2012, p3). Hence, effective use of instant messaging and social media is therefore both a learning skill and has become a communication skill relevant to student employability.

Students use instant messaging tools and social media to communicate with each other, their teachers, and mentors, as well as to access educational materials and resources. There is a small but growing body of literature which examines learning

processes in these media. Aramo-Immonen et al (2016) for example, looked at co-learning in conference attendance, utilising Twitter data to understand informal collaborative learning. Their work builds upon the concept of transactive memory, whereby groups collectively encode, store, and retrieve knowledge (Wegner et al, 1985) and has been shown as an effective mechanism for locating coordinating expertise in small groups (Nevo et al, 2012). Another example is that of Francescato et al (2006), who looked to compare face to face learning with online learning at a university in terms of social capital and developing professional skills. They found similar levels of professional skill development between the two groups, but the online cohort scored better in their competency-based tests. Also, social ties formed through initial face to face interactions lasted with online students. The types of messages sent in student software projects, and the time to respond, were observed by Juarez-Ramirez, Pimienta-Romo and Ocegueda-Miramontes, (2013), who classified the posts based on personal experience. The conversational moves in students' Whatsapp groups for a student group research assignment were analysed by Ngaleka & Uys (2013) using four types of interaction (Ten Have, 2007), and found that electronic conversations developed differently from the kinds of conversations the theory was developed for.

2.0 Proposed research method

The collection of student discussion presents an ethical dilemma. On the one hand the ideal resource would be entirely natural student discussion collected "from the wild". However, to collect groupwork data informed consent must be obtained from every member of the group. If this is done prior to the discussion, likely it will influence what students say, making the discussion less natural. If it is sought post hoc our experience shows that obtaining informed consent from every member is difficult due to the lack of an ethically and pedagogically acceptable way to incentivise students. Therefore, we determined to find a method for collecting *naturalistic* student discussion in a controlled environment.

To do this we propose to use a vignette-based survey design. A vignette can be defined as "*a short, carefully constructed description of a person, object, or situation, representing a systematic combination of characteristics*" (Atzmueller and Steiner,

2010). Vignettes are regarded as a reliable approach for obtaining realistic responses in information systems research (McInroy & Beer, 2022). In the proposed study, the vignettes will take the form of a snippet of WhatsApp style dialog, to which participants will be asked to respond. The responses will be analysed using speech act theory, to determine their purposes.

3.1 Speech acts

Speech acts theory of communication is proposed for this project to identify the purpose of the speech in a closed group, and propose how it may inform our understanding of communication involved within project-based learning in a team. Speech acts have previously been considered as a helpful viewpoint for comprehending how individuals use communication to plan group actions (Cheng and Rana, 1997).

Speech acts aim to break down communication into what is to be achieved, both intended and in reality. Searle (1969) described speech acts as description and action. For example, by requesting something, a person is saying they would like something and expecting the hearer of the utterance to perform said action. A speech act is broken down into the locutionary text (the literal utterance), the illocutionary text (the intended meaning) and the perlocutionary (how an utterance is understood, and its actual effect) – figure 1. The illocutionary speech, or the purpose of the utterance can be broken down into 5 categories (table 1).

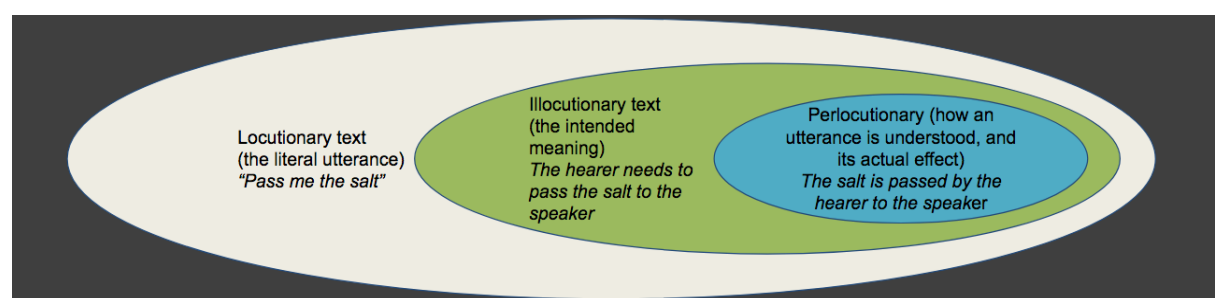


Figure 1. Examples of locutionary, illocutionary and perlocutionary text.

