



Research Article

The Accessibility of a Human and Social Sciences Framework for Training Medical Students to Cooperate in Work Meetings

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Abstract

The aim is to develop a cooperative skills training for 3rd year medical students based on practice and debriefing. The training device uses a skills repository, human, and social sciences (HSS) framework to help the trainees gain a better understanding of the activity to which they have contributed. The aim of the study is to test the accessibility of this framework and to obtain initial feedback on this training system designed for students who are not used to working in small groups. The results are very encouraging and invites to develop this training.

Keywords: Collective Activity; Cooperation; Training; Skills; Activity Analysis.

Introduction

Medical students are trained to conduct medical consultations [1,2] and future surgeons and anesthetists to work in teams [3]. On the other hand, medical students are not prepared for professional meetings. Experimental studies show variability in decisions [4-6] and other studies show the dissatisfaction of staff in these collegiate meetings [7]. The aim is to prepare medical students for these meetings. For that, we propose a training based on practice and debriefing. The aim is to enable medical students to develop the skills associated with collective activities. This paper tests the human and social sciences framework that will be used to conduct debriefings following the practical sessions.

Theoretical background

The training is based on scenarios and reflections guided by the trainer around the scenarios. This type of training involving practice and reflection on practice is particularly well suited to

developing skills [8]. These courses also make use of academic knowledge, which generally takes the form of skills repositories. This type of format links practice and theoretical content [9], and is particularly popular with health students [10]. In particular, it is used to train students to conduct medical consultations and to train future surgeons in teamwork. For debriefings, trainers have at their disposal reference systems adapted to the evaluation of the targeted skills; for example, the Calgary Cambridge [1] for training in care-giver consultations, the VR-code [2] for training in managing patients' negative emotions during consultations, or the NOTSS reference system [3] for training in teamwork during surgery.

Our training system involves learners firstly experiencing a collective activity with a creative aim (practice) and secondly discussing sequences of the collective activity (reflection on the practice), guided by a skills reference framework and an interpretative framework derived from social sciences and humanities. The framework is an adaptation of a framework developed to diagnose creative collective intelligence [11]. The purpose of the reference framework is to provide a reading of the

activity based on the identification of the skills expected in this collective and creative context. The Human and Social Sciences (HSS) framework aims to provide a better understanding of the activity. This is in line with one of Perrenoud’s recommendations [12], namely not to rely solely on reference frameworks, common sense theories and knowledge specific to the experience and professional culture of trainees, but to rely in addition on the mobilization of new frameworks from the HSS. Our SHSS framework draws on theories, models, concepts and methodologies from activity ergonomics, interaction psychology and language sciences. The challenge is to get them to study sequences of their activity from different angles, so that they can enrich their understanding of the activity.

Materials and Methods

Task and instructions

The task was defined with a senior medical student. The task was creative and drew on medical knowledge. The students had to produce a scenario to establish a diagnostic hypothesis - the “right” diagnostic hypothesis can only be found if the physician

conducts an in-depth interview. The three students were asked to describe the scenario, list the questions they felt were essential to ask the patient and explain their choice of scenario. It is suggested that they choose a pathology that has been presented to them in class (so that all three can participate actively). A constructive and positive attitude is suggested, asking them to do their best and to work together in a positive social climate. They may use any documents they feel are useful. They are told that they will not be asked to produce a written report and that they will be given around half an hour for this work. For the reflection phase, which takes place a fortnight later, they are informed that sequences taken from their group activity will be submitted to them and they will be invited to comment on them.

Target skills

The target skills [1] takes the form of a slide show in which each skill, represented by an action verb, is defined and illustrated by means of a commented sequence. For reasons of space, we will limit ourselves to a brief definition of the skills included in this reference framework (Table 1).

Skills	Briefly definition
Listens	Is attentive to verbal, para-verbal and non-verbal information, to the person speaking and to other members, and remembers what has already happened.
Shows that you are listening	Uses phatic behavior (maintaining the communication channel): hum...; produces statements that show that you understand what is being said
Understands	Ensures understanding, e.g. by asking for explanations, submitting own understanding
Makes him/herself understood	Uses discourse that is understandable and accessible to the members of the group
Manages emotions	Identifies negative emotional expressions produced in a situation and reacts to mitigate them.
Exercises critical thinking	Analyses information and experiences objectively, on the basis of tangible elements.
Coordinates himself/herself	Fits in with the organization of the activity by performing a given role in a way that is consistent with the roles of the other members
Cooperates	Takes account of what others say in his/her own words, adds to or challenges elements produced by others
Contributes to a positive climate	Expresses misgivings in a way that does not offend others, does not judge, and shows enthusiasm...

Table 1: The skills associated with collective work.

