Title of Project | Analysing Clinical Talk
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**Outputs: What has been produced?**

1. We developed an analytical tool—Clin Com Tool (CCT) for teaching and learning clinical communication, drawing on the analytical methods of interactional linguistics.
2. We wrote a handbook to introduce the tool.
3. In collaboration with Virtual Campus, we developed an e-learning programme for learning to use the tool.
4. We conducted and evaluated an educational intervention, including face-to-face training and self-directed e-learning with medical students and clinical communication tutors.
5. The Handbook and the e-learning constitute part of the newly developed Core Clinical Communication Module on KEATS for MBBS1 and 2 students in 2015-2016. This KEATS module is attached to a new MBBS 1 clinical communication teaching session called ‘Core Clinical Communication Workshop – Application and Reflection’.

**Outcomes/Impact: To what extent have you achieved the original aims of the project? Please include examples where possible**

We achieved the aims set at the beginning of the project, that is, to develop an analytical tool and an e-learning. The evaluation showed that users have improved their ability to analyse medical consultations in a more systematic way after the educational intervention.

We conducted pre- and post-intervention assessment of people’s ability to analyse clinical communication. The number of texts that deemed to contain good quality analysis increased by 13% in the post-intervention evaluation; the number of ambiguous analyses decreased by 14%. Overall, there were about 8% of items deemed as incorrect, and the percentage did not change after the intervention. We also found that the overall reference to language use in interaction slightly increased in the post-intervention, regardless of their correctness. The difference between correct analyses in pre-, and post-intervention reached borderline significance (p<0.044, 95% Confidence Interval). Although the incorrect analyses decreased post intervention, this difference was not significant (p=0.701). We found almost no change in the number of neutral analyses (p=0.364). This may be attributed to the difficulties of learning and using the CCT, which were also reflected in participants’ own words, as shown below.
Participants felt that the CCT provided them with a means to interpret interactional features that are significant to understanding the meanings in a conversation but have been either overlooked or misinterpreted in the past. This allowed them to better understand how clinical goals stipulated in other medical consultation models have or have not been achieved in a consultation.

“…I like how it is quite intricate and emphasises certain aspects that would normally be glossed over (eg cues)” (std5)

“It is a useful tool to dissect the different phases in a consultation, and the different components used to facilitate interaction and smooth transition between phases.” (std 6)

“…It teaches me how to analyse communication at a deeper level in literature terms…I may be more aware of certain jargon used to describe particular aspects of conversation that I probably was not so aware of before” (std 9)

“I do think that the tool offers a great opportunity for me to systematise my feedback to students. I would adapt it to the level of students.” (fct 3)

The tool raised the awareness that analysis should not just look at what is said but also how it is said interactively so as to avoid interpreting meaning out of context. The analytical terms provide facilitators and students with a set of common language and an index of analytic points and procedures. They allow a more structured and systematic investigation of the seemingly spontaneous and chaotic conversation.

“I will pay more attention to think about HOW to talk with the patient rather than just what to talk with patient…It is very common that we just think about what kind of things need to be covered during consultations, like ticking all the boxes, but not too many thoughts about how should we achieve that.” (std 16)

“As stated, it gives some more points and especially more terms and language to aid analysis.” (fct 2)

“This is interesting. Despite having…a linguistics background, I often felt that my feedback to the students was not sufficiently structured and sounded like common sense advice. (fct 6)

“This analytical tool is thorough. It gives someone starting from scratch a framework… and it allows people with pre-existing system to identify holes in their analyses.” (std 4)

The tool also provides a new angle to look at consultations. One student particularly commented on the value of the concept that a consultation is constituted of both institutional knowledge (as an institutional participants either as a doctor or a patient) and sociocultural knowledge (as a member of a society). The linguistic knowledge of the English language may be particularly useful for international students who are non-native speakers of English.

