Hearing Silence

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Hearing Silence: Understanding the Complexities of Silence in Democratic Classrooms and Our Responsibility as Teachers and Teacher Educators.

A Response to *Creating a Democratic Mathematics Classroom: The Interplay of the Rights and Responsibilities of the Learner*

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Abstract

This response to Priya Prasad's and Crystal Kalinec-Craig's article on the interplay of the Rights and Responsibilities of the Learner aims to engage with and add on to the authors' exploration of learners overexercising or opting out of their rights. While grappling with these challenges alongside the authors, our curiosity deepened about a significant and understudied facet of democratic classrooms: silence. Through this response, we consider the multifaceted dimension of silence and how a focus on silence may help us more fully understand the tension between learners' rights and responsibilities to self, each other, and the collective. Specifically, we engage in dialogue around three questions: If students have the right to speak, listen, and be heard, do they also have a right to be silent, or is that right surpassed by a responsibility to contribute verbally, because classmates will not be able to learn from unexpressed thinking? If a student is silent, how do we distinguish if they are choosing to be silent or are being silenced? What might it look like to think about rights and responsibilities as collective rather than individual?

This article is in response to

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Introduction

The aim of this paper is to engage with and respond to Priya Prasad and Crystal Kalinec-Craig's (2021) article, "Creating a Democratic Mathematics Classroom: The Interplay of the Rights and Responsibilities of the Learner." As we reflected on the interplay between rights and responsibilities in a mathematics classroom, we sought to explore and open a space we think lies somewhere between rights and responsibilities: the space of silence. Silence, when noticed by teachers and teacher educators, can help reveal how power is being wielded in the classroom by teachers and students. We propose that becoming curious about silence and its various meanings in learning contexts can help teachers and teacher educators use their position to affirm students' "right to silence." Further, we propose that attending to student silence in responsive and responsible ways calls us to attend to the collective, beyond the individual.

We start by laying out perspectives on how we are making sense of the current sociopolitical context in the United States and how that context is influencing our work in mathematics education. Secondly, we provide some contextualization for our reflections about the roles of silence in schooling and mathematics classrooms. Thirdly, we share (in the form of a summary of the dialogue between the authors of this piece) how we grappled with tensions around student silence that we see implicitly raised within Prasad and Kalinec-Craig's (2021) discussion of rights and responsibilities. We put forward the idea that by hearing and listening to and for silence, teachers can support an environment for the affirmation and actualization of students' rights. At the same time, by supporting students' rights, teachers can also foster students' *response-abilities* to their own, their peers', and the collective's learning. Here, we write *response-abilities* as a reframing of the term *responsibility* to help shift the focus from the individual learner to the environment for learning and the community of learners. In other words, the focus is on whether the environment fosters each and every student's "ability to respond" to one another. Creating such an environment involves cultivating conditions for students to learn how to respond in ways that support their own and their classmates' learning. We close by considering collective rights and responsibilities, beyond individual rights and responsibilities. We consider how collective rights and responsibilities may offer an important framing for what constitutes the foundation of democratic classrooms as spaces wherein students develop not only knowledge, understandings, and identities as mathematicians but also a sense of belonging to a meaningful, dynamic community of equal participants. We suggest that fostering conditions that support listening to and for silence in learning environments is central to this framing.

Considering Context: Mathematics Classrooms Today

Mathematics classrooms are as much in transformation as is our ever-changing democracy in the United States. Serious questions about the nature and meaning of democracy, and how to foster it in classrooms and in society, have been centered in the past two years of the COVID-19 pandemic and public protest against persistent and violent racism. These events have made the deep-seated racial inequities in the United States and around the world even more glaring. It is the responsibility of educators, in reckoning with the present historical moment, to recognize the embeddedness of white supremacy in our education system—systemic racism brought on by colonialist and imperialist forces that have shaped and continue to shape the dehumanizing practices within our schools. In this context, one of the most pernicious practices to recognize is how students and their families from marginalized communities are silenced. Perhaps one of the places where these inequitable practices are most reified is within our interactions in educational spaces, especially in high-status subject areas like mathematics (Battey & Leyva, 2016; Goffney et al., 2018; Martin, 2012; Stinson, 2006).

