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Curricular conundrums: Internationalising teaching and teacher education in Wisconsin

Abstract

Calls to internationalise teacher education are ubiquitous and inspiring but often challenging to enact. Both teacher educators and the pre-service teachers they teach face curricular conundrums such as how to 'do' global education in their respective classrooms. This paper explores these tensions – and their potential resolutions – by examining the enactment of an undergraduate global education course in Wisconsin. It examines the curricular conundrum experienced by two White, male, pre-service physics teachers from rural Wisconsin who had no- previous international experience as they engaged in the course and aimed to conceptualise and enact global education. The paper further explores my own curricular conundrums of how to design and teach global education in Wisconsin, particularly in light of three curricular conceptualisations and commitments held by me as the teacher educator. I argue that curricular conceptualisations and commitments play an influential and underexamined role in considering how to internationalise teaching and teacher education for both teacher educators and pre-service teachers.

Keywords: Teacher education; global education; comparative and international education; teacher educators; pre-service teachers; Wisconsin

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Bio

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Introduction

Teachers and teacher educators are frequently positioned as the means to developing a more globally aware and engaged citizenry (Engel et al., 2019; Estellés & Fischman, 2020; Thomas & Banki, 2021). Yet instilling global sensibilities and skills into their students, and integrating global themes and awareness into their pedagogies, remains challenging (Zeichner, 2010). These challenges may be particularly acute for teachers and teacher educators with minimal experience in international or diverse contexts (Merryfield, 2000), working in relatively homogenous or resistant contexts, or teaching certain subject areas, including science (Tichnor-Wagner et al., 2016).

This paper explores these tensions as experienced by myself as a teacher educator and two of the pre-service teachers (PSTs) I taught. These PSTs were arguably the least likely to engage in global education: White, male, physics education majors from rural Wisconsin with no previous international experience. The paper examines my curricular conundrums in designing and enacting an undergraduate global education course as well as those experienced by the PSTs as they engaged in it and learned how to become 'globally responsive teachers'. This phrase featured in the 'vision' statement of their teacher education program, where internationalisation of teacher education was encouraged but challenging to implement. Drawing on diverse data from the course, myself, and the two focal participants, I argue that curricular conceptualisations and commitments play an influential and underexamined role in considering how to internationalise teaching and teacher education for both teacher educators and PSTs.

Tensions in Internationalising Teacher Education

Scholars posit that teacher education remains simultaneously one of the most important and most challenging spaces to internationalise (e.g., Yemini et al., 2019;

Lourenco, 2018). While not solely responsible for internationalisation, teacher educators play an immensely important and complex role in advancing these efforts. For example, learning about the beliefs and lived realities of PSTs is essential to teach and empower them toward new global understandings. Teacher educators are also influenced by their own identities and experiences, which can enhance or constrain integrative approaches to internationalising teacher education (Merryfield, 2000; Lourenco, 2018). Self-reflection is therefore paramount (Shah et al., 2017; Merryfield, 1993), especially related to student perspectives, personal experiences, and curricular decisions.

Many teacher educators are also involved in the complicated work of designing, curating, and enacting a globally-focused teacher education curriculum. This process is made more complex due to parochial curricula and policies that, understandably in many ways, prioritise the local contexts in which the schools are located (Aydarova & Marquardt, 2016; Lourenco, 2018; Zeichner, 2010). Beyond these local foci, teacher education programs are notoriously crowded, and reserve considerable space for content knowledge that is often perceived as discrete and disconnected from geopolitical contexts (see Standish, 2014; Thomas & Banki, 2021). Science subjects (including physics, the focus of this paper) are further perceived as spaces least receptive to global education (Tichnor-Wagner et al., 2016). Teacher educators and PSTs must therefore reconcile these (and other) tensions in order to realise the espoused benefits of global education initiatives. The curricular choices and pedagogical decisions of teacher educators, then, are vital to consider.

