Adopting an unknowing stance in teacher–child interactions through ‘I wonder…’ formulations

S. Houen a, S. Danby a, A. Farrell a and K. Thorpe a,b

aSchool of Early Childhood and Inclusive Education, Faculty of Education, Queensland University of Technology, Brisbane, Australia; bInstitute for Social Science Research, University of Queensland, Brisbane, Australia

ABSTRACT

Teachers’ interactional practices shape children’s displays of knowledge. Teachers often rely on direct interactional devices, such as questions, to call for knowledge displays from children. However, case examples suggest that interactional strategies that downgrade teachers’ expert status, such as ‘I wonder…’ formulations may enhance child agentic participation. From 170 h of video-recorded classroom interactions across nine sites, 81 h were of teachers interacting with children (aged 3.5–5 years). This corpus of interactions was examined to explicate how teachers use ‘I wonder…’ formulations in their interactions with children. Drawing on the analytic resources of ethnomethodology and conversation analysis, we found that this formulation worked to disrupt teachers’ institutionally ascribed expert status and provided children with interactional spaces to display their own knowledge.

The ‘I wonder…’ strategy is presented as an interactional tool for teachers to draw upon to (i) elicit children’s displays of knowledge and (ii) follow-up when children have stayed silent or shown hesitancy during earlier talk. Fine-grained investigations of teacher–child talk enable the explication of interactional strategies that enrich communication and learning strategies in classrooms.

KEYWORDS

Conversation analysis; epistemics; ethnomethodology; ‘I wonder…’ formulations in teacher–child interactions; knowledge; requests; teacher–child interactions

Introduction

The goal of teaching is to build knowledge, and teacher–student interactions are integral to achieving this goal. In classrooms, interactions often revolve around knowledge, which can be exchanged in two main ways. The first way is the transmission of knowledge from expert to learner. Transmission of knowledge approaches involve teacher–student interactions that preference knowledge transfer from teacher to student (Cazden 2001; Nystrand 1997). These ‘lecture’ style interactions are labelled as being either traditional (Cazden 2001), method (Young 1992) or monologic (Nystrand 1997). Regardless of their label, they each position teachers as experts who have knowledge to impart to children.

In traditional approaches teacher knowledge is central to sequences of talk. Teachers often initiate sequences of talk with ‘test’ questions (Searle 1969) to assess students’ knowledge (McHoul 1978), with their own knowledge considered the baseline. Test question sequences
typically follow a well-known three-part sequence of talk known as the Initiation, Response, Evaluation (IRE) (Mehan 1979) sequence. IRE interactional sequences are initiated (I) by teachers asking questions, such as ‘How many legs does an insect have, Michael?’ The task for students then is to respond (R) through the provision of answers to teachers’ questions (Bateman 2013; Christie 2002; Margutti and Drew 2014; Waring 2009), such as, ‘Insects have six legs’. In the third turn, teachers usually assess or evaluate (E) student responses according to the sufficiency or accuracy of their responses.

Test questions preference a ‘correct’ response from students and often result in students trying to ‘guess what’s in the teacher’s head’ (Anstey and Bull 1996; Christensen and Baker 2002). Test questions may prevent students from contributing their own knowledge for fear of being assessed as incorrect and can restrict students’ turns at talk. These restrictions constrain students’ contributions to answering teacher questions, limit students’ turns at talk to a ratio of two teacher turns, (initiation [I] and evaluation [E]) to 1 student turn, (response [R]) (Edwards-Groves 2014) and aim to ‘transmit’ knowledge from teachers to students.

The second way that knowledge can be exchanged is through conversational approaches, which include non-traditional (Cazden 2001), discourse (Young 1992), dialogic (Nystrand 1997) and reciprocal conversations (Bateman 2015, 4). These approaches shift away from traditional styles of interaction to methods that encourage shared dialogue (Durden and Dangel 2008; Howe and Abedin 2013; Massey 2004; Mercer and Dawes 2014) with authentic discussions where thoughts and ideas are exchanged. In comparison to traditional approaches, conversational approaches allow more opportunities for students to talk and to become ‘active conversational partners with teachers’ (Durden and Dangel 2008, 252). Conversational approaches encourage an interactional space that is non-testing and, therefore, does not revolve around teacher knowledge as the baseline of the interaction. Rather, teachers and students engage with their displays of knowledge as the interaction unfolds to provide opportunities to develop new knowledge.

Conversational approaches align with the imperatives of early childhood education, which values the development of children’s (i) communication skills, such as oral language, (ii) critical thinking, including contributing their own knowledge, ideas and theories, and (iii) ability to work collaboratively. Interactional devices used by teachers influence the pedagogical approaches they implement. For example, the design of teacher elicitations is shown to prompt different responses from children (Houen et al. 2016b) and to effect children’s contributions to discussions. This paper reports on a study that investigated what happened when teachers use the interactional device of ‘I wonder...’ formulations to elicit children’s displays of knowledge in early childhood classroom contexts.

Knowledge in social interaction

Engaging with knowledge in social interaction is endemic in everyday life. The term epistemics refers to knowledge and knowledge positions in social interaction, including epistemic status and epistemic stance (Heritage 2012a, 2012b, 2012c; Heritage and Raymond 2012, 4). Epistemic status refers to the knowledge that individuals hold, whereas epistemic stance references the knowledge position that interactants present during social interaction. The varying levels of knowledge between interactants is labelled the epistemic gradient.
where interactants can present themselves as more knowledgeable (K+) or less knowledgeable (K-) (Heritage and Raymond 2012, 6) than each other. The epistemic gradient ‘may vary in slope from shallow to deep’ (Heritage 2013, 376). Interactants manage the gradient by establishing common knowledge as interactions unfold.

