What are the implications for identity positioning of foregrounding the low prior attaining students' own narrative data?

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The identity narratives that surround low attainment in mathematics suggest a negative and deficient positioning when compared to both other students and the discipline of mathematics itself, however the positioning voice of low prior attaining (LPA) students themselves is less prevalent when compared to that of other participants. This discussion compares both direct and indirect positioning statements of participants as reported in research regarding low attainment in mathematics, before foregrounding the LPA students' own narratives. The themes of *behaviour*, *capacity* and *opportunity* emerge from my analysis; however, the theme of *behaviour* is not evident in the LPA students' own narratives. There is some evidence that foregrounding LPA student participants in research regarding their identity allows a counter narrative to emerge.

Low prior attainment, Identity work, Positioning, Voice

Introduction

A student's mathematical identity has been described as their saying, doing and relating in the context of mathematics as well as the positioning by themselves and others (Bishop, 2012; Grootenboer & Edwards-Groves, 2019). This discussion that follows arises from a literature review within a larger project into the experiences of low prior attaining students in mathematics and considers the impact on identity positioning of foregrounding the LPA students' own narrative data. Below, I discuss the role of positioning in the work of identity and the importance of the self-positioning voice. I analyse positioning statements from within a small sample of literature, focusing on the themes that emerge from different types of participant, namely teacher, 'other' students, and LPA students. Finally, I consider the implications within the wider discourse surrounding low attainment in mathematics.

Positioning in the work of identity

The concept of 'positioning' is described as the process by which rights and duties are assigned within in-the-moment communication acts, emerging from both explicit and implicit patterns of reasoning (Harré, Moghaddam, Cairnie, Rothbart, & Sabat, 2009; Herbel-Eisenmann, Wagner, Johnson, Suh, & Figueras, 2015). It could be argued that the explicit and the implicit are being revealed in the presented narrative, within both direct and indirect positioning statements. That is to say, whether one actor is directly (explicitly) positioning, or indirectly (implicitly) positioning the other actor(s) in the interaction. Furthermore, by analysing these situated positioning acts, the opportunity could be afforded to understand the nature of (in)equity, as well as how these positionings may underpin a larger discourse (Herbel-Eisenmann et al., 2015).

Bishop (2012) suggests that a mathematical identity is constructed in and alongside the context in which the act of being mathematical occurs and hence, for the

LPA student it could be argued that 'context' could be aligned with the positioning by others, for example teachers, 'other' students and indeed researchers. However, Bishop (2012) goes on to describe the work of mathematical identity as both "individual and collective" (p.39) suggesting the key role of the self-positioning voice within the performed identity, the term 'voice' being used here as relating to the discernment of attitudes and perspectives (Cook-Sather, 2006; McIntyre, Pedder, & Rudduck, 2005). It is suggested that by giving attention to the unacknowledged voice, the opportunity to highlight dominant discourses is afforded and hence the construction of a counter narrative (Solomon, 2012, Fielding, 2004). I argue that foregrounding the self-positioning statements in the identity work of LPA students offers the opportunity to (re)consider the interpretations of their identity work.

This study

Secondary data collection

The secondary data used in this study is verbatim participant quotes that either directly or indirectly positioned LPA students, from literature that references low attainment in mathematics. I carried out a search of the BEI (British Education Index) and ERIC (Educational Resource Information Center) databases using the terms MATH* and LOW ATTAIN* and the bounds 2010-present, peer reviewed, academic articles, and then undertook an abstract review to identify methodologies that implied the use of qualitative participant voice as data, resulting in nine articles. Finally, each article was closely read for verbatim participant quotes that referred to LPA students. Six articles were excluded as the participant data was presented though the lens of the researcher without using verbatim quotes, and one further article was excluded as the study commented on teacher positioning of one specific low attaining student. This resulted in the two articles, one specifically on teacher's constructions of lower attainment groups (Mazenod et al., 2018) and the second on learner's attitudes to mixed attainment grouping (Tereshchenko et al., 2019). Finally, the quotes were extracted and grouped by participant type, resulting in three mathematics teacher participant quotes, six 'other' student quotes, and five LPA students quotes.

