

Small shifts can improve the social experiences of teaching and learning for all.

We are teachers, and teaching is a social profession; we spend all day interacting with students and adults alike. As teachers, we are expected to write lessons that provide opportunities for students to engage in group work and to frequently collaborate with other teachers. These expectations unintentionally value the perspectives and skills of extroverts, and they create unique challenges for introverts.

When we met each other in our credential program, we quickly discovered we had similar working styles. We were hired at the same school in 2016; over the course of our first year, we both had difficulties putting a vocabulary to the pressures we felt in a collaborative environment. This past fall, we decided to explore these challenges by reading and discussing Susan Cain's Quiet: The Power of Introverts in a World That Can't Stop Talking (2012). Here, we describe the knowledge gained from our reading and reflect on the ways in which our introversion affects our roles as collaborators. We also discuss how our culture's extroverted outlook on collaboration permeates our daily routines as classroom teachers, and what we might do to address our own working style as well as those of our introverted students.

Introversion in collaborations

Consider that the simplest social interactions between two people requires performing an astonishing array of tasks: interpreting what the other person is saying;



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reading body language and facial expressions; smoothly taking turns talking and listening; responding to what the other person said; assessing whether you're being understood; determining whether you're well received, and, if not, figuring out how to improve or remove yourself from the situation. Think of what it takes to juggle all this at once! And that's just a one-to-one conversation. Now imagine the multitasking required in a group setting like a dinner party. (Cain, 2012, p. 237).

The challenges we experience in collaboration are twofold: as introverts, we prefer to share ideas only

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after we have had time to fully develop them, and we sometimes get so stuck in our own ideas that we have trouble synthesizing the ideas of others with our own. Both of these challenges require extra processing time, which is often unavailable or underestimated during collaboration. This is compounded by our mental multitasking. We notice that during collaborative experiences, we try to develop our personal ideas while simultaneously processing the ideas of our colleagues so that we do not hinder the progress of our group as a whole. When this is not adequately addressed by the group, we feel that "going together" often means going too fast, and our ideas do not have time to take root.

One situation highlighting these challenges in our professional lives has been our experiences in a district-wide effort to develop new Next Generation Science Standard-centered curriculum for our science courses. In reflecting on these curriculum-writing events, I (Bennett) noticed that the facilitators focused on immediately letting groups get to work and did not allow participants time to independently consider their ideas. I felt pressure to "get something out there" to prevent my voice from being lost entirely in the group. As a result, only a fragmented portion of my ideas made it out, and I was left frustrated by the missed opportunity for think time to deeply consider my ideas so that I could clearly articulate them to the group.

However, introverted traits also come with some unexpected strengths for collaboration over the long term. We did not reach out to our colleagues much in our first year of teaching, but one graciously reached out to each of us. Over time, we came to feel comfortable telling them about our ideas and our classroom instruction, viewing them as mentors. I (Bennett) even invited my mentor to observe a lesson that included a game of Kahoot!, an online learning and trivia platform. He was unfamiliar with the platform and decided to implement it in his own classroom. A week later, he acknowledged my contribution to the entire school in a full staff meeting (to my quiet, introverted horror). This marked a turning point in my relationship with my department, after which other colleagues began showing interest in my ideas and instruction. As more of these subtle one-on-one interactions occurred for both of us, we began to feel more integrated into our department.

Due to our tendency towards self-reflection and mental multitasking, introverts prefer working in small groups of two or three individuals. In our own experience, this practice has lead us to build strong relationships within our department by sharing well-picked resources or simply maintaining meaningful conversations on a day-to-day basis. Although this can seem exclusionary at times, it is an act of introverted self-care, as we require "down time" and focused interactions to avoid the exhaustion inherent in larger groups. However,



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this does not mean that introversion and change are mutually exclusive. These smaller interactions have often grown—sustainably—to include members across our department. We have seen a gradual but measured change in our own department's culture as colleagues have built confidence in us through these interactions, leading to greater cohesion in our department as a whole. Several colleagues who have been here for years have personally expressed to us that they have not seen this level of collaboration in years. It may not seem like much in the moment, but in a school context that has been fragmented by high administrative turnover in the past several years, it is a step in a right direction.

As our experiences show, our nation's current educational culture places a high value on teacher collaboration. This tends to value the traits of extroverted teachers over introverted teachers, and is a reflection of what has occurred in the American "culture of personality" (Cain, 2012, pp. 19-33). To foster continued engagement from introverts in a collaborative setting, we suggest that facilitators provide adequate time for all participants to consider their ideas and perspectives. Introverts participating in a collaborative setting need to check in with ourselves frequently and monitor whether or not we are fully engaged in a task. We also need to seek out what Cain calls "restorative niches"—places where we can go to be alone and recharge (Cain, 2012, pp. 219-220). As introverts, we are especially prone to mental multitasking, and this can lead to our disengagement from group work. After reading Quiet: The Power of Introverts in a World That Can't Stop Talking, we developed a set of critical questions (see below) for both facilitators and participants working in a collaborative setting.

Critical Questions for Facilitators and Participants

For facilitators:

- Am I allowing introverts enough time to independently think through their ideas throughout my session?
- How am I fostering small (2-3 people) group

interactions, rather than larger group interactions, so that the voices of the quieter participants are not drowned out?

 Am I providing spaces for people to be alone and recharge if needed?

For (introverted) participants:

- How can I reduce the cognitive load caused by my tendency to mentally multitask?
- How can I advocate for individual time to think and reflect in this particular context?
- What is my personal time limit for remaining fully engaged in group work?