Conceptualising the Curriculum

Three curricular emphases have shaped my conceptualisation of global education, each competing for curricular space and instructional time. The first is comparative and international education (CIE), a diverse field of research, policy, and practice that broadly

concerns the systematic comparison of educational contexts and the interactions between the global and the local within education systems.¹ Once commonplace in teacher education programs, coursework in CIE experienced a decline due to increased crowding and accreditation demands; however, recent scholarship and the development of a 'Teaching CIE' group within the Comparative and International Education Society has reinvigorated attention to its potential for engaging PSTs in the careful analysis of educational systems, policies, and processes (Aydarova & Marquardt, 2016; Kubow & Blosser, 2016; Thomas & Mosselson, 2019). As an alumnus of two CIE (post-)graduate programs (USA) and an active member of the Teaching CIE group, I drew heavily on a set of CIE concepts and scholars in designing and enacting my course. For example, I assigned CIE texts as required reading (Mundy et al., 2008; Vavrus & Bartlett, 2011), used quotes by prominent CIE scholars (e.g., Arnove, Kandel) in course materials, and showed videos of CIE research (Tobin et al., 2009). I did have concerns, however, that my PSTs might not share my enthusiasm for CIE, or see its value for their future work as teachers.

Thus, making a legitimising case for 'global education' constituted the second curricular emphasis. Like CIE, conceptualisations of global education are diverse and contested. The boundaries between global education and multicultural education are often conflated (Kubow & Blosser, 2016; Merryfield, 2000; Pashby, 2013), and the former shares much in common with global citizenship education, which has garnered considerable scholarly attention.² Beyond these concepts/sub-fields, there exists a diverse constellation of purposes to be pursued through 'global education' and related fields. These sometimesoverlapping purposes include but are not limited to enhancing global competitiveness in an

¹ See Mundy et al. (2008) and Kubow and Blosser (2016) for more on the definition and development of CIE. ² For reviews specific to teacher education, see Estellés and Fischman (2020), Pashby and Engel (2020), and Yemini et al. (2019).

increasingly interconnected neoliberal capitalist society, advancing social justice and liberal egalitarianism, encouraging democratic and civic engagement, and deconstructing neocolonial imaginaries (Aydarova & Marquardt, 2016; Engel et al., 2019; Pashby et al., 2020; O'Connor & Zeichner, 2011; Zeichner, 2010).

While engaging comprehensively in these conceptual distinctions is beyond the scope of this paper, I use the term 'global education' to maintain consistency with the statelevel context where the research was conducted. Global education was conceptualised by the Wisconsin Department of Public Instruction (WDPI) as follows: 'Global education...investigates issues in a global context to reflect the complex web of social, economic, or scientific issues that transcend national boundaries' (2015). WDPI further grounds global education in notions of global competence', where 'global competence is the capacity and disposition to understand and act on issues of global significance. Globally competent individuals are aware, curious, and interested in learning about the world and how it works' (Mansilla & Jackson, 2011, p. xiii). While this emphasis on 'global competence' may be decidedly US-centric (see Pashby & Engel, 2020) and it is vital to recognise that (sub-)national jurisdictions worldwide engage in internationalisation in varied forms and for various reasons, I nonetheless used these conceptualisations and discourses from WDPI as a means to gain and maintain PST interest in a course perceived by them as disconnected from teaching practice. Overall, and distinct from the CIE emphasis on comparing educational systems and processes, the 'global education' perspective I utilised aimed to teach PSTs about the world as well as encourage them to do global education with their (future) students, as I had once done with my own (Thomas, 2012).

This, then, relates to the third curricular emphasis: teaching teaching. As a former public school teacher myself, I considered myself 'a teacher who teaches teachers' (Russell,

1997, p. 32). For me, this meant merely teaching about CIE or global education was inadequate. I desired and felt obligated to: embody the pedagogical approaches I wanted PSTs to utilise; engage PSTs in critical analysis of my own teaching; and provide ample opportunities for PSTs to practice and receive feedback on their teaching. With inspiration from reflective teacher educators and research on modelling (Loughran & Berry, 2005; Lunenberg et al., 2007; Russell, 1997), I developed a meta-pedagogical method (Thomas & Yehle, 2018) in which I enacted a teaching/learning activity, then engaged PSTs in a guided analytical discussion of my own pedagogical practice. Beyond sharing 'tips and tricks' (Loughran, 2005, p. 8), I hoped these meta-pedagogical discussions would help my PSTs to 'think and act like teachers, not students'. This approach occurred within and alongside the other two curricular emphases noted above in my course.