The present moment offers us, as educators, the opportunity and the demand—equally—to actively pursue new ways of upending dehumanizing practices that are dialogically reinforced through our daily interactions (Memmi, 1965). The democratic classroom provides a valuable space for positive change, as Prasad and Kalinec-Craig (2021) made clear (p. 1). And, as Dobson (2014) noted, for democratic society to flourish, there needs to be spaces for silence, the type of silence that lets those who are listening within a dialogue contemplate how to respond responsibly. In this response, we further consider what it might mean to think about the rights and responsibilities within democratic classrooms. We do this from the perspective of viewing silence as indispensable to the establishment and development of democratic spaces.

A Lens on Silence—Silence as a Lens

In transforming our educational practices to foster democratic classrooms, questions of speech and silence inevitably emerge.

Often the focus is on an individual's right to participate as equivalent to the right to speak. But, speech, in a democratic space, is fallow if it is not heard (Dobson, 2014). Thus, as we have made explicit in our work, transforming our educational practices requires a commitment to listening—listening deeply to ourselves, to teachers, to our students, and to their families (e.g., Murdoch et al., 2021). It requires, as Paley (2000) modeled, listening for fairness, justice, and belonging so that we can continue to develop as individuals and as a collective.

In the context of mathematics classrooms, listening to our students is essential to the shaping of what mathematics means and of mathematical identities. Gutiérrez (2002) and Nasir and Cobb (2007) made this point poignantly: It is not just that children need mathematics—it is that mathematics needs our diverse children. Embracing this idea in mathematics teaching means embracing and actively forwarding the broader idea that human's individual and collective growth and development depends on a diversity of ideas that are shared, inquired into, and discussed. Thus, we acknowledge that speaking, in the form of sharing ideas, or also "speaking up" and "speaking out" as a means of pointing to and standing up to injustices, has been and remains essential to the development and sustaining of democratic classrooms.

In turning to the other side of speech—namely, silence—in the context of this response, we aim to reveal the complexity of silence for teachers' practices in discussion-based democratic mathematics classrooms. In revealing this complexity, we hope to offer insight into how understanding silence can help our emerging understandings of the meaning of participation in education. To situate our response, it is important to consider the many meanings of *silence* in and out of school contexts. In the histories of Western societies, certain humans have been actively silenced, that is, "unjustifiably restrained" from speaking and contributing to public discourse (Forrest, 2013, p. 610). If unaware of the dynamics of classroom talk and silence, teachers can perpetuate this societal power dynamic between those who speak—which historically have been white males—and those who have been expected to be silent or actively silenced, which historically have been minoritized peoples (Forrest, 2013).

An additional complexity arises when we consider that silence can be interpreted as a deficit, presumably signifying a person's lack of knowledge and ability. Such interpretations of silence as a deficit can implicitly affect teacher decision-making and students' participation. For example, Acheson (2008) noted that some white teachers interpret the silence of Indigenous students as inattention or uncertainty and tend to quickly "interrupt" the silence with speech; yet students perceive this "interruption" as harsh and lacking regard for them as persons (p. 546). Like talk, silence has multiple meanings, and its use is cultural (Acheson, 2008). Not respecting a student's silence could mean that a teacher is not including important cultural practices (Schultz, 2010). Just as forms of oppression and dehumanization in classrooms can occur if students from marginalized communities are actively silenced, this too can occur if mathematics reform toward "verbalization" of thinking pressures students to speak, and thereby removes what Forrest called their "right to silence" (Forrest, 2013, p. 610).

Finally, environments that encourage talk can potentially have dehumanizing effects, as bell hooks (1994) pointed out, when students feel forced to speak solely within the constraints of the dominant culture's language or in ways predetermined by the teacher as valid (see also Delpit, 2006; English, 2016). This happens in mathematics classrooms, as Aikenhead (2017) made clear, when teachers expect students to speak the "language" of Western mathematics as if that *is* mathematics, i.e., the *only* way of speaking and thinking mathematically. This failure to acknowledge traditional school mathematics as one culture-based mathematics (i.e., Euro-American) among others can serve to hinder students' access and success in connecting to school math (Aikenhead, 2017). In this way, teachers can perpetuate a school mathematics that has violently devalued or entirely ignored Indigenous cultures' mathematical ways of being and doing (Aikenhead, 2017). This implicitly teaches children that the knowledge and experiences they bring to the classroom do not matter. This lack of connection to classroom learning can serve to perpetuate another kind of silence: silence as a valid resistance to an exclusionary classroom culture (Cook-Sather, 2006; McCaleb, 2013). Thus, it is vital to hear the stories that each human being brings to a moment in learning (Zavala & Hand, 2017). Hearing stories requires attending to the silences (Dobson, 2014). In addition, as Jansen, Kalb, and McCunney (2021) have helped us to consider, we need to take a step back to learn more about the classroom culture that is being developed in order to understand more about how teachers use their authority to affirm learners' rights.

