Who am I as an internationally minded thinker, community leader and researcher?
A multisite qualitative study of student and teacher perceptions and experiences connecting TOK, CAS and the EE throughout the IB Diploma Program.

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Abstract

The purpose of the study was to learn how students and teachers conceptualize the IB Diploma Core (TOK, CAS and the EE), and how connections are made between these elements. Students were asked to reflect about the Core in relation to development of identities, using the questions: who am I as an internationally minded thinker in TOK, as a community leader engaging in CAS, and as as a researcher doing the EE?

Based on stories told, it was found that engagement and interest in the Core significantly improved when students were given time to connect personal interests with Core elements, and when they were given this framework and language to help make connections between themselves, their learning and assessment.   In other words, the Core was taught, not tasked. To make this happen, teachers stressed the need for strong leadership, time to plan and teach, and professional development to build on pedagogical skills to make this happen.

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This study was inspired by my experiences holding various IB Diploma roles including as an IB Coordinator, TOK teacher and EE/CAS supervisor. The questions I was hearing and asking myself, again and again, were: "what is the purpose of the Core?", "how can we support students to make better sense of the Core?" and "what does it mean to connect the Core?". In my classroom, I began to explore these questions with my students through different teaching practices that connected their own experiences to their research and their service learning projects tied to CAS. In doing this work, I became particularly interested in exploring how the Core might be conceptualized and connected by thinking about it as shaping students' identities, asking the question, "who am I?" as an internationally minded thinker (TOK), community leader (CAS), and researcher (EE)? I was curious if thinking about the elements in this way could help to create cohesion and purpose.

As an IB workshop leader for TOK, CAS and the EE, I began to pose these questions to the participants I was working with, wondering if, in their experiences, they were having success making sense of the Core with their students using some kind of model. Some had similar ideas; others began using these questions as a framework after our workshop. As a qualitative researcher, I began to wonder more about how students and schools were making sense of the Core, how their sense-making changed over the two years in the Diploma Program, and what knowledge could be gained by hearing the

stories of the Core, as told by students across their two years in the IBDP. These questions inspired this study.

Subsequently, the goal of this multisite qualitative study was to inquire into the experiences of sixteen IB Diploma students, and twelve IB teachers in four schools, located in Canada and the United States to better understand how, and if, they were making and facilitating connections between the Core elements of the IBDP (TOK, CAS, EE). The purpose of this research was threefold. Firstly, I was interested in hearing how students described their own experiences in the IBDP, and especially with regards to TOK, CAS and the EE, and the connections they were making. Secondly, I was interested in understanding teachers' perceptions about what it means to address the IB expectation to "connect the Core", in relation to TOK, CAS and EE, in philosophical and practical ways. Finally, I was interested in how students would respond to questions about the Core framed around ideas of internationally minded thinkers, community leaders, and researchers.

Research Questions:

There are three central research questions that guided this work:

1. How do IBDP students and teachers perceive how the Core is connected in philosophical and operational ways?
2. How do IBDP students experience and talk about the Core over their two years in the program?
3. How does the IBDP Core inform students' perceptions of themselves and their identities as internationally minded thinkers, community leaders and researchers?

The Study Logistics

This research study took place over a 22-month period, between August 2016 and June 2018 and involved four schools, sixteen students and twelve teachers.

School and Participant Selection. The schools selected were intended to represent a range of experiences across North America. The study began with four schools: one independent school and three public schools. The independent school (Eastern International High School[1]) participants engaged in one round of interviews. Participants from the three public schools: one in eastern Canada (Parks High School), one in the United States mid-west (Central High School), and one in the southern United States (Southern High School) completed three rounds of interviews. Participants were selected based on consultation with the IB Coordinator at each school. It was suggested that student participants represent a range of scholastic and extra-curricular interests, and not necessarily all be the top academic students. It was also suggested that the IBDP teacher participants had varying degrees of interest in the Core. In all cases, the coordinators recommended participants who represented these suggestions.