Research Context and Methodology

Global Education in Hilldale, Wisconsin

Teaching teachers in Wisconsin is perhaps unique in and of itself, as the state has been a long-time promoter of global education, purportedly recognised among the 'leaders in the field' (O'Connor & Zeichner, 2011; Standish, 2014, p. 168). For example, the *Strategies for Achieving Global Literacy for Wisconsin Students* (WDPI, 2006) stressed that 'American students need to study global cultures, global challenges, and global connections, at all grade levels and across all subjects' (p. 2). However, realising these ambitions at Nighthawk University in Hilldale, Wisconsin³, where this research was conducted, was a mixed pursuit.

³ The institution and town names are both pseudonyms.

On one hand, the 'Vision' of Nighthawk University's School of Education was to 'become a leader in the preparation of globally responsive teachers' (Nighthawk, 2019). Here globally responsive teaching was described as the 'infusion of a strong academic curriculum linked to world events, geography, world cultures, and diverse perspectives. Globally responsive teachers act to make the world a healthy and more sustainable and just environment.' This discursive framing manifested programmatically, too: the School required all PSTs across programs (early childhood, primary, secondary) to complete EDS309: 'Education in a Global Society'. Unlike institutional contexts where global education courses are electives (McCormick & Thomas, 2019; Thomas & Banki, 2021), this mandatory two-credit⁴ course sat alongside other educational foundations courses focused on U.S. public education and multiculturalism, respectively. Thus, in both discourse and policy, an emphasis on globally responsive teaching was a distinguishing feature of Nighthawk's teacher education program.

On the other hand, the local and institutional culture made the enactment of global education quite challenging. Nighthawk University is a mid-sized public university located in a small metropolitan area with rural surrounds that enrols approximately 10,000 students: roughly 90% identify as White and 80% are residents of Wisconsin.⁵ While the institution has worked to increase and promote diversity through a range of initiatives, the campus culture felt fairly homogenous and monocultural (i.e., White, Midwestern, semi-rural), at least to me. Moreover, my experiences as a teacher educator suggested that many (though not all) PSTs had limited prior experiences with diverse populations, travelling

⁴ Most Nighthawk University courses are three credits.

⁵ Notably, the city is home to significant populations of Vietnamese Hmong and the Ho-Chunk Nation, which are underrepresented in higher education, and approximately 40% of Nighthawk University students are the first-in-family to attend higher education.

internationally, or even 'investigat[ing] issues in a global context' (WDPI, 2015). For example, 31% of the PSTs in this study had never left the US, and when I asked PSTs in one class, 'Who is Angela Merkel?', not a single hand was raised. It was this latter example that sparked my interest in studying systematically the teaching and learning that occurred in EDS309.

Research Methods and Participants

Specifically, I was interested in understanding: 1) how PSTs experienced a global teacher education course that I taught; 2) how they conceptualised global education; and 3) how they aimed to do global education in their future work as teachers. To answer these questions, I employed a largely qualitative methodology informed by both case study (Merriam, 1998) and self-study (Loughran, 2005) with a goal to understanding more about my teaching and my students' learning. After attaining ethics approval, I invited all 46 PSTs enrolled across my two sections of EDS309 to participate. In total, 37 PSTs (80.4%) opted into the study, which included a variety of data collection methods with the studentparticipants: a) anonymous descriptive surveys (n=36) collected near the course's beginning and end; b) in-depth interviews (n=12); c) ethnographic field notes and observations; d) artefacts and student work; e) audio recordings of four classes; and f) further correspondence by email (optional). Some of these sources also served as data for my own self-reflection and study (i.e., recordings, fieldnotes), which was supplemented by a weekly reflection journal and ongoing conversations with Nighthawk University teacher educators also teaching EDS309 and experienced teacher educators at other institutions. These critical friends provided invaluable feedback on how I was approaching my teaching of teachers (Schuck & Russell, 2005).