Prasad and Kalinec-Craig (2021) considered these issues as they emphasized throughout their article that the fifth right in Torres's Rights of the Learner (RoTL) framework—the right to feel safe and have one's ideas respected—is essential for democratic classrooms. They underscored that "students should feel safe to both exercise their rights and to opt out when they do not yet feel comfortable to do so" (p. 4). They also emphasized that the teacher holds a particular responsibility to create and maintain this democratic space for all students: "We both agree that students can and should look to their teacher to lead the creation of a democratic classroom that is a safe space for students" (2021, p. 4). We agree with the authors on the essential role of the teacher. We value their emphasis on fostering democratic spaces wherein each and every student's ideas are heard and responded to in responsible ways. Next, we turn to look at how this idea of democratic spaces provides the grounds for further exploration of the complexity of student silence and students' right to silence.

Focusing on the Interplay between Rights and Responsibilities through the Lens of Silence

Prasad & Kalinec-Craig (2021) courageously revealed the tension they faced as educators (in university-based teacher preparation programs, working with preservice teachers) by describing two scenarios: (a) when a student, Emma, over-exercised her right to be "confused" but did not take up the responsibility to persevere through problem solving and perhaps silenced others' sense-making; and (b) when another student, Maribel, remained silent and expressed that she did not feel safe to participate verbally

in her small group, thereby not taking up the responsibility to share her thinking so that others could learn from her and with her. The authors found that upholding a student's right to learn was in tension with wanting the student to be responsible for participating in certain ways that supported their own and their peers' learning (pp. 6, 8). We agree with the authors that there is genuine difficulty for teachers to navigate varying forms of student participation in discussion and group work. From one view, by not "thinking aloud," each of these students is leaving their teacher and their classmates without insight into the type of "sense-making" (Carpenter et al., 1999), "rough-draft thinking" (Jansen, 2020), and "productive struggle" (e.g., Murdoch et al., 2021; NCTM, 2014; Warshauer, 2015) that research and policy have highlighted as so significant for all students' conceptual learning. From another view, as Prasad and Kalinec-Craig pointed out, a broader question regarding the exercise of power in the classroom arises, namely "who takes up these responsibilities, and to what extent?" They asked, "Is it the sole responsibility of the teacher to be responsible for creating an equitable learning space and for ensuring that all students are learning, or is it more nuanced with respect to sharing responsibilities among all members of the class?" (p. 8).

We greatly value Prasad and Kalinec-Craig's (2021) contribution to the discourse by naming this issue in terms of rights and possible associated responsibilities. Their paper highlighted that creating spaces for students to share sense-making, confusions, and responses is a vital task for teachers if they are to shift toward more democratic classrooms that support all students to learn mathematics with understanding. In situating their discussion within the context of teacher education, the authors have added another layer of complexity to this discourse that points to the two-fold aspect of the teacher educator's role: How do teacher educators attend to preservice teachers' (i.e., students') rights and responsibilities in a way that can support them to attend to their learners' right and responsibilities when they become practicing teachers? As we leaned in to make sense of these dilemmas, we became curious about the role played by student silence. We believe looking at student rights and responsibilities through the lens of silence could help us to make sense of how both teacher educators and practicing teachers in schools could navigate this tension.

Dialogue

Prasad and Kalinec-Craig's (2021) article inspired us to come up with new questions around learners' rights and responsibilities through the lens of silence. Following, we present our questions and (work-in-progress) responses to those questions to open continued dialogue with the authors and readers on this topic. First, we situate our positionalities to invite the reader into the dialogue with us.

In our team, we have developed a commitment to listening and responding to one another in responsive and responsible ways that help us to show up as the ever-developing human beings we are. We work to create a collective space to share emergent ideas and live and learn as mothers, scholars, educators, partners, professionals, friends, daughters, and sisters who continue to grapple with our whiteness and what it means for our lived experience, for those we work and learn with, and for those who we may engage with in life inside and outside educational spaces. Our collaborative research has developed by trustfully leaning on another's strengths while helping each other learn and grow with evermore vulnerability and joy as we see and name our contexts by developing "critical consciousnesses," as Kazemi (2018) called for in her response to Kalinec-Craig (2017).