Introversion in the classroom

At the end of each quarter, I (Quaal) like to give my students a brief engagement survey. The comments are often predictable, but one comment in particular struck me this past fall. After learning about several promising resources over the summer, I made some major shifts in my instructional style towards group work. However, one student in my Advanced Placement Physics course provided some gentle pushback in this anonymous survey: "I like group work, but sometimes I wish I was working with five of myself."

As I fished through the survey responses and reflected on my new resources, I wondered about the assumptions I had made when choosing to implement these strategies. In our early careers as teachers, both of us have seen that many instructional strategies billed as effective place a high value on extroversion. We wonder if these strategies foster an engaging and cognitively demanding environment for our introverted students as well, given their potential to shut down in highly reactive situations. These students crave individual analysis and reflection, and we feel that rich tasks and effective lessons are often perceived as such because they equate student talk with student productivity. When this is the case, students who tend towards introversion may very well disengage from the task at hand. Moving forward, I (Quaal) altered several of my strategies to provide space for individual thinking and time for introverts to work alone. Some of my group structures remain, but I like to think I have moved towards a happy medium for both modes of interaction.

Many effective—even essential—activities in our classrooms revolve around group work and communication: laboratory investigations, whiteboarding, and group projects are just a few broad practices that appear in many science classrooms. We do not argue that educators should dispose of these strategies. Rather, we urge our colleagues to think about the ways they can ensure that individual time for analysis and reflection are built into each lesson. If introverted students do not have sufficient time to develop their thoughts, it is unlikely they will genuinely contribute to a group effort. Perhaps these students may still walk away from group work having

learned something, but these experiences over time will sour their opinion of the process. It is no coincidence that introverted teachers have such visceral reactions to collaboration, even when we are told these structures may produce superior outcomes.

In her chapter on collaboration and creativity, Susan Cain bemoans the rise of small group work in schools, citing the rise in classrooms and workplaces where seating has been rearranged in pods. I (Quaal) could not help but blush upon reading this critique, as I had just rearranged my own seating into groups of four desks. Many teachers Cain spoke with cited preparation for the business world when justifying their focus on small group work and promoting managerial roles (2012, pp. 77–78). These teachers are correct in their assumptions. Even a cursory search of skills valued by contemporary employers reveals a clear pattern that places a high value on extroverted traits, with a particular emphasis on teamwork and communication.

As educators, we aspire to train students—academically and socio-emotionally—to succeed in this economy. Part of that work will undoubtedly involve teaching students to collaborate, but in championing these environments exclusively, we lose sight of the powerful analytical tools that introverts quietly bring to the table. Workspaces and classrooms that are arranged solely for group work may stifle one of the cornerstones of deep understanding which Cain refers to as "deliberate practice". Deliberate practice is the solitary practice of a skill for uninterrupted periods of time, which the mental multitasking of group activities hinders. She cites a series of studies that focus on deliberate practice in various fields, from music to programming. These studies all reach similar conclusions: practicing in solitude consistently produces superior results (Cain, 2012, pp. 80-85). This conclusion was true for all people, not just introverts, and as teachers we would do well to recognize the importance of solo deliberate practice for all students to develop a deep understanding of our content areas.

After reading Cain's book, I (Quaal) at first felt that refining my classroom for introverts would require me to backtrack to some archaic form of teaching. This is not the case. After all, the success of introverts in any field will require them to deliver effective presentations and relay information clearly to their colleagues. Introverts do not abhor all group work, and they may actually enjoy listening to the complex thinking of their peers. Both introverted and extroverted students have a great deal to learn from each other, but instructional strategies that inherently place a higher value on extroverted traits signal to our introverted students that their deep reflection and meticulous thinking are inferior to fast talking and quick decision making. Here are a few questions to start reflecting on existing classroom practices.

Classroom Practices

For our classroom environment:

- To what extent does my classroom culture equate talking with learning and understanding?
- How reactive is my classroom environment? Do introverted students have the personal space, personal time, and freedom from peer pressure to be creative in their thoughts?
- How are roles in my classroom distributed between extroverted doers and introverted listeners? Does every student feel comfortable in or appropriately challenged by their role?

For our classroom instruction:

- Do my instructional strategies give introverted students enough time to recharge their batteries and think independently between social interactions?
- How can I prevent my introverted students' good ideas from being drowned out during necessary group work or whole-class discussions?

Conclusion

We hope it is apparent in this article that both introverts and extroverts are needed in the collaborative process. Without extroverts, we might fall into an infinite loop of analysis and prototyping, never taking any action. No irony is lost on the fact that it took two introverts six months and three separate brainstorming documents to write this brief article on the subject. Without introverts, however, working groups might make important decisions based largely on instinct and wordiness, without critical reflection. We believe the latter has occurred disproportionally in our experience as collaborators, and we see this phenomenon among our students as well.

The introversion/extroversion divide is one that spans student demographics and teacher contexts. As we attempt to foster engagement in our classrooms and among our colleagues, it is important that we critically examine what exactly engagement feels like to both introverts and extroverts. This may be an unorthodox and uncomfortable process, especially in an organization that views collaboration as essential to progress. Implicitly exalting extroversion in our department meetings and classrooms runs counter to the important role that solitude, analysis, and reflection have played in our own fields of science and mathematics. If we expect all of our students to become the next generation of leaders, we must provide a space where they, both introverts and extroverts, can flourish.

References

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Citation

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