To establish common knowledge, interactants utilise interactional resources, such as questions, to display their own knowledge and elicit displays of knowledge from others. Heritage and Raymond (2012) show that question designs can indicate a speaker’s claim to knowledge. They use the following four questions as examples to explain the variance of knowledge claimed by the questioner: (a) Who did you talk to? (b) Did you talk to John? (c) You talked to John didn’t you? (d) You talked to John? (p. 180). Question (a) claims an absolute, or an extreme, lack of knowledge, question (b) and (c) suggest some knowledge and question (d) invokes a great deal of knowledge about ‘who’ the person had spoken to. When members ask questions they take a position of not knowing (K-) to varying degrees and assume that the person they ask is knowledgeable (K+) (Heritage and Raymond 2012). Questioners can, however, present an epistemic stance during an unfolding interaction that is different from their actual epistemic status (Heritage 2012a). Heritage (2012a) asserts that questioners, for various reasons, can ‘appear more, or less, knowledgeable than they really are’ (379). Although Heritage’s research relating to knowledge did not focus on classroom settings, classroom contexts present an important focus for understanding knowledge displays in interaction.

**Knowledge in classroom interaction**

Unlike in everyday life, questioners in classrooms are typically teachers who are institutionally ascribed as knowledge holders. Heller (2017, 159) points out that in classrooms, ‘both the selection of knowledge as well as its transmission are institutionally anchored and organised’. Teachers and students orient to the organisation of their roles in the classroom context (Heller 2017); teachers are experts and students are lay persons. As experts, teachers’ roles involve creating opportunities for students to display their knowledge and to assess the knowledge displayed (Bateman 2015), whereas students are responsible for displaying their knowledge (Macbeth 2011). When one party is considered the expert and another a lay person, epistemic asymmetries exist (Stivers, Mondada, and Steensig 2011).

Studies reveal that teachers’ and students’ knowledge asymmetries are not clear-cut and that interactional resources are used to manage the knowledge presented within and during unfolding interactions (Kääntä 2014; Sert 2013; Szczepk Reed 2017). Sert (2013), for example, identified the *epistemic status check* that is used by teachers to check the epistemic status of students, such as, ‘you don’t know?’, ‘no idea?’ (Sert 2013, 17) before they reallocate turns to talk to another student. In another example, Heller (2017) showed how teachers use *inserted knowledge questions* and how teacher reactions to students’ knowledge displays worked to manage the epistemic claims of students. Heller’s study, which investigated teacher-led whole class discussions of mathematics and German language lessons at five secondary schools in Germany, revealed that in whole group discussions, teachers treat students’ epistemic status as a collective rather than individually. When teachers present knowledge as new learning for the group of students, students downgraded their knowledge displays with
interactional resources which claim uncertainty such as ‘I think...’. These studies show that teachers and students draw on interactional resources to manage knowledge and find congruence in epistemic expectations. The management of knowledge is therefore fluid and negotiated as interactions unfold (Kääntä 2014).

Building onto the notion of downgrading knowledge (Heller 2017), this paper investigates what happens when teachers (who are considered experts) downgrade their own knowledge positions using the interactional resource of ‘I wonder...’ to elicit displays of knowledge from students. Before explaining the study’s methodological approach, we overview the interactional resources teachers use to elicit students’ displays of knowledge.

**Interactional resources to call for displays of knowledge**

Elicitations for knowledge in teacher–student interactions, as in everyday interaction, can be made via direct and indirect means. A direct approach uses questions to call for displays of knowledge. Question designs can include yes/no questions (Raymond 2003), ‘Wh’ questions (Hayano 2013) (including who, what, where, when, why and how), and alternative questions (Stivers 2010) that provide the recipient with a choice between two or more pieces of information. In relation to teacher–child interactions direct questions are often ‘test’ questions. These question types can be viewed as problematic as they restrict students’ contributions and result in students trying to ‘guess what’s in the teacher’s head’ (see discussion above). Questions in interaction expect displays of knowledge in response. The absence of a response causes interactional trouble and prompts interactional work to repair the non-answer (Sacks and Schegloff 1979). For example, the questioner might repeat the question (Bateman 2015) or reformulate the question in order to get a response (Houen et al. 2016b).

Indirect elicitations differ from direct ones in that they are not as expectant of answers. They invite displays of knowledge and are not treated as problematic if answers are not forthcoming (Houen et al. 2016b). Indirect elicitations can be implemented through non-interrogative formats (Margutti 2007), such as ‘Your name is Charlie?’ delivered with rising intonation. Unlike direct yes/no questions that expect a yes/no in response, non-interrogative designs are not framed grammatically as questions, therefore ‘do questioning’ in an indirect way, often through rising intonation. In response to the non-interrogative format, the respondent would most likely confirm that their name is Charlie or provide their correct name. Indirect elicitations can also be implemented by ‘fishing’ (Pomerantz 1980). Pomerantz (1980) asserts that speakers ‘fish’ for knowledge by stating the knowledge they have, which can result in other persons revealing their own knowledge. For example, Brooke says, ‘I saw police at the house two doors down on Tuesday’ and Luke responds, ‘I heard they were burgled.’ Here, Brooke provided her knowledge and achieved gaining Luke’s knowledge about the police being at the house two doors away without directly asking for it.

In classroom contexts, teachers can implement indirect requests for knowledge through interactional devices, such as the (i) Designedly Incomplete Utterance (DIU) (Koshik 2002) and (ii) Eliciting Completion Device (ECD) (Margutti 2007). Koshik (2002) describes DIUs as turns at talk that are stopped mid-sentence, such as the teacher saying, ‘the time is?’ (with rising intonation), an act that signals for students to complete the utterance. Margutti (2007) uses the label ECD to describe when teachers withhold
the last word(s) as a stimulus for students’ completion. For example, the teacher, who is reading a book, ‘Humpty Dumpty’ to the class, says, ‘Humpty Dumpty sat on the w-’, prompting students to complete the sentence, ‘wall’. Students’ completion of the sentence displays knowledge.

Students’ responses to teachers’ elicitations for knowledge can reveal how children display ‘understanding’ or display ‘knowing’ through their claims and demonstrations (Koole 2010, 184). Koole (2010) shows that students’ claims of understanding and demonstrations of knowledge are achieved interactionally in different ways; these displays can be used by the teacher to ascertain student knowledge. Students’ claims of understanding are usually done through acknowledgements, such as ‘yes I know that’, whereas a claim of knowledge is followed by a demonstration of that knowledge, for example, ‘yes I know how to get to the library; you walk outside, turn right and then it is on the left.’ In this paper we contribute to understanding teachers’ and children’s engagement with knowledge, and to understanding epistemic order, in classroom interactions. We explore what happens when teachers downgrade their own knowledge and adopt an unknowing stance through ‘I wonder…’ formulations. Our analysis seeks to understand how members orient to this stance during the unfolding interaction.