Our first question: If students have the right to speak, listen, and be heard, do they also have a right to be silent, or is that right surpassed by a responsibility to contribute verbally because classmates will not be able to learn from their unexpressed thinking?

Our response: Yes, students have a right to be silent in the same ways they have the rights to speak, listen, and be heard. Affirming students' rights means affirming the conditions that foster those rights. The right to be silent is as important as the right to speak, because it creates space for reflection, listening, and being heard. It also opens space for teachers to attend to, to recognize the unspoken with an asset view of learners. This means for us recognizing that learners have valuable ideas, whether or not they are communicated verbally to others.

One tension named by Prasad and Kalinec-Craig (2021) is the concern that if a student does not verbally contribute, that student may not be contributing to their classmates' learning (p. 8). As Prasad and Kalinec-Craig described striving to find equilibrium between rights and responsibilities (p. 9), we think it is important to support teachers to develop an expansive understanding of learning. Yes, learning occurs through talk, but an important part of any learning is the internal reflection on what is heard. Such reflection takes place as learners contemplate the meaning of what a person is saying and productively struggle to understand contradictions, confusions, and new ideas while thoughtfully considering a response. Such reflection is important for any meaningful learning to take place, as Dewey underscored within his notion of "reflective experience" (Dewey, 1916/2008; see also English, 2013; Murdoch et al., 2021). This internal reflection often manifests in classrooms in the form of a student's silence. Equally it is facilitated in environments where silence is given a safe place to emerge. By honoring this silence, the teacher has the opportunity to develop a deeper understanding of students' modes of being. Silence as a space for reflection is also important for preservice and in-service teachers as they learn to develop their practice and make just and equitable decisions as "agents of change" (Pantić, 2015; Pantić & Florian, 2015). In this sense, Pantić (2015) showed how self-, peer-, and collaborative reflection are vital aspects of developing teacher agency for inclusion and social justice. This points to a need for teachers and teacher educators to affirm students' silence as a right.

The right to be silent is important for other rights to have space in the classroom. As Rinaldi (2020) underscored in her work with the Reggio Emilia approach, "rights are never given, never acquired. But rights are generative. Rights beget rights" (p. 17). We suggest there may be a generative relation between the learner's right to silence and other rights in the RoTL framework. Do

the rights to listen and be heard generate a right to silence? Does the right to silence grow out of the right to feel safe? The RoTL framework and Prasad and Kalinec-Craig's (2021) emphasis on the right to feel safe as the basis for all other rights (which they drew out in the case of Maribel) suggest that if a student feels safe by being silent, then that must be valued by the teacher.

At the same time, it is vital to recognize the more nefarious roles silence can play—and have played—in upholding colonized educational practices. Too often, silence is what we hear when we witness a fellow human being harmed, being silenced. When one person is silenced, there can be a reverberating silence that arises when others do not speak out about what they have witnessed. There is also the silence that thrives in an environment when one has witnessed someone be harmed and stays silent so as not to bring on more harm to that person, others, or themselves. In traditional mathematics classrooms (in classrooms devoid of Torres's RoTL), we have heard this kind of silence. We see how this kind of silence and silencing is racialized (Applebaum, 2020). When we affirm silence as a right, we must also work fiercely to end practices in our education system that harm learners, families, and teachers through acts of silencing. As we argue for the idea of students having a "right to be silent" we also must underscore that an essential part of learning to teach is learning to recognize, name, interrupt, and end all instances of silencing and the silence born of interactions that harm a fellow human being and hinder humanity, community, and belonging.

