Study #	Focus	Methods	Intermingling of the oral and the written
1	The enacted educational design and uptake of a lesson activity exploring the distinction between facts and opinions, using the hashtag function in Talkwall	Mico analysis of classroom social interactions. Video-recorded data that are trascribed and analysed monent-to moment over one lesson trajectory. Blogs of the students contributions posted on Talkwall and field notes.	The **permanence** of the written blog contributions enabled the students to have focused discussions during group work, where they categorised blogs with the hashtags #fact or #opinion. The **provisional** nature of the microblogs afforded this type of categorisation task where the content of the student's works was edited over time.
2	How one teacher worked to develop a culture for dialogue by engaging her students with the purpose and practises of talk for learning. Multimodal focus on diverse resources and their function in students meaning making.	Multimodal micro analysis of one teacher's classroom social interactions and the student uptake of the educational design. Video-recorded data, blogs and field notes of one lesson trajectory.	The teacher used written resources, both digital (Talkwall, PowerPoint) and printed (wall posters), that she referred to in her talk to the class. The **permanence** of these written resources was important in the teacher's work to **activate talk rules** and turn them into relevant scaffolds in the student's group work.
3	Methods and techniques used by teachers to make talk rules into relevant resources in the context of co-located microblogging activities (activation of talk rules).	Reflective thematic analysis using Excel and NVivo12 of 20 teachers accross 57 lessons. Five themes were identified. Total number of instances within each theme (459) was calculated, including mean frequency.	Across the classrooms, the talk rules were variations of lists displayed in writing and displayed on Talkwall or PowerPoint, creating a **permanence** for these resources. How much and how the teachers made use of the class talk rules in their oral interactions varied extensivly. The analysis show variatin in how the oral and the written intermigled.
4	Developing material-dialogic space. How may Talkwall intra-act in dialogue with teachers and students and how is the affordances of Talkwall enacted?	Micro analysis of intra-action based on video data and lesson transcripts, comprising six Talkwall episodes in a geography lesson. A material-dialogic approach.	Shared thinking is embodied in positioning the contributions on the wall, which also creates a **permanence** for these ideas. Browsing other groups' written contributions on the feed started conversations in the group, which let the students **build on** and **connect** with the ideas of others.
5	The study focus on how a microblogging tool (Talkwall) contributes to co-creative processes as a 'voice' in a dialogue.	Micro analysis of one English lesson. Exploring ideas of creativity in the context of Talkwall-supported classroom dialogue and frameworks of understanding informed by agential realism.	The intermingling of the oral and written interactions is brought forward in the analysis through the enactment of **permanence** and **provisionality** in the microblog-supported exploratory talk.
6	The realisation of student voice through dialogic engagement. How students' microblogging contributions were heeded by three teachers in one school.	Micro analysis of interactions of video data, lesson transcripts and microblog meta-data, and student focus group interviews. Three teachers in one school.	Microblogging can develop student agency as it support **concurrency**. This help realize student voice by removing the struggle to capture and maintain the floor and enabling students to become attuned to the ideas of others.
7	How teachers can integrate microblogging into their practice to make whole-class dialogues distributed and productive.	Mixed-method approach (descriptive statistics and correlation analysis combined with analysis of interaction) investigating how teachers integrated Talkwall in 35 lessons and 64 whole-class dialogue episodes.	Intermingling strengthened the collective endeavor in whole-class dialogues, and supported the teacher in exploring the students' thinking and connect their thinking with prior collaborative learning activities, as students **build on** and **connect** with the thinking of others.
8	How microblogging affords conditions for realising student voices about the body and sexuality in a science education lesson.	Micro analysis of classroom interactions based on video data, lesson transcripts and students microblogging activities during one science lesson.	Microblogging afforded intermingling of talk, text, and **concurrent** interactions; oral and written interactions happened simultaneously. The task asked the students to express what they needed more knowledge about and this was written in the microblogs.
9	A social network analysis (SNA) focusing on how teachers conduct their interactional management in whole-class discussions with Talkwall.	SNA degree measures are used to explore the interactional management of teachers. The study captures the patterns and the implications of the teachers' social interactions.	The oral interactions between teachers and students are foregrounded in the analysis. However, the object of exploration typically contains content from microblogs that was visually accessible to everyone on an interactive whiteboard, creating **permanence** for the microblogs.
10	How students used rap lyrics to learn literary methods and concepts in the context of co-located microblogging activities.	Micro analysis of classroom interactions based on video data, lesson transcripts and students microblogging activities during one lesson.	Intermingling was realised by students developing ideas in a digital representation (Talkwall) and these representations were continually refered to throughout the dialogue as students **build on** and **connect** with ideas of others.