The two focal PSTs in this paper, Aaron and Henry (pseudonyms), were selected for their similarity and relatively extreme case characteristics (see Patton, 2014). Both were White males who grew up in Wisconsin and had no international experience, completing degrees in secondary physics education, planning to work as high school physics teachers, and questioning how to enact global education with/in physics.⁶ In many ways, Aaron and Henry were least likely to engage deeply in global education. Finally and importantly, they both participated in all components of data collection, yielding a considerable (sub-)corpus of micro-level data to analyse.

Data Analysis and Positionality

The data analysed in this paper were those related to the two focal participants, including interviews, in-class notes and observations, artefacts, and follow-up correspondence, as well as data from my own self-study. These data were read individually (by case) to understand each separately. Then, each type of data was compared (i.e., interviews, assessments) for further analysis across the cases and exploration of areas of convergence and divergence (Miles & Huberman, 1994). Finally, to enhance trustworthiness and credibility, both focal participants were invited and agreed to review a draft of this paper. One provided substantive feedback, even acting as a type of critical friend over multiple email exchanges.

While considering positionality is always important, it is perhaps particularly vital when researching one's own courses/students. Having previously conducted research with students, I had experience in clarifying student-participants' involvements with me as a researcher/teacher educator. Throughout the semester I emphasised the entirely voluntary

⁶ Nine participants self-identified as male (24%) and 14 participants were in secondary education (38%).

nature of the research and its disconnect from their course performance. In interviews, both Aaron and Henry openly critiqued aspects of my course and pedagogies, suggesting limited concern for providing socially desirable responses. Moreover, given some of our shared characteristics, my own identity as a young(ish), White, American male may have enhanced their levels of comfort, even as we differed in terms of previous international experiences and engagements with diverse populations and cultures.

Learning Global Education with/in Physics

The sections below draw on data from interviews, artefacts, observations, and correspondence with the two focal participants to explore broadly their experiences in EDS309 as well as their perceptions and anticipated enactments of global education.

Aaron: 'I was going the wrong route'

Aaron grew up in a Wisconsin town of approximately 25,000 people and 'unfortunately' had never travelled internationally. He was an astute student, however, and articulated tensions between various conceptualisations of global education. He noted one goal is to 'make students that are able to compete in a global economy', observing that 'policymakers in America' might see 'how much more emphasis they put in India and China on engineering and science' and become concerned. While Aaron understood this neocapitalist rationale, he simultaneously sought to distance himself from its 'kind of like, functionalist, outlook on it':

But I think more emphasis should be put on, less on the economic and more on the, just like geographic literacy. I think it's a big problem. And I know that Africa quiz⁷ that we took really spurred my awareness of my lack of geographic

⁷ The 'Africa quiz' was an ungraded activity in Week 4 where PSTs worked individually, then in pairs, to name as many countries as possible on a blank map of Africa. Notes from my reflection journal show very few PSTs were able to name more than 1-2 countries (usually Egypt and South Africa).

knowledge. So the kind of thing that [Local] Elementary School⁸ is doing to just get kids aware, you know that there are countries outside of the US, I think that's pretty important.

Here Aaron references knowledge of the world (i.e., countries in Africa) as well as focused attempts within public schools to educate students about various countries, peoples, and cultures.

Yet for Aaron, incorporating global education into his own (future) physics teaching seemed daunting. Aaron and his EDS309 peers were encouraged to practice this translation process through their 'Country Case Study' assessment, which constituted 35% (the largest percentage) of their overall grade. For this assessment each student pair submitted a: formal paper; set of pedagogical materials; 45-minute lesson plan, part of which they enacted in class as a form of micro teaching; and post-presentation selfreflection. Aaron and his partner⁹ selected Poland as their Country Case Study, but struggled with the assessment and how to approach global education. In short, he faced a curricular conundrum:

Matthew: In thinking about your future as a K-12 teacher...how might you incorporate

global themes into your teaching?