We also see how the silence and silencing that are born out of moments that harm can undermine democracy and learning. When no one speaks out or stands up because of fear or discomfort, the space is no longer democratic; there are no voices being heard or responded to. It is also a space that is devoid of the vital kinds of vulnerable learning that come from hearing others' sense-making, interests, and wonders, including those forms of thinking which are still in rough draft form (Jansen, 2020). In our experience in teacher education and professionalization, it seems that part of gaining expertise in teaching is learning how to read the different meanings of silence that emerge in one's classrooms and school communities. In our recent study on how mathematics teachers listen when students verbalize struggle, one of our focal teachers said in an interview, "I worry about students who hide" (English et al., forthcoming). She expressed how, for her, "hiding" (and thus being "silent") was potentially a sign of the student's fear of learning, fear of being involved, fear of not wanting to be wrong. She offered students the opportunity to share in their learning journals anything they were feeling or thinking about the work in the classroom. By learning to listen to the different kinds of student silence that emerge in a learning environment, teachers gain a deeper understanding of whether, to what extent, and for whom they are fostering democratic spaces for learning.

Thus, as we assign students the responsibility to participate in certain ways, we think it is vital to take a stance of active awareness for the diverse needs and interests of learners in any given learning setting. Undergirding this stance is the recognition that what a learner does and says makes sense to the learner. This stance supports the importance of seeing learners from asset perspectives, rather than deficit perspectives (Zavala, 2019) and, as Prasad and Kalinec-Craig (2021) noted, eschewing carceral pedagogy (p. 5).

Our second question: If a student is silent, how do we distinguish if that student is choosing to be silent or is being silenced?

Our response: This wonder is inspired by two students in the Prasad and Kalinec-Craig (2021) vignettes. Jayna (p. 6), who was perhaps silenced by her classmate Emma's confusion, and Maribel (p. 7), who said she did not feel safe to speak up in her group. As our team discussed these scenarios, we leaned into Prasad and Kalinec-Craig's point that "teachers need to be prepared to honor and incorporate students' cultural, linguistic, and racial identities while also valuing the knowledge they bring from their homes and communities'" (p. 5). To do this work, Zavala and Hand (2017) called for getting to know more about learners' stories in order to support their learning in mathematics. Thus, alongside Prasad and Kalinec-Craig, we became curious about the students' previous experiences in the class and in their group. We were curious about Jayna's and Emma's previous experiences learning and using mathematics inside and outside of their teacher education program. We were curious about what was going on in each person's life. We were curious about their sense-making and the languages they were thinking in. What opportunities existed for teachers and students to learn about one another beyond the subject(s) they were learning? Did getting to know Jayna and Maribel—and the other students in the class—help distinguish if either of them was choosing to be silent or was being silenced?

Leaning into these silences is a kind of leaning into students' lived experiences, ways of knowing and being, and stories, which can support expanding their learning opportunities (Herrenkohl & Mertl, 2010). We wonder: How are democratic mathematics classrooms important contexts for supporting children and educators to build relationships with themselves and each other? How can we listen to, understand across differences, and collectively experience and process emotions? And how can teacher candidates come to learn about building such relationships as an integrated part of learning to teach mathematics? These questions remind us of the consensus that "social and emotional development is multi-faceted and integral to academics—to how school happens, and to how learning takes place" (Jones & Kahn, 2017, p. 5).

As we think about the Emmas, Jaynas, and Maribels we have met in our own classrooms, and their silences, we are reminded of Hintz's (2014) research that helped us to learn that children are silent for different reasons. Sometimes students may be silent because they are listening to hear and understand the ideas being discussed. Sometimes students are silent to mitigate the risks of sharing their ideas aloud, wondering if their ideas will be valued and understood. We wondered what would happen if teachers leaned in and facilitated conversations with the individual and the class community when a student said they felt unsafe or another student was being silenced by a peer. How might participation shift if the teacher attended to the environment that created the unsafe feeling and shined the light upon the need to change the environment (rather than on the student or students needing to change)?

The teacher may say to the group, "I'm wondering what I/we can change, do, or say in our class so that each and every one of you can fully exercise Torres's RoTL?"

As we think about how to attend to our students' silences, we are inspired by the work of Dena Simmons, founder of LiberatEd. As Simmons has described, LiberatEd "centers healing, justice and radical love in Social Emotional Learning (SEL) to create a world where all children and youth love, learn and thrive in the comfort of their own skin" (Keels & Malley, 2021). Focused on "collective liberation," Simmons pointed out, "superb teachers have always been building relationships, helping students resolve conflict, helping students through difficult emotions." As we read Simmons's works, we were called to reflect on if and how we foster relationships in our own classrooms that center healing, justice, and radical love. This reflection reminded us that creating spaces in education where "children and youth love, learn and thrive in the comfort of their own skin" means that educators need to work toward loving, learning and thriving in the comfort of their own skins in educational spaces. Thus, as we call on teachers to foster relationships with their students, we must recognize that such work requires that educators strive to know and share themselves in the same ways we ask students to share. To know, we must be known. At the same time, we need to recognize that we work in systems and that this work needs to happen from the inside out and the outside in. Just as teachers are called to create safe learning environments in their classrooms, we need educational leaders to center love, healing, and justice in our schools, districts, and states as well.