11	How the building of agency through dialogic moves, positioning and technology mediation.	Thematic analysis of five lessons with one teacher and interviews with the teacher and students. One lesson was selected for micro-analysis based on video data, lesson transcripts and students microblogging activities.	Intermingling was realised by the teacher's uptake of her students' ideas as presented in Talkwall, allowing these written utterances to be followed up on in whole class talk. Through the class talk, the ideas are elaborated and buildt on , compared and connected.
12	Technology-aided meaning-making across group and whole class interactions.	Thematic analysis of a period of eight lessons on World War II. From this, one lesson was selected for micro analysis based on video data, lesson transcripts and students microblogging activities.	Talkwall afforded intermingling as written microblogs from the group talk were discussed during whole-class interaction **(permanence, activity shifts)**.
13	How students used querying in subject oriented meaning making.	Micro analysis of peer group interactions. Focus on how student's querying led to a whole-class discussion.	The written blogs are made the object of oral querying, prompting students to pose questions, provide reasons, elaborations and arguments. The **permanence** of the blog allows for focused reasoning based in this utterance.
14	Dialogue, microblogging and multivoiceness	Micro analysis of example transcripts of peer group and whole class interactions from one social science lesson.	Intermingling between the oral and the written was especially apparent when students during group work **built on** each other and wrote blogs in Talkwall. The students looked at the feed and discussed what was written by other groups in the class. The talk rule 'we build on each other's ideas', for example, was made concrete and tangible by the materiality of the tool.
15	How one teacher worked to establishing and maintaining joint attention in classroom dialogues.	Micro analysis of example transcripts form one teacher's classroom interactions.	Not subject of analysis
16	Using microblogging to create a space for attending and attuning to others.	Micro-analysis of examples of peer group interactions from one lesson.	Intermingling is examined through Ragnar Rommetveitt's idea of attuning to the attunement of the other to achieve intersubjectivity.
17	How a diverse class explored an academic concept of Power in the context of microblogging activities	Micro analysis of classroom interactions based on video data, lesson transcripts and students microblogging activities during one social science lesson.	Intermingling is realised by microblogging as cognitive support by providing elusive vocal utterances with **permanence** and making them visible to all participants.
18	The work of a year 10. class work with literary devices and rap lyrics through dialogue and microblogging. What happens when a text and a digital format that the students know form their everyday lives meet traditional school content.	Micro analysis of classroom interactions based on video data, lesson transcripts and students microblogging activities during one language art lesson.	Intermingling is facilitated by the teacher by making the group blogs the point of departure for whole class talk, exploiting the **permanence** of the blogs. The microblogs mostly mention examples of literary devices, while they orally explain and connect examples and literary terms (**build on and connec**t).
19	The study investigated how students in a 8th grade class (13–14years old) used Talkwall to express, explore and expand their ideas of how they could contribute to sustainable development.	Thematic categorisations and counting ofTalkwall contributions derived from the logs. Micro analysis of classroom interactions using transcribed video recordings from one lesson.	Intermingling was realised as a combination of microblogging activities and oral discussions which prompted the students to question, elaborate and reason, supported broad participation, and helped students to **build on** each others ideas in the blogs **(permanence)** and create links between everyday actions and wider sustainability issues **(build on and connect)**.
20	How teacher noticing can be extended in teacher reflection using video as a reflective tool.	Qualitative analysis of audio recorded meetings of with researchers, presenting self-selected video clips from their lessons for discussion.	Not subject of analysis
21	Dialogic intention (DI) as a factor in promoting metacognitive awareness of productive dialogue among students and the role of microblogging in the realisation of these intentions.	Two step analysis. First, 17 video recordings of lessons were reviewed for how the teachers stated verbally their DIs, then 29 peer group episodes were reviewed for the uptake of teachers DIs. From this, one lesson was selected for micro analysis.	How talk and writing intermingle is shown in an analysis of students' group work discussing a challenging task and co-creating a blog. They are facing the challenging task of deciding who can leave the Earth in a spaceship as the world ends. The students listen to each other, **build on** and challenge each other.

