Microblogging for Joint Construction of Meaning in the Classroom

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Abstract: In this study we present a digital microblogging tool called Talkwall with the aim to contribute to research focusing on how digital technology can facilitate student participation, dialogue, and learning in the classroom. By analyzing classroom interactions, we show how Talkwall supported joint meaning making in a whole-class setting.

Introduction

Research on classroom dialogues shows that much variation in classroom dialogues exists worldwide (Alexander, 2008). The reason is that teaching often comes with established norms for classroom interactions, and if teachers use questions to keep topics closed down instead of opening them up, this may limit student engagement and the educational potential of talk. Generally, dialogue is considered productive for learning if the classroom is a place of purposeful inquiry in which students can express ideas, listen to each other, consider alternative perspectives, and share and build on each other's ideas (Alexander, 2008; Littleton & Mercer, 2013).

A growing body of research finds that digital technology may facilitate dialogic teaching in the classroom (Major et al., 2018). This research indicates that sharing objects on interactive whiteboards provides opportunities for shared attention and joint reference in whole-class teaching. The shared objects also provide opportunities for participation, as students can interact with and manipulate them, as well as save them for further discussions later. Furthermore, microblogging (e.g., Twitter) also seems to support joint construction of meaning in the classroom. The short-message format (e.g., tweets) seems productive for mobilizing and eliciting students' understanding of a topic, starting conversations or bringing new information into conversations. Talkwall is a microblogging tool that aims to support participation and dialogue in the classroom (Rasmussen & Hagen, 2015). In this study, we focus on how Talkwall can support joint construction of meaning through whole-class teaching and discussions.
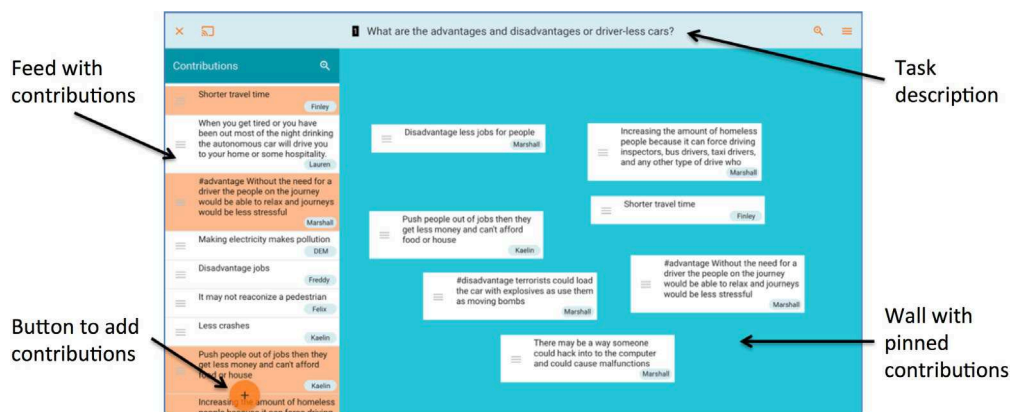

Figure 1. A screenshot of Talkwall with descriptions.

Talkwall

Talkwall is a browser-based tool comprising a task description on top, a feed on the left, and a wall (Figure 1). The teacher posts tasks that are displayed centrally. Each task has one feed and one wall. To contribute an answer to a task, the student clicks the "+" symbol at the bottom of the screen to open a message box, in which students can enter their text. The contribution is then submitted to the feed with no limits as to how many contributions students can add to the feed. In Talkwall, participation and dialogue are supported mainly through three mechanisms: short textual contributions, the feed, and the wall. The short-communication format's intent lies in the premise that microblogging is so commonplace, it may encourage students to participate, and the format can be read quickly to exchange ideas and elicit possible discussions (Rasmussen & Hagen, 2015). For the teacher, the feed is intended to provide an overview not only in terms of participation, but also in how students formulate their ideas. For students, the feed is meant for them to both acquire and build on their peers' ideas. The teacher may highlight certain contributions in the feed to share interesting ideas concerning the task

that students are working on currently. Contributions in the feed also can be pinned to the wall to promote interesting contributions, arrange them, and synthesize their information through dialogue.

Setting and method

In this study, we used data from a lower secondary school in Norway, where we conducted video observations of a social sciences class of approximately 26 students (13-14 years old, seated in groups of three and four) during the winter of 2017. The teacher had more than 20 years of experience and described herself as having ordinary knowledge of ICT. She is one of several teachers who participated in the "Digitalised Dialogues Across the Curriculum" project (DiDiAC) funded by the Research Council of Norway [FINNUT/Project No: 254761], which aims to develop and enhance classroom dialogue by using Talkwall. A rich data set was collected, comprising field notes, video recordings, interviews, and log data. The video recordings from whole-class sessions comprise the core data, and analyses of verbatim transcriptions of video recordings are used to provide concrete descriptions of social interactions. In this study we take a sociocultural perspective, and to understand what is going on, we apply Linell's (2009) concept of "joint construction". This analytic concept refers to the collective construction of discourse and meaning mediated by tools.

A teacher's work with students' views in a whole-class setting

In what follows, we provide an example of a typical discourse from a one-hour lesson. The theme is the Industrial Revolution. The teacher first introduced the lesson's goals, and some central concepts. She then introduced a task called "odd one out," in which each group of students was presented with a set of four pictures and corresponding words describing the pictures. Each group's task in Talkwall was to decide which picture in its set did not fit the Industrial Revolution period and why. Each group used a tablet to write their answer in Talkwall. When all groups were done with the task the teacher used her tablet to pin each group's contribution one at a time. Each pinned contribution was projected onto a large screen in front of the classroom so that it could be discussed in a whole-class setting. The following excerpt begins just as the teacher has pinned Group B's contribution to the wall.

1. Teacher: Group B. Horses, coal, factories, machines. Horses. Please, explain (5.0)

2. Ann: Uhm, horses are out because they were used before the industrial revolution

3. Teacher: Okay? Yes. So horses were the only ones used before the industrial revolution? Is there anyone else that has thoughts about this? (2.0) *(Tom from another group raises his hand)* Yes, Tom*?*

4. Tom: Weren't machines used before the industrial revolution?

From this exchange a few aspects become apparent. First, Talkwall supports mobilizing and eliciting of students' ideas, as the contributions make the students' opinions visible (line 1). The second aspect is that contributions pinned to the wall become productive for starting conversations. Contributions become shared objects for shared attention and joint reference. Group B's contribution on Talkwall was projected on a large screen in front of the classroom, and the teacher used the contribution in Talkwall to trigger a justification from the group (line 1). Third, through the task and the public display of their contributions the groups become accountable to the learning community and have to provide reasons for their choice (line 2). Finally, the shared attention towards the contributions and the teacher's orchestration of the class provide opportunities for other students to participate with potentially different perspectives (line 3 and 4). Thus, what this exchange illustrates is how Talkwall to a certain extent affords joint construction of meaning through the public display of students' written contributions, through which the teacher can build a whole-class dialogue.

References

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