“… after study[ing] the ‘anatomy of verbal interaction’, I also realised that apart from the institutional knowledge, sociocultural knowledge will also … influence … the medical consultation. I wouldn’t be too surprised in the future if the patients brought in some of their own …thoughts and understandings.” (std16)

“The session has truly made me rethink the way I will approach facilitation in the future. From a personal point of view it has helped me further understand aspects of my facilitation practice…I feel the tool has the potential to allow us to introduce students to a useful way of
thinking about interactions between healthcare professionals and patients.” (fct4)

“Excellent this is very innovative, gives us more opportunity to measure the effectiveness of what we do and how to get across the complexity of such consultations.” (fct7)

“It is useful to learn some correct and appropriate language…, especially for me as a non-native speaker.” (std16)

On the other hand, participants raised concern over the complexity of the tool. With little to none experience in linguistics, most participants felt that learning the tool is time-consuming. Although most people felt that the training and online resources mitigated the difficulties significantly, it is still challenging to remember that much information about both the concepts and the procedures. Some said that they had to keep the written materials in hand as a reminder, which could limit the tool’s use in a real-time learning environment. Participants saw analysing recorded consultations in slow motion different from commenting on a live consultation which would require much simpler ways of using the CCT. While participants acknowledged the tool’s added values for allowing them to see what used to be overlooked in a consultation, they also pointed out that other consultation models were also in play when they analysed consultations. The CCT is an add-on rather than an alternative.

Supportive factors: What were the main factors that contributed to the successful outcomes of the project?

I attribute our success to the following factors:

1. Interdisciplinary team working: Having people from different academic and professional background means things took much longer time to be discussed and agreed on, but the result was extremely rewarding. The analytical tool had been debated several times and undergone several revisions before it was used in the intervention.

2. Great support from Virtual Campus: Amandeep Cheema was assigned as our instructional developer. Her professional support was invaluable for this project. We were also grateful for David Byrne, director of VC, who has been extremely cooperative and supportive of Amandeep’s work in the project.

3. Great support from the College: Due to the nature of the development and the involvement of human participants, the project took slightly longer than expected. The College allowed me to extend the completion date, ensuring funding was available until completion.

Challenges: Have you experienced any barriers or challenges in developing your project? What could be done to support innovation in the curriculum?

The biggest challenge was to recruit student participants. Even if we offered incentives, it still took us very long time to just recruit a small number of students. The project was intended to be a year-long project so time was also a big challenge for us. For this particular project where there were two parts of development and involved human participants, it was extremely challenging to complete within a year. However, this was accommodated by the College by allowing extra time.

Recommendations: Based on your study, what recommendations would you make for improving the curriculum and student experience generally? Are there any wider implications of your project for the College/University undergraduate and/or postgraduate curriculum? In particular what would be the implications of introducing your innovation on a large scale across a range of disciplines?

Improving the understanding of what language does in communication can improve feedback and reflection in simulated consultations, and help students develop critical ability to judge and act upon the constantly changing interactional communicative situations the clinician and patient find themselves. Reflection and the reflective practitioners are at the centre of the epistemology of professional practice (Schon, 1983, Schon,
The CCT can become a useful addition to other consultation models used in UG medical education to provide reflective methods for analytical and critical skills development, which can transform learners’ intuitive feelings into systematic and evidence-based reflection. Therefore, surface learning moves towards deep learning, allowing effective knowing-in-action (Moon, 1999, Kaufman and Mann, 2014). Focusing on the features of language used in interaction, the CCT puts forward the view of clinical communication as a creative and dynamic interaction, allowing students to sustainably and continuously develop their creativity and critical ability in understanding and managing medical consultations.

The online platform is a timely response to the current changing educational ecology [14] and suits the learning preferences of UG students as adult learners. [15] Rapid technology advancement is changing the adult learning and teaching (andragogy). The online platform will provide an opportunity for students to learn ‘on-the-go’. The technology allows flexible, interactive and continuing learning, and creates a community for learners to acquire knowledge and skills by being a member of a close-knit professional community. [17]

The analytical tool and the e-learning resources could also be used by other health students (eg. nursing, pharmacy, dietetics, etc.) and junior clinicians who need to train for communication with patients. Experienced clinicians and educators can also use the learning resources for their continued professional development.

It may also be used by students of health communication at Centre for Language, Discourse and Communication. This way allows both students and staff to enjoy an interdisciplinary learning.

Implementing the innovation on a large scale would potentially create a virtual community that links different health professions, students and staff of different disciplines to discuss, debate, learn and teach clinical communication together.

In 2015-2016 this innovation package has been implemented with years 1 and 2 medical students. The KEATS module may become a key part of future clinical communication teaching and learning resource.

**Dissemination:** How has the project been shared with colleagues within and beyond the institution?

**Conferences:**

**Invited workshop:**

**Paper:**