Methodology

Theoretical underpinnings. The research is qualitative in nature, relying on a theoretical underpinning that takes a narrative approach (Clandinin & Connelly, 2000; Naraian, 2017) when inquiring into the experiences of the participants. To that end, this work was designed to privilege the stories told by the participants, seeking to value each story to better understand particular perspectives. The intention of this research was not to generalize the findings, but to derive examples of experiences that might inform teaching practice. Subsequently, I approached this study from a constructivist standpoint, believing that there are always "multiple subjective realities" (Creswell, 1998, p. 73) that represent different ways that one can make sense of the world. I argue this approach is

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[1] All school, teacher and student names are pseudonyms

important in this study as it is in keeping with the IBO mission statement that says, "other people, with their differences can also be right" (IBO, 2019).

    Data collection and analysis. Because this study privileges the stories told by the participants, the primary data sources analyzed were the interviews done with the participants (both the transcripts and the audio recordings). The student participants also shared some of their IB work that was also discussed in the interviews. I took field notes throughout the visits I made to the schools.

     Interviews took place in person, and when necessary, online through face-to-face discussion platforms, over the period of the 22-months outlined above. The student participants were interviewed three times over two years; the teachers were interviewed once, at the beginning of the study. Because the purpose of this research was to explore connections that the participants were making between: TOK and international mindedness, CAS and community leadership, and the EE and being a researcher, the questions asked were framed around these ideas. The interviews themselves were semi-structured (Merriam, 2009), providing a framework for the conversation, but also such that the conversation and questions were responsive based on the participants' interests.

    In keeping with qualitative research practices, Merriam (2009) notes, "the much preferred way to analyze data in a qualitative study is to do it simultaneously with data collection" (p. 171), and this was done during this study. All interviews were recorded, and after each round of interviews, data was transcribed. Transcripts were analyzed looking for particular moments of learning that were indexed as emerging themes. They were analyzed several ways: each individual participant's story across time was examined. The stories of multiple participants, teachers and students, in individual

schools were analyzed. And, the stories of all of the participants across the two years were looked at as a collection.

Upon the completion of this study, and following the indexing of all of the transcripts, a series of themes that I frame as "lessons learned" emerged. These lessons learned helped to inspire the implications that come from this study.

Lessons Learned

There are many ways that the lessons learned could be framed, but for purposes of this study, I have chosen to focus the discussion around the heart of the study: the stories told by teachers, and the stories told by students. The lessons learned are divided into two parts, representing teachers and students and are informed by the collection of all of the stories heard. While all participants are not directly quoted below, it is important to recognize that they all contributed to the way that these findings are presented.

Teacher Stories

At the outset of this study, I interviewed teachers at all four schools to get a better understanding of how each school conceptualized and connected the Core. Curious about innovative ways that schools were creating the context for students to make connections, I asked about collaborative planning, strategies for fostering connections with students, and about understandings about what it means to do that work. What I found was that teachers and school leaders understood that there is importance and a need to make connections across the Core, but struggled with how to operationalize that in practice. There were three major ideas that came up in the research relating to this: the need for strong leadership around the implementation of the Core, time needed to both plan and

work with students on Core elements, and the desire for more strategies and professional development about how to do this work.

Leadership. The first lesson that emerged related to leadership and the Core. This came out in two ways. Firstly, teachers were unsure about whose responsibility it was to connect the Core, particularly in contexts where there was more than one person responsible for a Core element. In all four schools, different people were responsible for different elements and took their roles seriously (for example as a CAS coordinator) but did not necessarily know whose role it was to connect to the other elements. One teacher noted that she did not want to step on someone else's territory, and another teacher commented that he didn't know whose responsibility it was to make these connections. John, a teacher at Central High School said, "No one's really thought about putting the three together with any serious effort." (John, personal communication, February, 2017). The IB Coordinator at Eastern International School talked about different ways he had thought about operationalizing this:

> Well there was one or the idea of having collaboration between the teachers who teach the three components. I've thought about putting in the hands of one person, one person being all three of those things, or even with subjects where you have a teacher who's multitalented who can do two or maybe even three parts.
> *(Pablo, personal communication, February 2017)*

Pablo had obviously put serious consideration into ways that could make it work, but was struggling to implement a practice. This was in keeping with all four coordinators interviewed. Each of them recognized that the Core elements will not connect on their own and that there needs to be teacher leadership to make it happen, but were not sure how to proceed.