Method and data

With a focus on naturally occurring classroom interactions, this investigation employed ethnomethodology (Garfinkel 1967) and conversation analysis (Sacks 1995). From an ethnomethodological perspective the interactional resources that members use to understand and co-construct social interactions are ‘recognisable, describable and reportable’ (Hester and Eglin 1997, 125). Conversation analysis provides a means to inspect the ‘bedrock practices of interaction’ (Heritage 2016, 216) by explicating the underlying patterns of talk that members orient to, and how members together construct meaning in situ (Pomerantz and Fehr 1997; Psathas 1995; Have 2004). Instead of focussing on external constructs, ethnomethodology and conversation analysis focus on explicating the interactional resources used by participants to make sense of the interaction as it is happening, on a moment-by-moment basis.

This paper reports on 81 h of footage that included teacher-child interaction from a total of 170 h of video recorded classroom interactions, in nine preschool classrooms. Teachers and parents of children (aged 3.5–5 years) provided informed consent and children provided their assent to participate in the study. Participants were assigned pseudonyms to protect their identity. The video recordings provided a resource to examine the fine-grained details of teachers’ and children’s methods (Pomerantz and Fehr 1997). These recordings afforded the repeated viewing of the interactions, and enabled the production of transcripts (Danby 1996; Heath, Hindmarsh, and Luff 2010; Pomerantz and Fehr 1997). Transcripts used Jeffersonian notation (Jefferson 2004) (see Appendix 1 for a summary) and were used in conjunction with the video recordings during analysis.

The analytic focus emerged after an extended single case investigation of teachers’ pedagogical interactions (Houen et al. 2016b). Analysis of the single case located teacher-initiated ‘I wonder…’ formulations as an important pedagogical tool; for
example, when the teacher says, ‘I wonder what that is?’, the formulation worked to indirectly elicit, rather than mandate, children’s displays of knowledge (Houen et al. 2016b).

While single case analyses afford a fine-grained investigation of the details of extended interactions and support the explication of interactional phenomena that interactants use, identified interactional phenomena can then be investigated as part of a collection. Investigating collections can enhance understandings of interactional phenomena and aid in the generalizability of findings (Liddicoat 2007). A single case analysis conducted by Houen et al. (2016b) identified the ‘I wonder…’ formulation as an interactional resource that one teacher used to prompt children’s displays of knowledge. Although the formulation was not grammatically framed as a question, within this single case, children treated the formulation as ‘doing questioning.’

Further investigation of a collection of ‘I wonder…’ formulations sought to understand this phenomenon within a larger corpus of teacher-child interactions. Close inspection of the 81 h of video recorded data found 41 instances of the formulation being initiated by teachers. These 41 instances formed a collection. Initial inspection of the collection identified that ‘I wonder…’ formulations were located in particular sequences of talk that (i) relate to future classroom experiences, such as ‘I wonder if we should look for lady beetles on our flowers in the garden when we go outside’, and (ii) orient to knowledge, such as ‘I wonder why the beetle dries its wings before flying off the flower’. Of the 41 cases, the formulation was employed 17 times by the teacher to relate to future classroom experiences (Houen et al. 2016a). This paper reports on the remaining 24 (out of the initial 41) occasions, in which six teachers across nine classrooms used the ‘I wonder…’ formulation to orient to displays of knowledge. Within the data subset of 24 cases, there were two instances where teachers’ ‘I wonder…’ formulations were followed by talk that was inaudible and were excluded from analysis, leaving 22 cases to be investigated.

Analysis

Using conversation analytic perspectives, our analysis focused on 22 cases of teacher practice where they initiated ‘I wonder…’ formulations that oriented to children’s displays of knowledge. Practices, from conversation analytic viewpoints, are described as:

any feature of the design of a turn in a sequence that (a) has a distinctive character, (b) has specific locations within a turn or sequence, and (c) is distinctive in its consequences for the nature or the meaning of the action that the turn implements (Heritage 2016, 210)

Investigation of these cases revealed that the formulation was used strategically to orient to knowledge. This paper presents the analysis of four extracts. The first two extracts present dyadic interactions between a teacher and children. Extracts three and four present multiparty teacher and whole class interactions, with teachers allocating turns at talk (McHoul 1978). These extracts were chosen because they clearly illustrate the analytic findings that show how the ‘I wonder…’ formulation was positioned in teacher-child talk to initiate elicitations for, and respond to, children’s displayed knowledge. These distinct practices are discussed now, in turn.
‘I wonder…’ formulations to initiate elicitations of children’s displayed knowledge

There were 19 occasions in the sub-data set where teachers used the formulation to initiate elicitations for children to display their knowledge. Further analysis of these 19 occasions revealed that teachers use the formulation in two main ways to initiate requests for displays of knowledge. The first way was to ‘wonder’ about a topic. For example, ‘I wonder what the sailor is going to do?’; and the second way was to ‘wonder’ about children’s knowledge regarding a topic of talk, such as, ‘I wonder if anyone knows what season it is now?’ We now present extracts that demonstrate how the formulation worked to elicit children’s displayed knowledge.

Teachers use the formulation to present their own ‘wondering’ about a subject

Extract one shows an interaction between a teacher and a child watching a YouTube clip about submarines. This clip was located on the Internet by the teacher in response to the child’s interest in submarines. The teacher and child are seated in front of a laptop computer viewing video footage that was taken on a navy submarine. They watch the clip without the audio playing. As they watch, the clip is treated as a source of knowledge. The teacher and child provide an online-commentary of what is happening and discuss the sailors’ specialised immersion suits.