Aaron: That had been something that I was trying to grapple with this past week with this project. And it was *very* difficult [strong emphasis]. Particularly physics, I was, you know, tearing my hair out trying to think of, like, how can I make

⁸ PSTs visited this internationally-focused public primary school as an EDS309 field trip. According to the broader survey data, it was ranked the most important week of the semester and 3rd most important learning activity (behind whole-class discussions and in-class videos).

⁹ Another research participant

electric circuits? You know, how can I incorporate a global theme into that, or astronomy because it's [two-second pause], it was a, I had a difficult time. In the audio recording, Aaron is emphatic in stressing how challenging it was to integrate global themes into the content knowledge he was expected to teach. He eventually achieved a breakthrough, however:

Aaron: But then when I came up with my lesson plan, I kind of got excited because I just, I was going the wrong route in trying to do this. I was thinking about the physics and how do I apply, like, knowledge of countries to the physics, but when I started to just research Poland, I was researching the country. And then all of a sudden, like the physics came out of that.

Matthew: You saw physics...

Aaron: [finishes statement] in Poland, yeah!...Yeah, instead of thinking about...how do I incorporate, generally, like a global theme into the concept? But it involves a knowledge of the global theme, and then you know, you can recognise the content knowledge in that theme.

For Aaron, knowledge of both the content area (physics) and the global theme(s) were necessary to be able to combine the two.

With this new revelation, Aaron and his partner taught concurrently about physics and Poland. Their micro-teaching lesson plan focused on Grade 9 basic science and included a 'biomes jeopardy' game (featuring Polish landscapes), density demonstration (featuring liquids common to Poland), and faux field trip (featuring kinematic equations; see Figure 1).¹⁰

¹⁰ PSTs were provided the lesson plan template.

Figure 1

Part of the Lesson Plan

Start Time	Time	Active / Passive	Teacher Pedagogical Notes	Required Materials
9:20	11 min	Passive	 Physics Kinematic Problems introduction: "We are taking a field trip to Poland!" give a brief overview of the high speed intercity rail system that will take us from city to city reference that if we know various aspects of the train's linear motion, we can solve for unknown variables of its motion using "Kinematic equations" At this point students will be asked to break up into their jeopardy groups for a whiteboarding activity of the kinematic problem set 	Handout word problems and maps of the Poland with cities and rail network, poster board, markers
		Active A/P	 Aaron and [Partner] will hand 4 (or however many) sheets with all of the problems and a whiteboard or large piece of paper to each group while assigning each group a problem to solve We will hover from group to group answering any questions after 5 minutes, we will ask each group to take turns sharing their answer and their work (all written on the board/paper) with the rest of the class. once every group has shared, we'll ask the class to return to their original seats and have one student from each group hand in the large boards. 	

Source: Aaron and his partner's Case Study Project assessment As required by the EDS309 assessment, the lesson plan referenced Wisconsin state standards. The Polish field trip, for example, aimed to meet Standard D.8.6, which focused on 'the motion of objects' and expected students to 'apply these concepts and explanations to real-life situations outside the classroom.' To achieve these ends, Aaron's partner first announced to their PST peers that 'we're going to travel to Poland and learn about the culture of Poland while we do that' (fieldnote observation). They then offered a short introduction to the high-speed rail system in Poland before distributing maps (see Figure 2) and

worksheets with word problems using kinematic equations.

Figure 2

Handout Distributed to PSTs



Source: Blank map of Poland – modified significantly by Aaron – freely available at <u>http://upload.wikimedia.org/wikipedia/commons/5/5b/Relief_Map_of_Poland.pn_g</u>

Each of the six problems involved different cities in Poland and (primarily train) travel

between them. Here, for instance, is the third problem:

Warsaw is the capital and largest city of Poland. Our main stop in this city is the Polish

Parliament building where we'll be taking a tour. This building houses the two

democratic representative houses of the Polish parliament: the 100 seat Senate and

the 460 seat Sejm. After our tour, we board the high speed rail train and set off for