Analysis process

Thematic analysis was carried out in two stages. Firstly, as an individual researcher, I reviewed the quotes and identified emerging themes as a whole set of data, and then I grouped the quotes by type of participant in order to consider which themes are authored by which type of participant. At this stage I noted that there seemed to be a dichotomy between statements that were directly positioning, that is stating explicitly, in contrast to others that were indirectly positioning, that is statements that infer implicit positioning as can be seen in this example: "I think it benefits the lower-ish people because they feel encouraged to do better" (Tereshchenko et al., 2019, p.433). This statement could be read as suggesting that LPA students should be viewed as lacking the capability to 'encourage' themselves.

The second stage involved a thematic analysis of the grouped data by audience members of a workshop at the Belfast BSRLM conference, in order to identify additional themes and mitigate any subjectivity within the first stage thematic analysis. Within this second stage the data was already grouped by participant, with instructions given to either view the teacher and 'other' student's statements, or the

LPA student's own statements. This decision was made in order to evaluate what themes might emerge by foregrounding different positioning agents.

Resulting Themes

Below I discuss the themes that emerge for each type of participant, before comparing the findings overall and consider the implications of foregrounding the LPA students' own narratives.

Teacher participants

The most prominent theme that emerges from the teacher participant statements is that of deficient positioning in relation to classroom and learning behaviour. This can be seen in direct statements regarding both observable actions, such as "they would go off task" (Mazenod et al., 2018, p.60) and affective responses, such as "lack of confidence" (Mazenod et al., 2018, p.60). Furthermore, the behavioural and the affective are often present in the same statement as can be seen in this example:

> […] with bottom sets you tend to get more of a behavioural issue, so you have got pupils who are disengaged [……] so there is probably a lot more focus on behaviour and managing the class (Mazenod et al., 2018, p.60)

and it could be argued that this suggests a view of correlation, if not causality, between student behaviour and affect by the teacher participants.

There is some evidence of deficient positioning regarding teaching and learning opportunities, as seen in this direct statement, "a lot of the work you do is repetitive and dull and doesn't take you forward" (Mazenod et al., 2018, p.63). However, there is no reference to teacher allocation or challenging physical environments.

There is less evidence of indirect positioning statements made by teacher participants, with just one example below:

> Like I always gave out loads more praise points for the bottom set because I was like, 'you sat down. Brilliant!' (Mazenod et al., 2018, p.60)

The teacher seems to be implying that they give 'praise points' for what they seem to infer is trivial behaviour, with no reference to mathematical work; it could be argued that they position the LPA student as less capable of this type of success.

'Other' student participants

Higher attaining student participants position LPA students in terms of capacity and opportunity, however there is evidence of both deficient and sufficient positioning. Some students directly position LPA students in terms of deficient capacity stating: "they wouldn't have that much ability to share" (Tereshchenko et al., 2019, p.431). There is evidence of how capacity positioning goes on to further position in relation to the impact on learning, as can be seen in this example:

> they could be just asking loads of questions, 'I don't understand', and stopping the whole class from doing their work when you just want to get it done and go home (Tereshchenko et al., 2019, p.436)

Some 'other' students indirectly position LPA students stating that as a result of mixed attainment teaching: "they're not left behind" (Tereshchenko et al., 2019, p. 431) and "they feel encouraged to do better" (Tereshchenko et al., 2019, p.433); it

could be argued that these statement suggest that LPA students are positioned as deficient in terms of opportunity in comparison to higher attaining students.

However, there is some evidence of compassion amongst the 'other' students indicating a sufficient positioning. That is to say, challenging positioning in relation to prior attainment, as can be seen in this example:

> I just think it is better for the school to put different people together because it is not just about intelligent and lower because lower people might have high dreams (Tereshchenko et al., 2019, p. 437)

It could be suggested that the use of the word 'lower' is potentially problematic indicating a deficient view, however it is impossible to know if this may be a reflection of the dominant discourse used in the context of the 'other' student.

LPA Student participants

The LPA students position themselves in terms of capacity and opportunity. In terms of capacity, direct positioning statements indicate both a deficient and sufficient view, as can be seen in this example regarding mixed attainment teaching:

> …since there's different abilities, you can help some people and some others can help you in return……if you're in one of the lowers with loads of people who aren't good at maths….you can't get other students to help you (Tereshchenko et al., 2019, p. 435)

This statement seems to suggest that this LPA student positions themselves as capable of mutual support in the classroom, however not in the context where all students are low attaining. It could be argued that the label 'aren't good at maths' is viewed as synonymous with 'aren't good at supporting in maths'.