The second lesson on leadership that came up related to teachers' discussion about school administrators, and the need for the top-level school leaders to support the Core elements, and programs more broadly. When asked about what is needed to support implementing an IB program that connects the Core, Leanne from Southern High School said, "I think it has to come from the very highest administrative level on down. It can't just be like the mid level of people on…because if there's this disconnect even in one person of what are our needs for this program, then I have seen that there is a trickle down effect." (Personal communication, February 2017). Leanne's sentiments were reflected across all four schools; teachers felt that when their administrators were supportive of them, and their teaching practices, they were more confident and more likely to take risks and do things differently in their classrooms. Arguably, the work required to connect the Core requires leaders across the building understanding and putting value into it.

Time. The second lesson that emerged from interviewing the teachers was the need for time to both plan and implement strategies to connect the Core. This was expressed in two ways. Firstly, there was a desire for deliberate scheduled time for teachers involved in the Core to meet and talk about their vision, connections and ideas for teaching. At all four schools, when I asked to meet with the Core team, it was commented that this was not a regular practice. When I met with the lead TOK teacher, CAS and EE Coordinators at one school for a focus group, the first thing said was, "[w]ell, this is the first time all three of us have sat down to meet" (Alexandra, personal communication, February, 2016). It is important to note that this comment was one of puzzlement, and recognition that it would make sense for them to work together. In this

case, the need for time connects to the first lesson around leadership. If there is not someone tasked with leading the Core team, then finding and prioritizing time is put on the shoulders of people who may not realize the potential of connecting these elements for students. However, without time to think together, those connections cannot possibly be made.

The other aspect of the lessons learned about time is the importance of scheduling time for students to be given opportunities to forge connections. When I asked the IB coordinator at Central High school about the delivery of the Core to students, she said (on behalf of herself and the TOK teacher): "I think I speak for both of us when I say it's dysfunctional. We don't have a good method of delivery for the Core. We need to really sit down and take a look at how we do that and make it more manageable." (Katharine, Central High School, October, 2016). This proved to be a common challenge across all four schools - figuring out the timing, scheduling and sequence of when students do TOK/CAS and the EE, and also finding opportunities to create connections. For example, James at Eastern International School talked about how Extended Essays were largely drafted sooner than students did their CAS projects, and before their TOK assignments. He considered the idea of changing the sequence, but also discussed how there was no time for students to make connections. Another teacher, Maurice, at Parks High School discussed how there was no time set aside for students to make connections between TOK/CAS and the EE, even though he saw value in creating the conditions to make that happen.

The need for strategies. The final lesson from the teachers is the desire and need for strategies and professional development to help them with practical ways to make

connections in the Core. All teachers expressed that they know that, "IB wants us to do it" (Robert, Parks High School, June, 2017), but how to operationalize that was elusive to many. Camille from Southern High School said of the school: "I think we could do a better job connecting the Core. I don't know if it would take training. I mean because when you go to training it seems to be pretty isolated, only about the subject (Personal communication, February, 2017). Her colleague Leanne echoed this sentiment in her interview saying, " I think more training needs to happen" (Personal communication, February, 2017).

When asked about what kind of training they wanted, teachers commented on wanting practical strategies to use in the classroom. One teacher, Kwan talked about how he wanted to better understand connections, believing that this could support assessment: "If it were integrated a little bit more clearly than I think I would feel more confident explaining to my students" (Personal communication, February, 2017). Across the board, all teachers expressed a desire and interest to forge connections; their challenge was not willingness, it was operationalizing a theory into practice.

<p style="text-align:center">***</p>

The lessons learned from the teachers have implications that will be taken up in the last section of the paper, but what is important to recognize is the interconnection between these findings. Teachers articulated a strong desire and interest in connecting the Core, but noted that for that to happen, schools need strong administrative leadership; strong leadership for the Core; time for teachers to plan; time for students to forge connections; and the professional development, strategies and ideas necessary to understand how to implement this goal. In the case of these four schools, it was not a

lack of desire as to why they felt they were not connecting the Core, it was lack of clarity in how to create a roadmap that would support turning theory into practice.

Student Stories

While there are many things that I learned from working with students over two years, there are two big lessons that are particularly relevant to this study. The first lesson is that students need time to connect personal interests to assessment. The students who were given the opportunity to make connections between their personal interests and their assessments in the Core, and across all of the subjects, seemed to be more invested and engaged with their work. The second lesson is that students seemed to thrive when given a language to make connections in the Core, suggesting that as adults we can support connections by the questions we ask in reflective moments. These two ideas are explored through the stories of some of the participants in the study.