To define the skills, we have taken from the literature that they are expressed in situations, that they mobilize internal components (knowledge, abilities, values, preferences, etc.) and external components (environment, organization, documents, tools, people, etc.) [13] And that an individual's level of skills depends on the alternative resources available to them, which enable them to adapt more easily to the different situations they may encounter [14].

The framework is derived from activity ergonomics and borrows models and concepts from interaction psychology and language sciences. These include Leontiev's hierarchical model of activity [15], which looks at activity from the intentional (aim, motive, intention), actional (action) and operational (behavioural characteristics) angles, and the theory of conversational sequencing [16] which calls for a sequential and dialogical approach to communication, as well as work in the language sciences, which is useful for characterizing language phenomena.

Its implementation consisted of placing the group of three students in a situation where they had to solve a creative task, filming their activity, and then carrying out a cold collective debriefing using a collective self-confrontation [17] of the sequences of their activity guided by a skills reference framework and an SHS framework. The aim was not to train the students in these analytical frameworks and methodologies, but to guide their reflection on the activity via questions, which, by answering them, would enable them to invest the intentional, actional, and operational and perlocutionary dimensions of the activity. More specifically, getting them to invest in the intentional dimension means asking them about the match between their intentions.

Case Report

The students were volunteers. They were informed that the data collection was part of a study. They gave their consent for the data to be used for research purposes.

The group was made up of three members: two female students (called J and S) and a male student (P) in their 3rd year of medical studies from the same year, who knew each other from other sources - J and S were confined together; P was an acquaintance of J and S because of mutual friends. A higher-level medical student was asked to observe the collective activity and check that the medical knowledge used by the students was correct.

The first session was devoted to the collective resolution of a task. The second session was devoted to collective self-confrontation with three sequences extracted from the collective activity, which had been transcribed. This second session began with a presentation of the target skills. This is followed by a group self-confrontation based on three sequences previously selected by the trainer for their interest. For each sequence, the context in which it appeared is explained and then the sequence is presented in video format and transcribed. The students are then invited to comment

on the interventions that make up the transcribed sequence. Generally, the floor is first given to the person who made the first intervention, and then the other members are invited in turn to comment on this first intervention. They are guided by prompts such as: why are you making this contribution at this time? What is your intention? What do you expect from the speakers (those listening and interpreting)? Does their reaction match your expectations or not? Why or why not? The floor is then given to the listeners, who are invited to say how they interpreted the speech, what intention did they attribute to the speaker? What sequence was possible for them? When the situation lends itself to it, they are provided with academic knowledge designed to enrich their understanding of the subject. To conduct this session, we first selected sequences from their collective activity. The first reflects the skill of empathy (listening, showing that you are listening, understanding, making yourself understood); the second reflects the skill of contributing to a positive climate; the third shows skill defects (lack of listening, poor understanding, difficulty in making oneself understood, defective critical thinking).

Results

Overall, the group appreciated this training based on practice and reflection on practice. They particularly enjoyed working together in the practical phase. They felt that a collective solution was more effective than an individual one: it enabled them to capitalize on resources/ideas more quickly, avoid forgetting things and avoid spreading themselves too thinly.

They also mentioned the advantage of having proposed a task that required medical knowledge. They felt that this activity enabled them to:

- 1) Prepare and practice for professional health meetings
- 2) Deepen their knowledge of subject areas
- 3) Consolidate subject-specific learning

With regard to the training system, they appreciated the reference framework and the illustrative sequences to help them understand how the targeted skills take shape in real-life situations. As far as the framework for investing in the activity was concerned, G saw the value of investigating the behavioural dimension of the activity: "It was very interesting in any case, because it's things those we, that to us seem so insignificant, because it's spontaneous, our reactions! In addition, there is finally an explanation for everything! And I find that interesting."

Conclusion

The aim of this exploratory study was to check that a group of medical students placed in a self-confrontation situation were able to answer questions that would enable them to investigate the activity from different angles. We found that guiding students

through the questions enabled them to approach the activity from different angles. The level of doing (what we do in a context of interaction at a specific moment) does not pose a problem for the students. The intentional level (reasons, intentions, and motives) is not a problem either. Students are more surprised when they are asked about their expectations (perlocutionary level), but they manage it. The operational level, on the other hand, requires, in addition to guidance, the contribution of academic knowledge on interpersonal communication (in particular the notions of pre-inquiry, the figuration process, counter-argumentative connectors, etc.). As medical students are not used to working in small groups (3 to 5), we also wanted to find out how satisfied they were with the role-playing and group self-confrontation. It should be noted that the satisfaction of the members is very encouraging and invites us to develop this type of training. In addition, this type of training will enable them to create social links and reduce their exposure to isolation [18].

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