Extract 1 (07082012_00056_2.10–3.01)
Participants –
TEA: teacher
Ror: Child
Com: ((description of events shown in the video))

1  TEA: and there they are in side,
Com: ((sailors manipulating suit))
2   (0.4)
Com: [((sailor starts to put suit on))]
3  Ror: [putting their suit on,]
Com: [((continues putting suit on))]
4  TEA: => [(wonder why they’re putting that suit on.]
5   (0.4)
Com: [((gets help putting on suit)])
6  Ror: [I don’t know, (0.4) looks] [like a spacesuit to me:]
Com: [((places helmet on head))]
7  TEA: [(it does but they’re not going to space are the:)]
Com: [((re-adjusts helmet)]
8  Ror: [mm:]
9  TEA: => [(wonder what he’s going to do:)]
10  [(0.6)]
Com: [((turns to walk toward door))]
Com: [((bend down in front of small door))]
11  Ror: [going out:]
12  TEA: [oh] he’s going through li- <gee they’ve =
'I wonder…’ formulation is used twice in this extract and presents the teacher ‘without knowledge’ (K-) (Heritage 2012b). The first ‘I wonder…’ is in response to the child’s online commentary about the sailors putting on their suits (line 3). The formulation expands the sequence of talk focusing on sailor suits. The teacher prefices an interrogative sentence with the ‘I wonder…’ formulation (line 4). The teacher’s turn concludes with falling pitch, providing a weak conditional relevance for a response. The ‘I wonder…’ formulation can be heard as an invitation, as opposed to an expectation, to respond to the teacher’s own wondering about a subject. By presenting her own wondering about a subject the teacher also expresses her desire to build knowledge, thereby foregrounding possible future topics of talk.

In response to the teacher’s wondering, the child first claims insufficient knowledge (Beach and Metzger 1997, 562; Sert and Walsh 2013) through ‘I don’t know,’ (line 6); however, as Beach and Metzger (1997) point out, speakers can use claims of insufficient knowledge to indicate ‘uncertainty and concerns about next-positioned guesses’ (p 564). The child’s ‘I don’t know’ prefices a continued turn, which could indicate ambiguity and hints that the continued turn (after the short pause of 0.4 s) should be considered in light of this claimed uncertainty. In this continued turn the child does not orient to the specific knowledge claimed to be unknown by the teacher; however, while he displays some knowledge about the suits looking like space suits, he was not limited to providing an answer to the teacher’s ‘wondering’ as may have been the case if a direct interrogative, such as ‘Why are they putting that suit on?’ was implemented. Instead, the ‘wondering’ worked to invite the child to share his perspective about the suits and provided an opportunity for the child to make connections to prior knowledge about suits resembling space suits. While the teacher agrees that the suit does look like a space suit, she also partially rejects the response using the contrasting marker ‘but’ (Maynard 1992) with ‘but they’re not going to space are they’ (line 7). This marker is followed by the tag question (Hepburn and Potter 2010) ‘are they’ (line 7), which downgrade the teacher’s epistemic primacy (Heritage and Raymond 2005), thereby limiting her rights to evaluate the child’s contribution. The teacher’s request for confirmation is followed by the child’s minimal agreement (line 8) which brings closure to the sequence of talk about sailor suits.

The teacher implements a second ‘I wonder…’ when she initiates a new topic about what the sailor is going to do (line 9). This initiation presents her as curious and in a position without knowledge (K-) (Heritage 2012c). The child contributes his ideas when he says ‘going out’ (line 11). The teacher’s response then builds on the child’s suggestion that the sailor might be going out. She provides a commentary, ‘oh he’s going through li-‘, before cutting off her talk to alter the direction of the talk in relation to the size of the doors (line 13). This cut-off marks a departure of talk away from what the sailor is going to do, to now focusing on how small the doors of a submarine are. Extract 1 has shown how the teacher used the formulation to downgrade her own knowledge position and invite the child’s contribution to the discussion.

Within the collection, most teachers used ‘I wonder…’ formulations to downgrade their epistemic status. There were three occasions in which teachers used the formulation in conjunction with a tag question (Hepburn and Potter 2010). These occasions
revealed how the formulation worked differently from the ‘I wonder…’ formulations that were previously discussed. Extract 2 occurs one minute after the interaction that was presented in Extract 1.

Extract 2 (07082012_00056_4.10–4.27)
Participants –
TEA: teacher
Ror: child
35 TEA: => I wonder if they are missiles. (0.2) [ca] use =
36 Ror: [xx]
37 TEA: = some submarines are fo-f- for the army aren’t they
38 Ror: yea:h!
39 TEA: for the navy
40 Ror: yea:h!
41 TEA: mmm there it goes

The teacher and child view and discuss the YouTube clip about submarines. After seeing what looks like a missile on the clip, the teacher employs an ‘I wonder…’ formulation. She says ‘I wonder if they are missiles’ (line 35). In a latched turn at talk she provides a justification for her thinking and ends her turn with the tag question, ‘aren’t they’ (line 37). Although the teacher used an ‘I wonder…’ formulation, her justification worked to display that she had some knowledge about missiles, and therefore was not entirely without knowledge. The tag question ‘aren’t they’ seeks confirmation which is given in the child’s turn (line 38). In this way, an interactional space is created for the child to confirm or disconfirm the teacher’s knowledge, rather than orient to the ‘I wonder…’ formulation. The next section shows how teachers use the formulation to wonder aloud about the status of children’s knowledge.

**Teachers use the formulation to ‘wonder’ about the status of children’s knowledge**
The second way that teachers use ‘I wonder…’ formulations is to wonder aloud about children’s knowledge, such as, ‘I wonder if you know…’. There were three instances within the data set. Although the ‘wondering’ relates to the children’s epistemic status, it works to indirectly elicit knowledge from the children. Extract 3 is an example of a teacher wondering about the status of children’s knowledge and occurs as part of a typical multiparty classroom interaction. The children in the class sit on the carpet in front of the teacher discussing a postcard that had been sent to the group by a child on vacation.