Connecting Personal Interests. Over the two years of working with students in the study, what was affirmed was that students who were given the time to forge connections between their personal interests and their assessments related to the Core and their subjects seemed to be more engaged and invested in their work. While this might seem like an obvious statement, it became clear that for some students, finding a connection between their interests and assessments was a natural process; other students struggled with how to make those connections and needed guidance to see how interests could be connected to the classroom.

Adam, from Central High School, was a student who had a gift for making connections between his life and his schoolwork and exemplifies the kind of experience I

would argue we want to create for all of our students. Adam had singular passion and was able to find ways to connect to it in all of his classes. In the first interview I did with him at the beginning of his Junior Year (Grade 11), he talked at length about his love of computers, computer programming and engineering. It was clear that this was how he spent his free time, " I actually have a gigantic table in the basement just full of computers all the time. I just like building and trying new things" (Adam, personal communication, October, 2016). He continued to talk about how he was learning to read and write code, and about various computer engineers who he admired. When I saw him again, almost a year later, he picked up on the conversation, and talked again about computer science and how his plan was to apply to college to pursue that interest: "Yeah I think I've gotten pretty lucky because, I mean, there are kids who don't know…have no idea what they want to do when they grow up. But I've always kind of known that I want to, you know, I want to do something with computers*"(Personal communication, August, 2017)*.

Adam was able to take this interest and integrate it into his assignments for the Core. When I asked him to talk about it, he spoke about his work with ease, explaining:

> I did [my Extended Essay] on this service called Google App Engine which is a pretty much hosting service offered by Google…basically what it lets you do is you can write a {program} and you can host it on their platform and pretty much any language, and you can write it in Python….but it uses an old version…So I did sort of a feasibility study of upgrading App Engine from standard Python to Python 3…For a formal CAS project I took an internship at a nonprofit company over the summer. That was four weeks long and I basically did a bunch of hardware upgrades on a bunch of computers and all the normal IT stuff. They gave me a problem {to image computers faster} so I wrote a powerful script to do that…it was one hundred lines of power shell code…I also had to write an introductory guide to Windows 10. I had to think about what kind of things a new user needed to know about….I'm very good with computers, but I'm not great at teaching people. So that was a struggle….but I figured it out.
>
> (Adam, personal communication, April, 2018)

Adam was able to talk about his research and community engagement with a level of detail and commitment that showed he was knowledgeable about the subject, engaged in the project, and was excited to communicate his learning to me. This also came through in his discussion about TOK, after we had been talking about what international mindedness means to him:

> I think the closest thing to not computer science that I did was my theory of knowledge presentation, which was on mathematics (he laughed)…….for my TOK essay and presentation, I was getting a lot of sources internationally…you know for open source (computer) projects …so I've had to communicate with people (from all around the world) and it's been really cool to see the different styles of writing {of code} and how you see different people from different cultures talking about software. In the context of different cultures, open source software means a lot of different things…
> (Adam, personal communication, April, 2018)

As illustrated in this excerpt from our conversations, Adam was able to take the language of computer science research and connect it to the language of international mindedness is a synergetic way. Because he already had knowledge and deep understanding of his topic, his ability to connect it to a newer concept was easier for him than, for instance, if his topic was also new to him. In the example above, he was able to authentically explain what it means to be an internationally minded researcher and thinker in his field. This was exemplified across all of his work; because he was so articulate in the topic, he was able to make connections to the academic assignment at hand, bridging knowledge he had with the expectations of the classwork, arguably leading to better work.

Subsequently, I asked Adam about his other Internal Assessments (IA) and was not surprised to hear him talk about how he was able to make connections to his personal interests across all of his disciplines: for his computer science class he wrote 1600 lines

of code in Java, for his math IA he looked at how vectors are used in open source video games to help bots navigate, for one of his film IAs he did an analysis of the *The Social Network* (a film about the development of Facebook), and for his environmental systems and societies IA he did an analysis of the carbon footprint of bitcoin mining. When he was finished, he added: "So know I mean it's been interesting work for the most part…. I mean it's been a lot of work, but it's really helped having you know something that you care about" (Adam, personal communication, April, 2018).