Our third question: What might it look like to think about rights and responsibilities as collective rather than individual?

Our response: What we are coming to understand as we unlearn the dominant narratives that hold teachers captive within traditional dehumanizing practices is that it is important not only to attend to the individual in responsive and responsible ways but also to attend to the collective. Prasad & Kalic-Craig (2021) planted the seed for this idea when they wrote:

> *When teachers are explicit with the Torres's RotL in the classroom, they also should help students grow into a place of being responsible for their development and the space for others to grow in their thinking: a sense of responsibility to self and others. As students acknowledge a responsibility to self and the collective group, they can find more ways to exercise their rights as learners. (p. 9)*

When leaders in education spaces attend to the individual and collective in these ways, they are fostering conditions where learners become response-able.

From our discussion, what emerges for us is the need to deeply consider a shift from individual to the communal, or collective, rights and responsibilities. We want to recognize, as Bang and Brayboy (2021) have modeled, that "Indigenous communities have long engaged in robust systems of education that taught young people the many different aspects and demands of communal life" (p. 165). In their studies with Indigenous communities, Bang and Brayboy (2021) asked:

> *Who could we collectively become?*
> *What roles, relations, and responsibilities do we have with each other?*
> *With other-than-human life?*
> *With the land and the waters upon which all life depends?*
> *How should we nurture and uphold those relations? (p. 165)*

When we consider Torres's RoTL framework and the potentially associated responsibilities, we wonder, what happens when we shift from individual rights and individual responsibilities to affirming individual rights for communal or collective responsibilities? Looking at the rights and responsibilities that Prasad and Kalinec-Craig (2021) have described, for example, "a mathematician has the right to be confused" and the responsibility "to persevere through that confusion to some state of resolution" (p. 2), what we notice now is that the focus is on the individual's rights and assigning of responsibilities to individuals. What our dialogue with each other, with Prasad and Kalinec-Craig, and with the mathematics educators and researchers we have cited has us wondering is, what happens if we foreground a more collective perspective and shift the *you*s to *we*s?

This would mean that "you have the right to be confused" becomes "we have the right to be confused," and "you have the responsibility to persevere" becomes "we have the responsibility to persevere." The questions Prasad & Kalinec-Craig (2021) asked transform as well. In shifting power from an individual to a collective, instead of determining "who decides when/how you persevere through that confusion?" and "when are you done?" the questions become "how can we decide when, and how we will persevere through confusion?" and "when will we decide we are done?"

We wonder how a shift from the individual to the collective might help educators ask Bang's and Brayboy's (2021) aforementioned questions within their own classrooms? How might this shift push us beyond what is good for me or for you to consider what is good for us? How might this shift help us center our collective humanity and our relations to the natural world?

These transformed questions, we believe, provide space for the important role of silence in human learning—the silence that is a sign of contemplation and receptivity to others' ideas as a taking in of the world. This kind of receptivity to the world is essential to learning; it is what Dewey called the "undergoing" or taking in (1916/2008) that occurs when we encounter something new, different, or strange and want to learn from that newness and difference. Learning from newness and difference is the lifeblood of democratic classrooms, communities, and societies; it is the source of new energy for new inquiries into new solutions to new and old problems.

When we shift to focus on collective rights and responsibilities, silence comes into sharper relief. Not everyone can speak at the same time or with the same weight. Instead, like listening to a symphony, teachers can learn to listen to the rhythm and balance between voices (Schultz, 2003) in an attempt to understand how mathematical, social, emotional, and cognitive development of all participants can occur. The focus on the collective suggests further

that from the right to speak there emerges the "responsibility to listen" to one another (Maccarone 2022). We suggest that as teachers take up this responsibility, students can learn to as well, not by imitation, but rather by learning—through the act of listening and being heard—how to respect the worth and dignity of every human being. As children in our studies said, "When I listen, I listen to make sense of others' ideas. I listen so that I can have something to say," and, "I listen to understand how people are thinking and so I can ask questions about the ideas."