There is evidence of both direct and indirect deficient positioning under the theme of opportunity. With regard to current classroom experiences, statements such as "the teachers think we all understand….and then they move along" (Tereshchenko et al., 2019, p.436), indicate that, certainly within mixed attainment teaching, some LPA student position themselves as not having the opportunity for appropriate teacher input as "the teachers like paying more attention to the people that have done it" (Tereshchenko et al., 2019, p.436). In addition, there is evidence of indirect positioning regarding future opportunities, with one LPA students stating that it is by "sitting next to smart people" (Tereshchenko et al., 2019, p.434) that they will access "a better job…..then you can get a lot of money to have a nice family and a nice house" (Tereshchenko et al., 2019, p.434). It could be argued that they indirectly position themselves as lacking the potential for a 'successful' future outside of 'absorbing' from a higher attaining student.

Conclusions

Three main themes emerged in the positioning of LPA students, namely behaviour, capacity and opportunity. Regarding the theme of behaviour, LPA students are deficiently positioned by teachers, however there is no evidence of this positioning theme in any of the statements from students themselves. That is to say, the theme of behaviour does not seem to be observed in the same way by student participants. It could be argued that the observation of another's overt actions is interpreted in terms of how one positions the observed, for example what is labelled as poor behaviour by the teacher may be seen as frustration by the author themselves. Furthermore, there is

some evidence that students are able to show a greater range of empathy when compared to the teacher participants.

Under the theme of capacity, there is evidence of LPA students being positioned regarding the capacity to mutually support in the classroom, with 'other' students taking a deficient position in comparison to the discursive positioning of LPA student. The LPA student is seen to (re)position between sufficient and deficient depending on the learning context (mixed attainment versus setting). It could be argued that lack of capacity may be a result of lack of opportunity to demonstrate capacity, that is to say the act of supporting each other in classroom may be positioned by teachers as 'off task' and therefore opportunities to engage in activities that may require or encourage mutual support is avoided in the teaching and learning of low attaining students when grouped by attainment.

Finally, regarding the theme of opportunity LPA students are deficiently positioned by all types of participant, in terms of teaching and learning resources (work and teacher) as well as the potential for current and future success. As discussed above it could be suggested that the lack of opportunity in the classroom results in the positioning of students as lacking capacity, rather than lack of capacity being a motivator for lack of opportunity. Furthermore, all students indirectly position LPA students as lacking future prospects, that is in the context of mixed attainment teaching they may have possibilities that would not normally be available to them.

Foregrounding

In foregrounding the LPA students' own narrative data, two interconnected positioning themes emerged, namely capacity and opportunity. There is some evidence of sufficient positioning regarding mutual support in the classroom and future prospects, however this is in relation to working amongst higher attaining students; it would only be speculation to consider whether the inception of this repositioning is a result of different teaching and learning opportunities or a recognition of capabilities that are not demonstrable on a setted classroom. Conversely, there is also some evidence of deficient positioning in relation to working with higher attaining students regarding the resource of teacher; it is interesting to note that 'other' students position LPA students as negatively impacting learning which could be viewed as correlating to the LPA students' own positioning as lacking opportunity for teacher input; that is to suggest that in the context of mixed attainment grouping the LPA students may feel they should not be asking for extra assistance. It is interesting to note that the theme of behaviour does not emerge from LPA students' own statements, despite the positioning being prevalent in literature. It could be argued that the notion of 'poor behaviour' is to some extent subjective, with classroom discussions interpreted as 'helping each other' in one context and 'off task' in another, especially when the discussant is positioned as lacking the capacity to mutually support another in mathematics.

Limitations and future research

It is correct to acknowledge the subjective nature of positioning within this discussion which was particularly evident in the second phase of thematic analysis. I found it logistically problematic to gather the audiences' 'evidence' for the emerging themes, and therefore the discussion above could be described as the positioning (by me) of the positioning (by audience) of the positioning acts! However, Fielding (2004) states that although there are issues with speaking *for* others, it is just as problematic not to.

This conversation starter suggests that the positioning of LPA students should be re-examined as there is evidence of an emerging counter narrative. Future research should focus on foregrounding the LPA student participants' own narrative in order to consider the following: What are the patterns of identity that emerge when attention is given to the (self)positioning voice of students?

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