Just about everyone teaches a student like Adam: a student with a single passion that consumes all of his/her time, whether it be computers, video games, art, drama, sports and music to name a few. Adam was fortunate because his school encouraged him to harness that interest in all of his assessments; Adam also had the knowledge to see how it could be applied in all of his Core experiences, and in his classes. This paid off not only in terms of each individual assignment, but also in the sum of the parts. When prompted, he could articulate how he could be a researcher, community leader and internationally minded thinker as a computer programmer.

This kind of engagement should be something we try to foster in all of our students: to harness what they like to do in their free time, and teach them how to turn that into their academic pursuits. While not all students are like Adam with a single passion, all students have interests and ways that they spend their time. Our job as teachers should be to scaffold those interests into our respective classes and program requirements. For Adam, his work on the Core helped to solidify how to turn a hobby into something more, for others, it should be the place where we support students to find this kind of connection.

The Value of Purposeful Reflection. In addition to finding out how students experienced the Core, I was also interested in whether students' understanding of the Core could be shaped through the reflection questions asked. In each engagement I had with students, my series of questioning followed a particular format that first asked about each Core element, and then about who they were becoming as internationally minded thinkers, leaders and researchers. While there was conversation in between each question, the general format was:

1. Tell me about your experiences in TOK.
2. Tell me about how you're becoming an internationally minded thinker.
3. Tell me about your experiences in CAS.
4. Tell me about what you are learning about yourself as a community leader.
5. Tell me about your experiences with the EE.
6. Tell me about what you're learning about yourself as a researcher.

Consistently across all four schools, students, when asked to talk about TOK, CAS and the EE (questions 1, 3 and 5) told me about assignments and tasks. For example, without exception every student, when asked about CAS, first responded by saying something like: "Oh, I'm behind on logging my reflections", or "I haven't been on {the CAS recording software program} yet". Their perceptions, it seemed, was that "doing CAS" was about keeping up with logging experiences, a task, not about the learning they were doing as a result of the engagement. Similar responses came up when asked about the EE and TOK. Students gave me updates about where they were on a "to do" list of an assignment, rather than telling me about what they were learning.

However, when asked the second questions about being internationally minded thinkers, leaders, and researchers (questions 2, 4 and 6), each student was able to give richer responses that were reflective, complex and showed growth over two years in terms of who they were as individuals. Their discussions also provided opportunities to

disrupt and positively extend their beliefs and perceptions of themselves as internationally minded thinkers, leaders and researchers, proving to be important teaching moments in this process.

Internationally Minded Thinkers. As one might expect, students' perceptions of internationally minded thinking changed and developed across their two years in the program. In the first round of interviews, some students struggled with the idea, but by the end of it, it seemed that students across all schools had developed a sense of what it meant to them.

In the interviews, it was clear that not all students had talked much about international mindedness in their daily school lives; one student said, in our third interview, 'oh yeah, I remember you asked me about that'. However, the act of being asked about it over three occasions in interviews with me was enough for that student to develop her ability to talk about it. By contrast, what was interesting was that all of the students at Southern High School seemed to have a language and a personal understanding of their interpretation of international mindedness. I learned that in the TOK class their teacher had done a lot of work with them on this idea. It seemed that this deliberate discussion helped the students to not only be able to articulate their understanding of international mindedness using language that was familiar to them, but that they were also able to document their own growth over the two years. For example, one student said: "the biggest thing we've gained out of ToK {is understanding} that not everyone's going to think the way you do, but that's what makes you an international student, being able to look past different ways of thinking." (Ava, personal communication, May, 2018). This student was able to talk about this as a process of

change: "When I started, I did consider myself to be open minded, but looking back, I don't really think that I was. I had one line of thinking, and sort of almost looked down at other lines of thinking. I've noticed that this year, I've stopped doing that and thoroughly think about each new opinion that I come across" (Ava, personal communication, May 2018). Her peers articulated similar sentiments. A classmate, Asia said, "to me international mindedness is looking at the world through not just the lens of "oh I'm an American"….{instead}looking at situations and not necessarily thinking…we are right. That culture is doing it wrong. It's that they simply do it differently from how we do and this is something to be seen as interesting or to learn from. (Asia, personal communication, May, 2018). Tom also expressed a similar growth with his understanding of international mindedness: "I feel like I'm more open minded to other people than ever. Just because I've been taught so much with other perspectives, and understanding those perspectives, and just seeing how many other people can think in different ways you might think they do." (Tom, personal communication, May 2018).