Study #	Travelling of ideas	Augmenting dialogic space	N students	N teachers	Country
1	The #fact and #opinion labelling activity sorted the student's contributions, enabling a new entry point to their peers' ideas. This activity led to multiple conversations (**concurrency**) happening simultaneously, face-to-face in the classroom and online, as the students labelled the microblogs and talked about the content of the microblogs. In this way, ideas travelled between groups and within the groups, and ideas travelled when the teacher alternated between group and whole-class activities (**activity shifs**).	The way that this teacher **activated the class talk rules** was central to augmenting dialogic space. The teacher explicitly stated how the students could use the class talk rules as tools in group discussions by providing sentence openers that encouraged the students to interact and think critically about their peers' ideas as presented in the written microblogs. In this way the use of talk rules together with the technology enhanced and expand the possibilities for dialogue.	23	1	NO
2	The analysis reviles the importance of conversation openers for ideas to travel (e.g., I would like to build on what [name of student] just said]) (**building on and connecting ideas**)	Five ways of **activating talk rules was identified:** (1) Displaying representations of productive ways of talking together e.g., building on and connecting ideas 2) (3) Invited students to contribute (4) Integrated talk rules into the learning activity. (5) Encouraged meta-reflection on group interactions. These can be seen as central for augmenting dialogic space.	23	1	NO
3	Not subject of analysis	**Activation of talk** rules is central to augmenting dialogic space. We identified central scaffolding strategies and variations in their use both across the two countries and between individual teachers. Some teachers only co-created talk rules but did not refer to them or make them relevant to the task. Teachers' task design was found central for making talk rules relevant.	NA	20	NO and UK
4	Travelling of ideas is manifested in the analysis. The class **build on and connect ideas** via Talkwall. The analysis focuses on enacted affordances and the material aspects of the tool.	The exposure to ideas enacted through browsing other groups' contributions on the feed and the fluidity of this medium potentially enables Talkwall to become a constructive dialogue partner (**permanence and provitionality**). The analysis illustrate the intra-action possibilities that may facilitate the creative co-construction of ideas in the material-dialogic space created by the use of Talkwall (**building on and connecting ideas**).	29	1	UK
5	Ideas travel between groups of students when students actively interact with the contributions of others (**querying and building on**). The analysis brings to the fore how students by interacting with TW-contributions, **concurrently** interacts with the teacher (through the lesson design/instructions) and with other students.	Widening the material-dialogic space of collaboration. Talkwall is considered as an active collaborator; allowing students to interact with emerging ideas and ideas across the classroom (**travelling of ideas**). It fascilitates creative co-constructive practices as students interact with ideas of others, widening the dialogic space beyond groups into the wider class community.	25	1	UK
6	Travelling of ideas is encouraged when the views of all students are acknowledged by the teacher and used in developing collective ideas (**build on and connect**). The study shows variation between the three teachers' analysed and that the teachers' activation of talk rules was highly situated within the classroom and in relation to the broader school context.	Not subject of analysis	36	3	UK
7	Talkwall was typically used to connect learning activities and the teachers often asked the students for justifications and elaborations regarding their contributions. The study finds that in whole-class dialogues Talkwall could strengthened participation as a collective endeavor through connecting learning activities (**activity shift).**	The students augmented the dialogic space as they produced a substantial number of written contributions, and these were largely on-task. This study draws on the descriptive initial analysis, calculating the on-task contributions. The mico-analysis also shows how **talk rules** are activated and how the combination of talk rules and microblogging assisted students that were reluctant to participate.	230	13	NO
8	The processes observed, relating to **concurrent** interactions and the **permanence** of written blogs, extended conditions for the travelling of ideas and the realising of student voices in classroom discussions.	The teacher's activation of talk rules was vital and augmented the dialogic space by using the written blogs to connect learning activities (**build on and connect).** The students were anonymous in this task setup. The teacher set up the TW task by giving the students anonymous names, such as puberty 1 and 2.	27	1	NO
9	An increase in students responding directly to each other in students responding directly to each other in a student-to-student fashion is associated with a reduction in the distribution of productive interactions through dialogue. The students are less able to build on each other's ideas and challenge each other in a productive way compared to how a teacher manages dialogues in whole-class settings.	Augmenting dialogic space is based on productive interactions but often comes with a trade-off. The SNA results show that when the number of student-student interactions increases, the interactions may become less productive and that teacher-student interactions matter in ensuring that productive interactions are distributed among students (**build on and connect**).	23	13	NO
10	Keeping each idea present and available for the whole class while also being able to modify was central in order to advance student agency **(permanence and provitionality)**.	Augmenting in the form of "gap-closing" is used as a key concept to understand and explain why and how teachers and students interact with microblogs and used microblogging to discuss a rap lyric and literary methods. The analysis show the importance of a shared space.	29	1	NO