The achievement of a goal, in a collaborative work context, is perlocutionary. Participants in collaborative working contexts, such as students, should attempt to select the right kinds of illocutionary speech acts to influence others to act, to avoid

duplication of effort by declaring their own actions, to build social bonds within teams and so forth. Therefore, we have selected speech acts as a lens for examining group communication which can be applied to a wide range of disciplines and communication contexts.

Illocutionary speech acts	Definition	Example
Assertive	Commits the speaker to something being the case (e.g. suggesting, putting forward, swearing, boasting, concluding).	"I am the best baker"
Directive	Tries to make the addressee perform an action (e.g. asking, ordering, requesting, inviting, advising, begging).	"Could you shut the door?"
Commissive	Commits the speaker to doing something in the future (e.g. promising, planning, vowing, betting, opposing).	"I am going to the pub tonight"
Expressive	Expresses how the speaker feels about a situation (e.g. thanking, apologising, welcoming, deploring).	"Thank you so much for your help"
Declaration	Changes the state of the world in an immediate way.	"You are moving group"

Table 1. Overview of the 5 illocutionary speech acts

3.2 Vignette construction

The tone and broad narrative direction of the vignettes is inspired by chatlogs submitted by students taking a final year project module in IT and business at Aston University. For the ethical reasons outlined above, none of the students' actual text or real events were used.

In order to try to prompt responses using a range of speech acts, statements within the vignettes were created which could be coded with different speech acts. In particular, we designed the vignettes so that the final statements in the sequences, to which students will be prompted to make their own response, represent the full range of speech acts. As a guide to devising a range of realistic business scenarios within the vignettes, the Wasiak et al. (2010) framework was used. Wasiak et al (2010) provided a detailed categorisation and understanding for why an email communication had been sent. The statements in the full set of vignettes cover the full range of the Waziak framework. Table 2 provides one example of a vignette to be used in the study and demonstrates how the exchange represents a range of both Waziak and speech acts statements.

Vignette Content	Waziak (2010) Framework	Speech Acts
Scenario: Your team have all provided their contact details and said hello in the chat and are trying to decide how to begin. What do you say?		
Bob: Has anyone ever done a business plan?	Task-related	Directive
Ali: not me!		Expressive
Cathy: me neither but I looked online. we need exec summary, product description, market analysis, strategy, financial plan, stuff like that	Informative	Assertive
Ali: should we find out about the widget first?	Product	Directive
You: insert your response...		

Table 2. Sample Vignette

4.0 Conclusion

Insight into students' online communication behaviour could help educators develop employability skills for a world in which organizational social media and messaging apps are increasingly important. Future work may also give insight into how the role of social media communication intention may impact on team trust (Pjorkowski and Zhou, 2011) and performance (Krancher, Dibbern and Meyer, 2018). To gain such insight, researchers need access to data that is representative of students' messages. The proposed research design aims to overcome practical and ethical challenges with the collection of this kind of data. A draft version of the vignette survey is available¹ and we welcome input from colleagues on the research design at the presentation.

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¹<https://forms.office.com/Pages/ResponsePage.aspx?id=DJWFoCVM1USUWrhS-kSilYpmz71hAStAnTtm0IB4pf9UQ0QxVvk9DUE9BSkZZV0VMSTJEQ0VUOTVMTi4u>

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