Much like how Adam was able to draw on the language of computer science in reference to his assignments, the students at Southern High School were able to make connections to international mindedness because they had practice talking about it. Their understanding of the purpose of TOK, and the bigger objectives of being in a program that rests on the idea of international mindedness were easily articulated, and likely, understood in ways that were different from students who had not engaged in those conversations.

Community Leaders. Ava, mentioned above, is someone who I would have described as a community leader. When I met her the first time, she was excited about

being in IB, talked about her courses, how she enjoyed being with friends who also "want to learn" (Ava, personal communication, February, 2017). She found the classes challenging and talked about trying to manage her time. Over her two years in IB, she engaged in the school and community and was described by her coordinator as someone who could always be called upon to help. For her CAS project, she and a friend organized a school and community cleanup. When I asked her about it, I got the details of what she had to do, organizing her peers, getting garbage bags and the logistics of the day. She concluded by saying "When you organize the project, you have to be worried about other people. I was really proud of what we did." (Ava, personal communication, May, 2018). She had clearly taken on a lead role, and so I asked her what she learned about herself as a community leader. She said: "I'm not sure I learned about leadership itself, but I did learn about myself as a leader. I learned that I think I was good at it and I think I handled everything well, but it's not something I want to do. It's hard. It's really hard to be constantly thinking about everyone else around you." (Ava, personal communication, May, 2018). Had I not asked her about her perceptions of herself as a community leader, I may have left that conversation assuming that because the CAS project went well, because she said she was proud of what she did, that she saw herself as a capable community leader; that would have been incorrect.

Ava was not the only example of a student who engaged in a project but saw their influence as being something other than leadership. Tom, one of Ava's classmates, was a volunteer firefighter and talked, in great detail, about the support he had to give in the community following a flood. He was with first responders both on the ground and in an airplane, and talked about the kinds of rescues he witnessed and helped with; it was a

remarkable level of service for a sixteen year old. I also asked him if he considered himself a community leader, and he said that he wasn't there yet. I followed up by asking him to define what it is to be a leader and he said, "I would define a leader as someone who can actually lead your group with thought, whilst also making the best overall decision for the group. But I also think it's someone that has to be able to take a lot of disrespect because they are people that will not agree with certain decisions and disrespect them which is why they have to be an open minded person as well (Tom, personal communication, February 2017). Both of these students seemed, to me, to be leaders in their schools and communities, and, if I had had more time with them, I might have tried to disrupt their deficit thinking about their current and future conceptions of themselves in these roles.

In another interview, with Emmie from Parks High School, it seemed that the question itself was enough to disrupt her thinking. She had been talking about her experiences raising money for local causes through a school club. When I asked her if she saw herself as a community leader, she said: " I wouldn't say necessarily. Like it could be but…it's not as community based. Or it could be I guess because the events take place in the community. But…Actually yeah. I would say yeah….because I helped come up with up with some of the ideas and I helped out, I made things for the bake sale." (Emmie, personal communication, July, 2017). As she talked her way through her response to the question, her tone changed and she seemed pleased to take on this identity. This suggests that if we ask students to reflect on the CAS experiences and their role in them, we can elicit an understanding of the students' perceptions' of particular

events; but by asking them about how these experiences connect to their identities, we elicit a whole other lens through which CAS in analyzed.

  Researchers. Similar conversations happened with students when they talked about their Extended Essays and themselves as researchers. Students from all four schools, when asked about their Extended Essays, talked first about their topic and what they wrote about, explaining the task and where they were in the process. It was common, particularly in the middle of the process, for students to tell me about an upcoming deadline, or to give me a word count of where they were in relation to where they needed to be when they were finished. It was a task that had to be completed amidst a series of other tasks.