Conclusion

To make genuine, transformative change in our mathematics classrooms today, we must actively attend to our fellow humans who have historically been marginalized and silenced. Each moment when teachers have the opportunity to listen to students, and hear their silences, is equally giving them the opportunity to learn to attend to new voices and ways of being, potentially hearing previously silenced, silent, and unheard voices.

Prasad and Kalinec-Craig (2021) have given us the opportunity to consider these issues, and we invite more collective conversation to consider how to support teacher candidates to learn about how to navigate the dilemmas of silence that are part of learning to teach: In learning to teach, we need to hear how a student is thinking and feeling in order to understand what and how they are learning. At the same time, we need silence. That is, we need to acknowledge that silence is an important aspect of student learning and so it must be affirmed as a right. Perhaps one way of addressing this dilemma in discussion-based democratic classrooms is learning how to hear silence; hearing silence might be one way of helping teachers understand and consider the context of silence and if the silence is of the sort that is fostering or hindering students' learning. In this way, we view attending to silence as an important facet of how teachers can attend to power, collective learning, and well-being.

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References

Acheson, K. (2008). Silence as gesture: Rethinking the nature of communicative silences. *Communication Theory*, *18*(4), 535–555.

Aikenhead, G. S. (2017). Enhancing school mathematics culturally: A path of reconciliation. *Canadian Journal of Science, Mathematics and Technology Education*, *17*(2), 73–140.

Applebaum, B. (2017). Comforting discomfort as complicity: White fragility and the pursuit of invulnerability. *Hypatia*, *32*(4), 862–875.

Bang, M., & Brayboy, B. M. J. (2021) Indigenous peoples and civic education in the 21st century. In C. D. Lee, G. White, and D. Dong (Eds.), *Education for civic reasoning & discourse* (pp. 157–243). National Academy of Education. https://naeducation.org/wp-content/uploads/2021/03/Chapter-4.pdf.

Battey, D., & Leyva, L. (2016). Building a case for understanding relational dimensions in mathematics classrooms. In B. Greer & S. Mukhopadhyay (Eds.), *Proceedings of the 8th International Conference on Mathematics Education and Society* (pp. 327–339). Portland State University.

Carpenter, T. P., Fennema, E., Franke, M. L., Levi, L., & Empson, S. B. (1999). *Children's mathematics: Cognitively guided instruction*. Heinemann.

Cook-Sather, A. (2006). Sound, presence, and power: "Student voice" in educational research and reform. *Curriculum inquiry*, *36*(4), 359–390.

Delpit, L. (2006). *Other people's children: Cultural conflict in the classroom*. The New Press.

Dewey, J. (1985). *Democracy and education*. In J. A. Boydston (Ed.), *The middle works* (Vol. 9). Southern Illinois University Press. (Original work published 1916)

Dobson, A. (2014). *Listening for democracy: Recognition, representation, reconciliation*. Oxford University Press.

English, A. R. (2013): *Discontinuity in learning: Dewey, Herbart and Education as Transformation*. Cambridge University Press.

English, A. R. (2016). Dialogic teaching and moral learning: Self-critique, narrativity, community and "blind spots." *Journal of Philosophy of Education*, *50*(2), 160–176.

English, A. R., Tyson, K., Hintz, A., Murdoch, D., & Anderson, J. (forthcoming). Pedagogical Listening: Understanding how teachers listen to student struggle during mathematical discussion.

Forrest, M. (2013). Practising silence in teaching. *Journal of Philosophy of Education*, 47(4), 605–622.

Goffney, I., Gutiérrez, R., & Boston, M. (2018). *Rehumanizing mathematics for Black, Indigenous, and Latinx students*. National Council of Teachers of Mathematics.

Gutiérrez, R. (2002). Enabling the practice of mathematics teachers in context: Towards a new equity research agenda. *Mathematical Thinking and Learning*, *4*(2 & 3), 145–187.

Herrenkohl, L. R. and Mertl, V. (2010). *How students come to be, know and do: A case for a broad view of learning*. Cambridge University Press.

Hintz, A. (2014). Strengthening discussions. *Teaching Children Mathematics*, *20*(5), 318–324.

hooks, b. (1994): *Teaching to Transgress: Education as the Practice of Freedom*. Routledge.