Extract 3 (20120821085810_5.15–5.35)
Participants –
TEA: Teacher
Bil: Child
6 Ch?: a stamp_
7 TEA: a stamp.
8 TEA: => >↑I wonder if any of you know<↓ why you have to put a stamp
9 [on the letter that has to go in the letter box]
10 Bil: [because then you will know] =
The ‘I wonder if you know...’ formulation explicitly displays the teacher as K- relating to the children’s knowledge. The teacher employs the ‘I wonder if you know...’ formulation after children respond to her previous question calling for the label of ‘stamp’ (line 6). She wonders if the children know why letters need stamps (lines 8–9). While the design of this request calls for a confirmation or disconfirmation regarding children’s knowledge, Bill orients to progressivity (Lee 2011) and treats the ‘wondering’ as a known answer question that initiates an IRE sequence. In response, Bill displays his knowledge relating to why stamps need to be put on letters (lines 10–12), which is evaluated as incorrect (line 13) by the teacher in the third turn. The teacher follows with an extended turn at talk (lines 13–15) where she first assesses the child’s response, thereby claiming epistemic authority (Heritage and Raymond 2005) and manages the child’s displayed lack of knowledge by providing a verbal explanation (Sert and Walsh 2013). While the child did not display exact knowledge about why letters need a stamp, he did claim some knowledge about the sender’s details being provided on letters. This ‘seesaw’ of K- and K + between members’ displayed knowledge shows how knowledge is managed interactionally during unfolding turns at talk, thereby highlighting the importance of teachers’ responses in the third turn to extend dialogue and provide opportunities to co-create new knowledge. The next section presents the analysis of an extract where the teacher implemented the ‘I wonder...’ formulation in response to silence or children’s displays of a lack of knowledge.

‘I wonder...’ formulations to respond to children’s silence or displays of being without knowledge

There were three examples in the data set that show ‘I wonder...’ formulations being used following children’s silence or incorrect responses to teachers’ interrogatives. In everyday interactions, silence of one second or longer has been shown to indicate interactional trouble (Liddicoat 2007). In classrooms, however, silence, which is sometimes referred to as pauses (Cohrssen 2014; Cohrssen, Church, and Tayler 2014) or wait time (Ingram and Elliott 2014), can be used to afford or mark thinking time.

Of the three cases, there was one instance of the formulation being used to respond to silence and two instances where the formulation was in response to an incorrect answer to teachers’ interrogatives. When used in response to children’s displayed knowledge or silence, the formulation worked to downgrade the teacher’s epistemic authority and create an interactional space for the child to ‘have a go’ at displaying their own knowledge or provide an interactional space for others to contribute their ideas.

Extract 4, which was first reported in Houen et al. (2016b), shows how the ‘I wonder...’ formulation was used to respond to a child’s silence and gain a response from the selected children.
This extract commences with the teacher issuing a typical known-answer question using a ‘Wh’ design (line 157) asking for the label of antennae. Through her gaze, the teacher allocates the next speaker turn to Men. Men, though, remains silent (1.6 s) (line 158), which is potentially problematic and may indicate either a lack of knowledge or an interactional strategy that bides time to think. After 1.6 s the teacher reformulates the initial question by prefacing it with ‘I wonder...’ (line 159). She asks ‘I wonder what that is?’ By using this formulation, the teacher presents her own wondering and adopts a position of not knowing. This strategic move, which downgrades epistemic authority, creates an interactional space for the child to ‘have-a-go’ at responding to the teacher’s reformulated initial question. The child responds with the label ‘eyes’ (line 161). Although incorrect, the teacher does not explicitly evaluate Men’s response as right or wrong in the third turn. Instead, she repeats Men’s response of ‘eyes’ (line 163) with rising intonation and follows with a yes/no question (line 164), ‘do you think it might be eyes?’ Hellerman (2003) has shown that teacher repetition of student answers that incorporate certain prosodic features, such as rising intonation, can be oriented to by students as evaluations that warrant additional information or alternative answers. While the question does not seem to be oriented to by the interactants, indicated by a long silence of 2.2 s (line 165), Rory’s contribution of his perspective reveals that the long silence was used to think and frame a response. Rory displays his knowledge by correctly labelling the ‘antennae’ (line 166). This example shows how the teacher concealed her knowledge position, by presenting herself in K- through the ‘I wonder...’ formulation, and enabled the children to present their knowledge positions within the unfolding sequence of talk. As a result of the teacher downgrading her epistemic authority, interactional spaces were created for children to contribute their ideas. Here, the ‘I wonder...’ formulation did elicit knowledge in less threatening ways when compared to the more traditional questioning strategies teachers use, such as ‘wh’ questions.
Concluding discussion

This investigation focused on teachers’ ‘I wonder...’ formulations in their interactions with children. Analysis revealed that this formulation is used in different types of classroom interactions, including less formal dyadic interactions and typical whole class teacher-led interactions as an indirect, but effective, way to elicit and respond to children’s displays of knowledge.

When eliciting displays of knowledge from children, we assert that ‘I wonder...’ formulations invite, rather than expect, children’s contributions. We have shown how teachers use the formulation to present themselves without knowledge, that is as having an epistemic stance of being in K- (Heritage 2012b). When teachers are positioned in the K- position, their ‘expert’ status is downgraded. The formulation presents teachers as ‘being curious’ and without the relevant knowledge (K-) (Heritage 2012a) and establishes a weak conditional relevance for a response. Additionally, the chance of an explicit assessment of the child’s contribution as right or wrong by the teacher is reduced due to their K- claim. Instead, an interactional space for shared dialogue (Durden and Dangel 2008; Howe and Abedin 2013; Massey 2004; Mercer and Dawes 2014), such as children’s contribution of their own ideas or perspectives, may follow.

When using ‘I wonder...’ formulations to respond to children’s silence or incorrect displays of knowledge, the formulation downgrades the teacher’s epistemic authority and reduces teacher rights to explicitly evaluate the child’s contribution. It positions the teacher as doing questioning and can re-initiate an IRE sequence that had previously encountered interactional trouble due to silence or an incorrect answer. This re-initiation created another opportunity for the selected child or other children in the class to respond.