  There did seem to be an appreciated value to the process once it was completed For example, when asked about the most valuable part of the Diploma, James said: "I'd have to say that that would be the Extended Essay. I feel like after writing a 4000 word essay, I'm ready to write any future essay I'm going to have to do" (personal communication, May, 2018). He was able to connect the skills he learned about researching, finding peer reviewed sources, and using online databases to his future schooling, and felt satisfied with what he had learned. Megha, a student at Parks High School learned she could take her personal experiences as an international student from East Africa and draw on the cultural challenges she faced as part of her research story which, "was way different than other research projects" (Megha, personal communication, March, 2018). Both James and Megha seemed satisfied with the work they had done, and the implications that it has for future research.

Across all students, asking questions about the extended essay elicited responses about the task itself, but asking students about their growth as researchers resulted in conversations about learning and connections. As was the case with all three elements of the Core, the quality of reflection, and the ability to make connections beyond the scope of the element itself, and to themselves and across the program were stronger when the reflective questions asked went beyond the task at hand. These findings will be discussed in the implications section that follows.

Connecting the Core. By design, this study was a series of interviews with pedagogical underpinnings embedded in the research questions. Given the richness of reflective responses that students gave when asked to connect the Core elements to their developing sense of themselves as internationally minded thinkers, community leaders and researchers in these isolated conversations, there seems to be great potential to embed a strategy like this in the implementation of the Core. The following section looks at the implications for practice that comes from these findings.

Implications for Practice.

Based on the lessons learned, there are three interconnected implications that are significant, not only in terms of places for further research, but also for current IB schools and school leaders trying to develop a stronger Core in their program. Firstly, schools and school leaders need to take the time to establish a vision for the purpose of the Core in their particular context. Secondly, a priority needs to be made that the Core will be taught, not tasked, meaning that explicit teaching is devoted to opportunities for students to make connections between themselves, the assessment tasks at hand, and the bigger objective or purpose of the Core. Finally, it is argued that meaningful, deliberate

reflection that connects the vision, to the teaching of the Core can help to operationalize this objective in a way that increases student engagement and potentially helps students to generate assessments that are of greater interest and quality.

Implication One: Establish a Vision and Give it Time.

In order to convince students that thinking about the Core matters, it is necessary to have adults believe it; to do this is twofold. Firstly, senior leaders and administrators need to understand the value in connecting the Core, to speak the language of international mindedness, leadership and research, and create the contexts in the schedule for teachers (and students) to have time to make these connections. To do this, a Core leader or leadership team with time to plan is necessary so that there is deliberate implementation of the pedagogical practices necessary to make this happen.

We can learn this from the work done at Southern High School on international mindedness. Across the schools studied, when asked about internationally minded thinking, many students paused and hesitated before responding, prefacing their answers with "hmms and umms" before coming up with a response. The students at Southern High School, however, each had his/her own understanding of the concept and could articulate examples of it because of the work done by their TOK teacher. What was particularly noteworthy was that the students' understandings of international mindedness were not cookie-cutter explanations, but rather, were their own nuanced interpretations of how their own personal experiences connected to their ability to explain international mindedness to others. Arguably, this is what is needed for the Core as well. In all of the

schools, it was commented that the teachers responsible for the Core never had or made time to collaborate together. It was not a mystery why students were not making connections; there were not connections to be made. In the one school where some teachers had some time where this could happen, the conversations seemed to revolve around assessment and timelines as opposed to connection to a bigger goal or vision. This is not to say that teachers did not care about creating connections for students; as is evidenced in the quotations from teachers above, they care deeply about it; however, in the day-to-day realities of assessment pressures tied to the DP, it is easy for this goal to be lost.

Therefore, schools need to have time devoted for teachers to think about the vision and big ideas that are shared about the purpose of the Core, time to plan how this vision will be transferred to students, and a common language to help communicate these ideas. In schools, arguably the most important currency is time; teachers (and students) understand that what matters is given time: teaching time, meeting time, and planning time. To make the Core a priority, time for teachers to plan is critical.

Implication Two: Teach, Don't Task.

A key lesson learned through this research is that engagement is highest when students have the ability to connect their personal interests to the work they are doing, and that this is not necessarily a natural process for them, or for teachers. For example, Adam was able to make connections between his interests in computer science and gaming to generate a topic for all of his Core assessments, and all of his IAs. Other students took interest in their topics, but initially did not seem to have that level of personal engagement. While Adam received encouragement to make a connection

between his own interests and his research, he also had practice doing this through his hobbies. Other students expressed that they were told to 'pick a topic they were interested in', but were not shown how to do that kind of work.