Jansen, A. (2020). *Rough draft math: Revising to learn*. Stenhouse Publishers.

Jansen, A., Kalb, L., & McCunney, D. Middle school mathematics teachers' efforts to foster classroom democracies. A response to "Creating a democratic mathematics classroom." *Democracy & Education*, *29*(2), 5.

Jones, S. M., & Kahn, J. (2017). *The evidence base for how we learn: Supporting students' social, emotional, and academic development*. Consensus Statements of Evidence from the Council of Distinguished Scientists. Aspen Institute.

Kalinec-Craig, C. A. (2017). The Rights of the Learner: A Framework for Promoting Equity through Formative Assessment in Mathematics Education. *Democracy and Education*, 25 (2), Article 5. https://democracyeducationjournal.org/home/vol25/iss2/5.

Kazemi, E. (2018). The Demands of the Rights of the Learner. *Democracy and Education*, 26 (2), Article 6. https://democracyeducationjournal.org/home/vol26/iss2/6.

Keels, C., & Malley, A. (2021). Humanity, healing and doing the work: Honoring our collective humanity will result in an education system in which all children thrive. *Learning for Justice*, *1*. https://www.learningforjustice.org/magazine/fall-2021/humanity-healing-and-doing-the-work.

Maccarone, E. M. (2022). Listen up! An account of an ethical practice of listening. In L. Harper (Ed.), *The crisis of American democracy. Essays on a failing institution* (pp. 73–98). Vernon Press.

Martin, D. B. (2012). Learning mathematics while Black. *The Journal of Educational Foundations*, *26*(1–2), 47–66.

McCaleb, S. P. (2013). *Building communities of learners: A collaboration among teachers, students, families, and community*. Routledge.

Memmi, A. (2013). *The Colonizer and the Colonized*. Routledge.

Murdoch, D., English, A. R., Hintz, A., & Tyson, K. (2021). Feeling heard: Inclusive education, transformative learning, and productive struggle. *Educational Theory*, *70*(5), 653–679.

Nasir, N. I. S., & Cobb, P. (2006). *Improving access to mathematics: Diversity and equity in the classroom* (Multicultural Education Series). Teachers College Press.

NCTM. (2014). Access and equity in mathematics education: A position of the National Council of Teachers of Mathematics. Retrieved from http://www.nctm.org/Standards-and-Positions/Position-Statements/Access-and-Equity-in-Mathematics-Education/.

Paley, V. (2000). *White teacher*. Harvard University Press.

Pantić, N. (2015). A model for study of teacher agency for social justice, *Teachers and Teaching*, *21*(6), 759–778.

Pantić, N., & Florian, L. (2015). Developing teachers as agents of inclusion and social justice. *Education Inquiry*, *6*, 333–351.

Prasad, P., & Kalinec-Craig, C. (2021). Creating a democratic mathematics classroom: The interplay of the rights and responsibilities of the learner. *Democracy and Education*, 29(1), Article 2. https://democracyeducationjournal.org/home/vol29/iss1/2.

Rinaldi, C. (2020). The child as citizen: holder of rights and competent. The Reggio Emilia educational experience. *Miscellanea Historico-Iuridica*, *19*(1), 11–22.

Schultz, K. (2003). *Listening: A framework for teaching across differences*. Teachers College Press.

Schultz, K. (2010). After the blackbird whistles: Listening to silence in classrooms. *Teachers College Record* 112(11), 2833–2849.

Stinson, D. W. (2006). African American male adolescents, schooling (and mathematics): Deficiency, rejection, and achievement. *Review of Educational Research*, 76(4), 477–506.

Torres, O. G. (2020). *Equity in Education Webinar series: Rehumanizing schools—Rights of the Learner* [Video]. YouTube. http://www.youtube.com/watch?v=_UndpNUCAqw.

Warshauer, H. (2015). Productive struggle in middle school mathematics classrooms. Journal of Mathematics Teacher Education, 18(4), 375–400.

Zavala, M. (2019). Challenging deficit language in the classroom. https://mariazavalaphd.com/2019/08/08/back-to-school-part-1-challenging-deficit-language-in-the-math-classroom/.

Zavala, M. D. R., & Hand, V. (2017). Conflicting narratives of success in mathematics and science education: challenging the achievement-motivation master narrative. *Race Ethnicity and Education*, *22*(6), 802–820.