While the formulation was shown to open the interactional space for children to present their knowledge, further analysis revealed that the implementation of ‘I wonder...’ formulations alone did not guarantee that interactions were extended or sustained. We saw that ‘I wonder...’ formulations were rarely followed with teachers’ evaluations in third turn. Instead, the extracts presented in this paper revealed differing third turn moves by teachers, including silence, repeats of children’s responses and yes/no questions. Our findings align with Y-A. Lee’s (2007) study that showed that teachers’ talk in the third turn is often based on contingencies; what was said in the immediate prior turn affects what is said in the next turn at talk. Findings from this paper align with others regarding teachers’ talk in the third turn that assert that third turn moves have interactional consequences; some moves extend and others close sequences of talk (cf. Boyd and Rubin 2006; Lee 2007; Nassaji and Wells 2000; Teo 2016). The removal of teachers’ evaluative turns at talk, comments from teachers, and the asking of additional questions that build upon children’s responses have all been attributed to promoting extended interactions with elaborated contributions from children (Boyd and Rubin 2006; Nassaji and Wells 2000). This paper shows that teachers’ use of ‘I wonder...’ formulations can be used to disrupt explicit teacher assessments, which have been shown to close down sequences of talk (Beeke et al. 2013). Rather the ‘I wonder...’ formulation positions the teacher as ‘wanting to find out’ and foregrounds possible future topics of talk and expanded sequences about topics already underway.

The creation of interactional spaces for children to display knowledge and the reduction of teachers’ explicit evaluative turns may promote engagement with knowledge through conversational approaches such as dialogic (Nystrand 1997) and reciprocal
conversations (Bateman 2015). These findings can inform the pedagogical practices of teachers in early childhood settings, and educational settings more broadly.

While this research set out to investigate ‘I wonder...’ formulations in teacher-child interactions, the finding that teacher responses to child contributions were integral in fostering sustained interactions warrants further investigation. Teacher talk in the third turn was shown to be fundamental in continuing and extending conversations about topics underway and is an area for future investigation. For example, future investigations might target (i) teachers’ knowledge displays in third turn, (ii) teachers’ repeats of children’s answers, (iii) teachers recapping children’s ideas, and (iv) what happens when silence follows children’s responses. Close studies of teacher-child talk make visible interactional strategies that enrich communication and learning strategies in classrooms.

If teachers bring understandings of the organisation of interactions within classroom settings, there are opportunities to make intentional decisions, on a moment-by-moment basis, regarding the interactional resources they select for specific purposes. The ‘I wonder...’ formulation is one strategy that may be chosen from a repertoire to elicit children’s displays of knowledge, rather than children trying to guess the answer in the teacher’s head (Christensen and Baker 2002; Anstey and Bull 1996).

Through robust empirical understandings of how teachers’ use ‘I wonder...’ formulations to create opportunities for children to display their knowledge, and respond to silence or incorrect answers, we highlight that teachers’ follow-up turns in their talk with children are pivotal to foster continued dialogue. The focus on teachers’ use of ‘I wonder...’ formulations in teacher-child interactions reveals how the formulation can be used as a strategy to elicit children’s contributions of knowledge, without the pressure attributed to teachers’ expectations of a response.

Acknowledgements

We thank the teachers, children and families of the Crèche and Kindergarten Association for their participation in this study.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

The study was funded by the Australian Research Council [DP110104227], with ethics approval by Queensland University of Technology’s University Human Research Ethics Committee (Reference No.: 110001480).

Notes on contributors

S. Houen research interests focus on teacher-child interaction and quality in early childhood education. Previous investigations using ethnomethodology and conversation analysis include teacher questioning and how teachers support the use of digital technologies in early childhood classrooms.
S. Danby is Professor in the School of Early Childhood and Inclusive Education, Faculty of Education, Queensland University of Technology (QUT), Australia. Her research applies ethnomethodological and conversation analysis perspectives to investigating social interaction in institutional settings including classrooms, medication consultations, family settings and helplines.

A. Farrell is Professor and Head of the School of Early Childhood and Inclusive Education, Faculty of Education, Queensland University of Technology (QUT), Australia. Her research addresses early childhood education and care, children’s rights to participation and protection, research ethics and international policy analytical.

K. Thorpe researches the impacts of early education and care experiences on children’s learning and developmental outcomes across the life-course. Understanding the quality of adult–child interactional experiences is central to this aim. Her work includes a diverse range of qualitative and quantitative methodologies and features longitudinal studies.

ORCID
S. Houen http://orcid.org/0000-0002-0904-9906
S. Danby http://orcid.org/0000-0002-1944-7043
A. Farrell http://orcid.org/0000-0003-3663-223X
K. Thorpe http://orcid.org/0000-0001-8927-4064

References
Anstey, M., and G. Bull. 1996. The Literacy Lexicon. Sydney: Prentice Hall.
Bateman, A. 2013. Responding to Children’s Answers: Questions Embedded in the Social Context of Early Childhood Education. Early Years 33(3):275–288. Routledge. doi:10.1080/09575146.2013.800844.
Bateman, A. 2015. Conversation Analysis and Early Childhood Education: The Co-Production of Knowledge and Relationships. London and New York: Routledge.
Beach, W. A., and T. R. Metzger. 1997. “Claiming Insufficient Knowledge.” Human Communication Research 23 (4): 562–588. doi:10.1111/j.1468-2958.1997.tb00410.x.
Beeke, S., F. Beckley, W. Best, F. Johnson, S. Edwards, and J. Maxim. 2013. “Extended Turn Construction and Test Question Sequences in the Conversations of Three Speakers with Agrammatic Aphasia.” Clinical Linguistics & Phonetics 27 (10–11): 784–804. doi:10.3109/02699206.2013.808267.
Boyd, M., and D. Rubin. 2006. “How Contingent Questioning Promotes Extended Student Talk: A Function of Display Questions.” Journal of Literacy Research 38 (2): 141–169. doi:10.1207/s15548430jlr3802_2.
Cazden, C. 2001. Classroom Discourse: The Language of Teaching and Learning. 2nd ed. Portsmouth, NH: Heinemann.
Christensen, C., and C. Baker. 2002. “Pedagogy, Observation and the Construction of Learning Disabilities.” Pedagogy, Culture & Society 10 (1): 73–93. doi:10.1080/146813602020020128.
Christie, F. 2002. Classroom Discourse Analysis: A Functional Perspective. London: Continuum.
Cohrssen, C. 2014. “Pausing for Learning: Responsive Engagement in Mathematics Activities in Early Childhood Settings.” Australasian Journal of Early Childhood 39 (4): 95–102.
Cohrssen, C., A. Church, and C. Tayler. 2014. Purposeful Pauses: Teacher Talk during Early Childhood Mathematics Activities. International Journal of Early Years Education 22(2):169–183. Taylor & Francis. doi:10.1080/09669760.2014.900476.
Danby, S. 1996. “Constituting Social Membership: Two Readings of Talk in an Early Childhood Classroom.” Language and Education 10 (2–3): 151–170. doi:10.1080/09500789608666706.
Durden, T., and J. R. Dangel. 2008. “Teacher-Involved Conversations with Young Children during Small Group Activity.” Early Years 28 (3): 251–266. doi:10.1080/09575140802393793.
Edwards-Groves, C. 2014. “Talk Moves: A Repertoire of Practices for Productive Classroom Dialogue.” Primary English Teaching Association Australia PETAA Paper 195.