11	The lesson alters between group- and whole class sessions, 11 shifts. Talkwall mediates the transitions between activities; allowing the ideas to travel from groups to whole class.	Augmenting of dialogic space by the teacher positioning the students as competent by giving them the power to influence the topic and the evolvement of the lesson, and letting their contributions lead the classroom talk (**activation of talk rules**). The study shows how the teacher's moves and the students' uptakes of them contribute to forming a classroom culture in which agentic students are positioned as essential contributors in dialogic exploration.	29	1	NO
12	Talkwall was used to facilitate transitions between participation structures, allowing ideas to travel across activity shifts. In the group dialogues, the students explorations were grounded in their everyday knowledge, while in the whole-class sessions, they were guided by the teacher, connecting ideas and subject matter.	Augmentation by the teacher facilitating and combining explorations in groups and interthinking in whole-class interactions (**activation of talk rules**). In the whole-class interaction, interthinking became a tool for synthesising (build on and connect).	29	1	NO
13	Students i group query each others' political stance as stated in Talkwall. The students read each others blogs, choosing which to query (travelling of ideas) Querying correlates with students' learning in the sense that students used each other's contributions in their reasoning and building of new arguments (build on and connect).	Augmentation as students' way of relating to each other's utterances and seeking coordination shows their respect for each other and for the idea of exploring a topic together, in a shared line of reasoning (**build on and connect**). This enhanced their evaluative epistemic stances that resulted from querying and demonstrates how querying can contribute by widening and deepening the dialogic space in classroom dialogue combined with microblogging (**permanence and provitionality**).	29	1	NO
14	The teacher guideed her class through activities alternating between group and whole-class conversations (**activity shifts**) in a lesson where dialogic principles and digital technology are central (**activation of talk rules**).	Augmentation by the teacher taking many steps to involve as many students as possible in the conversations, while at the same time ensuring academic progress. We found that the technology can serve as a facilitator for the use of talk rules in group work.	27	1	NO
15	Not subject of analysis	Productive participation may be difficult to achieve without joint attention. Analysis of augmentation brings forward how the teacher established clear rules and good procedures for classroom interactions (**activation of talk rules**) and how she carefully managed transition between activities and learning resources (**activity shifts**).	23	1	NO
16	Not subject of analysis	Students' work on socioscientific issues (SSI) may lack clear solutions. Augmentation in such cases need collaborative and interactional work to achieve shared meanings or intersubjectivity, whilst maintaining an openness to exploration (**building on and connect**). Our analysis focuses how microblogging helped the students attend to different ideas and not arrive at a conclusion prematurely (**permanence and provitionality**).	29	1	UK
17	Microblogging allows many to 'talk' at the same time (**concurrency**), support the teacher in monitoring group work and allows **ideas to travel**. Provisionality of written contributions allow contributions to be manipulated, as the teacher does when sorting the contributions on the class screen (**provitionality**).	Augmentation by a teacher's active engagement with students' ideas is paramount to support dialogic reasoning and decide when to allow students time to explore and elaborate and when to guide towards more academic oriented lines of reasoning (**culture for dialogue**).	27	1	NO
18	The lesson is characterized by frequent **activity shifts** and demands for Talkwall contributions, facilitating the **travelling of ideas** between group- and whole class activities. The teacher encourages the students to build on and elaborate and supports the exploration of ambiguities by including many voices.	Augmentation by the teacher providing an analytic framing for the students work through a clearly defined task and an introduction where he reminds the students of their previous knowledge of literary devices and literary analysis.	23	1	NO
19	The study demonstrates how ideas about sustainability actions are generated, picked up and travel across activities in the classroom. The combination of microblogging activities and **activity shifts** between oral group and whole class discussions facilitated the **travelling of ideas** between the participants.	In this lesson, students suggest changing everyday actions to reduce consumption. Augmenting dialogic space is here realised through the **shared space** in Talkwall, where new ideas about challenging ideas were picked up across the groups and through classroom interactions. The space for dialogue is here, broadening the students' understanding.	29	1	NO
20	Not subject of analysis	This analysis demonstrates how teachers can create a frame for action for augmenting dialogic space not just when their teaching is under discussion but also when they have the role of observers discussing others' teaching and how other teachers use technology. The topics discussed were how to use Talkwall to foster student participation in classroom dialogue by **activating talk rules**.	NA	3	UK
21	Travelling of ideas is shown in an example analysis from a whole class dialogue. The teacher led an analysis of group choices, using Talkwall on a large interactive screen to move between group walls The analysis demonstrate **activity shifts, permanence, building on and connecting ideas** with microblogging.	The analysis shows variation in teachers' augmentation of dialogic space. The teachers stated their dialogic learning intentions (DI) as specific or generic. The "specific DIs" were more strategic and targeted aspects of dialogue, while the "generic DIs" adhered to a learning ethos related to open, positive communication in the classroom (**activation of talk rules**). The analysis shows how DIs are given prominence by teachers, how they are taken up by students and guide dialogue, and how a microblogging tool might be involved as an active tool in that dialogue.	134	6	UK