Therefore, the second lesson of this research is that the Core needs to be taught, not tasked. That means that instead of issuing a series of deadlines for CAS reflections to be posted, EE outlines to be submitted, and for TOK papers to be drafted, teachers should create time to ask and answer questions that connect personal interests to the Core elements. In this study, students who were given time to first identify what they were interested in outside of school, and were then prompted and supported to make connections between those interests, TOK ideas, CAS projects, and EE research ideas were more engaged.

To do this might involve slowing down the early teaching of these elements, possibly making teachers nervous about pacing and completing assessment. However, based on this research, the students who spent time investing in their topics and making personal connections at the beginning were more highly engaged, and more invested in the work they did.

In addition to making connections between personal interests and subjects, students and teachers struggled to bridge experiences between key elements. For example, a teacher, Stella, said, "There's just a lot of things that aren't connected as far as the writing. Like with the TOK essay and the Extended Essay you know the kids hear all the time we need to integrate TOK into all of our subject areas. And I don't really see that happening or being stressed in the EE. And I think it ought to be." (Stella, Personal

Communication, February 2017). These connections may happen serendipitously for some students and teachers, but, for most, it is likely they need to be taught, explicitly.

Implication Three: Reflect, With Purpose.

The third implication of this study connects vision with teaching, suggesting that the foundation for effective connection across the Core is the purposeful engagement with reflection that connects teaching with big ideas about the purpose of the three elements. Part of this study was to explore if students would find connections if the Core elements were organized around ideas about international mindedness, community leadership and thinking about themselves as researchers. Throughout the study, when asked to frame their experiences around these ideas, the students all generated insightful responses connecting their experiences to these bigger ideas of themselves, suggesting that this is one effective way to frame the Core for students, and schools.

For example, as outlined above, initially, when asked to talk about CAS, students talked about documenting experiences in their online software programs. However, when asked to think about moments when they felt themselves become a leader across their CAS experiences, the responses changed and became more complex; one student said he did not feel like a leader because he was not "loud", another student talked about how leadership is "hard", and another one said that she felt like she was becoming a "better leader". The reflections and engagements with their experiences with CAS changed from being a record of their weekly agenda to being an exploration of themselves.

A similar outcome emerged when the students were asked about their experience with the Extended Essay, and what they learned about being a researcher. One student

articulated becoming better at using online databases and libraries, another talked about constructing knowledge and coming up with an argument, a third student discussed connections she saw between her Extended Essay and her plans for university. When asked about who they were becoming as part of the process, each student became more reflective about his/her learning.

To do this kind of engagement with students involves time, something that many teachers are hesitant to give up in the name of assessment. It is important to clarify that what is being argued is not to disregard the assessment connected to the Core. Instead, the argument is that if we put the assessment first, we have tasked the Core, leaving little room for joy, fun, growth, and connection to other aspects of the IB and to the participants lives. Instead, based on the research, it is suggested that if we put the big questions first: "who am I…as an internationally minded thinker, researcher, and community leader?", then there is greater potential for authentic engagement, connection between all elements of the Core and the IB more broadly, and increased personal engagement with each element of the Core. Incidentally, it will probably also lead to better assessment scores.

Conclusion

The stories that are told about student and teacher engagement with the Core are varied, complex, individual and important, as should be the work of the Core itself. Based on this study, the conclusions are interconnected and rest on the assumption that schools want to make the Core a central, connected element to their school programs. The Core has the potential to be the most meaningful part of our IB programs, developing skills in our students that cultivate their sense of selves as internationally minded

thinkers, researchers and community leaders. To make this happen, it is up to school leaders to decide that the Core matters, to support teachers in building their knowledge to back this belief, and to find time for students do engage in deliberate reflection and connections to be made. When this happens, the possibilities for our students are certainly greater than the sum of the parts of each element. And, arguably, it's way more fun.

Perhaps, what it comes down to is thinking about the risk of tasking it, versus teaching it. The risk of tasking the Core is that students complete a series of school tasks and move on with their lives. However, the risk of teaching the Core has the potential to shape our students' lives as internationally minded thinkers, community leaders and researchers and, subsequently, the lives of those in the communities where they live. As IB educators, I think we don't have a choice but to try to teach.

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