Garfinkel, H. 1967. Studies in Ethnomethodology. Englewood Cliffs, NJ: Prentice-Hall.

Hayano, K. 2013. “Question Designs in Conversation.” In The Handbook of Conversation Analysis, edited by J. Sidnell and T. Stivers, 395–414. Oxford: Wiley-Blackwell.

Heath, C., J. Hindmarsh, and P. Luff. 2010. “Analysing Video: Developing Preliminary Observations.” In Video in Qualitative Research: Analysing Social Interaction in Everyday Life, edited by C. Heath, J. Hindmarsh, and P. Luff, 61–86. London: Sage Publications Ltd.

Heller, V. 2017. Managing Knowledge Claims in Classroom Discourse: The Public Construction of a Homogeneous Epistemic Status. Classroom Discourse 8(2):156–174. Routledge. doi:10.1080/19463014.2017.1328699.

Hellermann, J. 2003. “The Interactive Work of Prosody in the IRF Exchange: Teacher Repetition in Feedback Moves.” Language in Society 32 (1): 79–104. NY: Cambridge University Press. doi:10.1017/S0047404503321049.

Hepburn, A., and J. Potter. 2010. “Interrogating Tears: Some Uses of ‘Tag Questions’ in a Child Protection Helpline.” In Why Do You Ask? the Function of Questions in Institutional Discourse, edited by A. Freed and S. Ehrlich, 69–86. Oxford: Oxford University Press.

Heritage, J. 2012a. “Epistemics in Conversation.” In The Handbook of Conversation Analysis, edited by J. Sidnell and T. Stivers, 370–394. West Sussex, UK: Wiley-Blackwell.

Heritage, J. 2012b. “Epistemics in Action: Action Formation and Territories of Knowledge.” Research on Language & Social Interaction 45 (1): 1–29. doi:10.1080/08351813.2012.646684.

Heritage, J. 2012c. “The Epistemic Engine: Sequence Organization and Territories of Knowledge.” Research on Language & Social Interaction 45 (1): 30–52. doi:10.1080/08351813.2012.646685.

Heritage, J. 2013. “Action Formation and Its Epistemic (And Other) Backgrounds.” Discourse Studies 15 (5): 551–578. doi:10.1017/S1464517613010144.

Heritage, J. 2016. “Qualitative Research.” In Conversation Analysis: Practices and Methods, 4th ed. edited by D. Silverman, 207–224. Los Angeles: Sage.

Heritage, J., and G. Raymond. 2005. “The Terms of Agreement: Indexing Epistemic Authority and Subordination in Talk-In-Interaction.” Social Psychology Quarterly 68 (1): 15–38. doi:10.1177/019027250506800103.

Heritage, J., and G. Raymond. 2012. “Navigating Epistemic Landscapes: Acquiescence, Agency and Resistance in Responses to Polar Questions.” In Questions: Formal, Functional and Interactional Perspectives, edited by J.-P. de Ruiter. New York, NY: Cambridge University Press.

Hester, S., and P. Eglin. 1997. “Culture in Action: Studies in Membership Categorization Analysis.” In Studies in Ethnomethodology and Conversation Analysis, edited by S. Hester and P. Eglin, Washington, DC: University Press of America.

Houen, S., S. Danby, A. Farrell, and K. Thorpe. 2016a. “Creating Spaces for Children’s Agency: ‘I Wonder…’ Formulations in Teacher–Child Interactions.” International Journal of Early Childhood 48 (3): 259–276. doi:10.1007/s13158-016-0170-4.

Houen, S., S. Danby, A. Farrell, and K. Thorpe. 2016b. “‘I Wonder What You Know…’ Teachers Designing Requests for Factual Information.” Teaching and Teacher Education 59: 68–78. doi:10.1016/j.tate.2016.02.002.

Howe, C., and M. Abedin. 2013. “Classroom Dialogue: A Systematic Review across Four Decades of Research.” Cambridge Journal of Education 43 (3): 325–356. doi:10.1080/0305764X.2013.786024.

Ingram, J., and V. Elliott. 2014. “Turn Taking and ‘Wait Time’ in Classroom Interactions.” Journal of Pragmatics 62 (February): 1–12. doi:10.1016/j.pragma.2013.12.002.

Jefferson, G. 2004. “Glossary of Transcript Symbols with an Introduction.” In Conversation Analysis: Studies from the First Generation, edited by G. H. Lerner, 14–31. Amsterdam: John Benjamins Publishing.

Kääntä, L. 2014. “From Noticing to Initiating Correction: Students’ Epistemic Displays in Instructional Interaction.” Journal of Pragmatics 66: 86–105. Elsevier B.V. doi:10.1016/j.pragma.2014.02.010.

Koole, T. 2010. “Displays of Epistemic Access: Student Responses to Teacher Explanations.” Research on Language & Social Interaction 43 (2): 183–209. doi:10.1080/08351811003737846.
Koshik, I. 2002. “Designedly Incomplete Utterances: A Pedagogical Practice for Eliciting Knowledge Displays in Error Correction Sequences.” *Research on Language and Social Interaction* 35 (3): 277–309. doi:10.1207/S15327979RLSI3503.

Lee, S.-H. 2011. “Responding at a Higher Level: Activity Progressivity in Calls for Service.” *Journal of Pragmatics* 43 (3): 904–917. Amsterdam: Elsevier B.V. doi:10.1016/j.pragma.2010.09.028.

Lee, Y.-A. 2007. Third Turn Position in Teacher Talk: Contingency and the Work of Teaching. *Journal of Pragmatics* 39(1):1204–1230. AMSTERDAM: ELSEVIER SCIENCE BV. doi:10.1016/j.pragma.2006.11.003.

Liddicoat, A. 2007. *An Introduction to Conversation Analysis*. 41 vols. New York, NY: Continuum Publishing Corporation. doi:10.1016/j.pragma.2008.11.009.

Macbeth, D. 2011. “Understanding as an Instructional Matter.” *Journal of Pragmatics* 43: 438–451. doi:10.1016/j.pragma.2008.12.006.

Margutti, P. 2007. “‘Are You Human Beings?’ Order and Knowledge Construction through Questioning in Primary Classroom Interaction.” *Linguistics and Education* 17 (4): 313–346. doi:10.1016/j.linged.2006.12.002.

Margutti, P., and P. Drew. 2014. “Positive Evaluation of Student Answers in Classroom Instruction.” *Language and Education* 28 (5): 436–458. doi:10.1080/09500782.2014.898650.

Massey, S. 2004. “Teacher–Child Conversation in the Preschool Classroom.” *Early Childhood Education Journal* 31 (4): 227–232. doi:10.1023/B:ECEJ.0000024113.69141.23.

Maynard, D. 1992. “On Clinicians Co-Implicating Recipients’ Perspective in the Delivery of Diagnostic News.” In *Talk at Work*, edited by P. Drew and J. Heritage, 331–359. Cambridge: Cambridge University Press.

McHoul, A. 1978. “The Organization of Turns at Formal Talk in the Classroom.” *Language in Society* 7 (2): 183–213. doi:10.1017/S0047404500005522.

Mehan, H. 1979. *Learning Lessons: Social Organization in the Classroom*. Cambridge, Mass.: Harvard University Press.

Mercer, N., and L. Dawes. 2014. The Study of Talk between Teachers and Students, from the 1970s until the 2010s. *Oxford Review of Education* 40(4):430–445. Routledge. doi:10.1080/03054985.2014.934087.

Nassaji, H., and G. Wells. 2000. “What’s the Use of ‘Triadic Dialogue’? An Investigation of Teacher-Student Interaction.” *Applied Linguistics* 21 (3): 376–406. Oxford: Oxford University Press. doi:10.1093/applin/21.3.376.

Nystrand, M. 1997. “Dialogic Instruction: When Recitation Becomes Conversation.” In *Opening Dialogue: Understanding the Dynamics of Language and Learning in the English Classroom*, edited by M. Nystrand, A. Gamoran, R. Kachur, and C. Prendergast, 1–29. New York, NY: Teachers College Press.

Pomerantz, A. 1980. “Telling My Side: ‘Limited Access’ as a ‘Fishing’ Device.” *Sociological Inquiry* 50 (3–4): 186–198. doi:10.1111/soin.1980.50.issue-3-4.

Pomerantz, A., and B. Fehr. 1997. “Discourse as Social Interaction.” In *Conversation Analysis: An Approach to the Study of Social Action as Sense Making Practices*, edited by A. V. D. Teun, 64–92. London: Sage.

Psathas, G. 2014. *Conversation Analysis: The Study of Talk-in-Interaction*. Thousand Oaks, California: Sage. Raymond, G. 2003. “Grammar and Social Organization: Yes/No Interrogatives and the Structure of Responding.” *American Sociological Review* 68 (6): 939–967. Washington: American Sociological Assoc. doi:10.2307/1519752.

Sacks, H. 1995. *Lectures on Conversation, Volumes I and II*. Oxford: Blackwell.

Sacks, H., and E. Schegloff. 1979. “Two Preferences in the Organisation of Reference to Persons in Conversation and Their Interaction.” In *Everyday Language: Studies in Ethnomethodology*, edited by G. Psathas, 15–21. New York, NY: Irvington Press.

Searle, J. 1969. *Speech Acts: An Essay in the Philosophy of Language*. Cambridge: Cambridge University Press.

Sert, O. 2013. “Epistemic Status Check’ as an Interactional Phenomenon in Instructed Learning Settings.” *Journal of Pragmatics* 45 (1): 13–28. doi:10.1016/j.pragma.2012.10.005.

Sert, O., and S. Walsh. 2013. “The Interactional Management of Claims of Insufficient Knowledge in English Language Classrooms.” *Language and Education* 27 (6): 542–565. doi:10.1080/09500782.2012.739174.
Appendix 1. Transcription conventions – Jefferson Notation

The transcription system used to transcribe conversational data was developed by Gail Jefferson (2004). The following notational features were used in the transcripts presented in this paper. The following punctuation marks depict the characteristics of speech production, not the conventions of grammar.

- `bu-u-` hyphens mark a cut-off of the preceding sound
- `[` a left bracket indicates the overlap onset
- `]` a right bracket indicates where the overlapped speech ends
- `=` no break or gap between turns
- `(0.3)` number in second and tenths of a second indicates the length of an interval
- `(.)` brief interval (less than 0.2) within or between utterances
- `so::rry` colon represents a sound stretch of immediately prior sound
- `↑` shifts into high pitch
- `↓` shifts into low pitch
- `hey?` a question mark indicates a rising intonation
- `dog¿` a Spanish question mark indicates a substantial rise that ends up in the mid to mid-high end of the speaker’s range
- `here,` a comma indicates a continuing intonation with a slight rise
- `did.` a full stop indicates falling, final intonation
- `boots` underline indicates stress or emphasis via pitch or amplitude
- `◦ ◦ ◦ softer, quieter sounds`
- `>quick<` talk is speeded up
- `<slow>` talk is slowed down
- `hhh` a dot prior to h indicates an in-breath
- `hhh` indicates an out-breath
- `(xxx)` the talk is not audible
- `(house)` transcriber’s best guess for the talk
- `together!` an exclamation mark indicates an animated tone
- `dr-dirt` a single dash indicates a noticeable cut off of the prior word or sound
- `((walking))` double brackets indicate the annotation of non-verbal activity