Gliwice. If the train accelerates at a rate of 2.50 m/s/s out of the station and it reaches its maximum velocity in 1300 meters, what is the train's maximum velocity?" While the inclusion of arguably extraneous political information seems somewhat contrived in this question, the disjuncture between global themes and core (physics) content felt less severe within the context of the larger set of problems from the travel itinerary. Moreover, these word problems reflected Aaron's emerging efforts to engage in global education with/in physics. Other "questions with kinematic equations" similarly incorporated information about UNESCO world heritage sites, educational institutions, WWII history, and film festivals in each Polish city. As his teacher educator, I was quite surprised at the interdisciplinary and cross-curricular nature of these questions, stilted as they may have been in (global) content integration.

Aaron, himself, was also surprised at his efforts to do global education, something he was sceptical about before the course:

I definitely think I'll be incorporating global themes into my classroom. Because before I thought, 'Okay, this is just a class, I'm going to stretch it, I'll find a way to make it work.' But now that I found the other way to go about it [i.e., find physics in Poland], like the difficult part of it is learning about cities in Poland. I mean, it's not necessarily difficult, but it's time consuming, to organise all that knowledge.

This excerpt highlights how PSTs like Aaron may firstly view their internationalised teacher education coursework as superfluous, but secondly, come to new understandings of how to resolve curricular conundrums of global education, even with/in physics. Finally, Aaron arrived at the following conclusions, as written in his EDS309 Final Exam:

Science, and physics in particular, can be really boring if it doesn't have any context. Theorems, equations, and laws of nature will seem dull if I can't make students

connect them to real life experiences. Rather than make up silly and arbitrary scenarios to represent things, I can do the little extra work...to sneak in and add an element of [global education] hidden curriculum to my lessons.

Although some scientists might take issue with Aaron's assertions about the 'dull' nature of science education, his reflection posits that enacting global education requires additional effort and, in many ways, it may be easier to be parochial.

Henry: 'Presenting my material in a variety of ways for all my students'

Like Aaron, Henry was a physics education PST and had not travelled internationally. He was very open about his apparent lack of 'meaningful experiences to learn about world cultures and global issues' (WDPI, 2006, p. 4), noting: 'I really haven't had any.' Henry attended a local private Catholic school from K-12 and felt he was 'so isolated, in my primary, secondary education, because we just focused on what was happening here.' At first, Henry operationalised global education through a neoliberal lens that prioritised human capital and global competition:

You hear about the United States' [education] system really falling behind, and I don't know how true that is or not, but in the scope of where we are at with other countries, I think it's interesting to look at those comparisons and see what those countries that are supposedly really doing well, are doing differently than we are.

His desire for comparison did not end with this perspective of nationalistic selfadvancement, however. He also wondered, 'or those countries that are lacking, how could we possibly help them?' Taking a more liberal egalitarian perspective, Henry questioned implicitly whether it was ethical 'isolating a really good educational system in one country, and why would you deprive other students of that? It should be accessible to all.' He also

believed students should have a broader understanding and less myopic view of the world beyond 'our little bubble here in the US.':

especially in K-12, just for students to understand there's more going on in the world than just what's going on in the United States. You know, like the news, you see how the United States kind of mingles with other countries, but you don't hear the other countries' side of things, you know, you don't really get their perspective on it, or even understand what's going on in that country.'

This perspective-taking was ideally intended to occur alongside basic understandings of 'knowing where all, like, all the countries are...'¹¹

Enacting global education was still 'super hard to think about, especially with a physics background', as Henry and Aaron shared the same curricular conundrum. His approach, however, focused more on understanding 'the new pedagogy, pedagogical techniques that other countries used' and how to 'incorporate them into the classroom...which would be a really cool thing.' Henry believed that these diverse, globally-informed pedagogical approaches would enable students to 'see, like, there's so many different ways that they could learn the same thing'. He further highlighted:

it's not even so much like you have to learn facts about the country...population, and size or anything like that. But learning how the people in that country, like,

developed throughout their lifetime, you know, seeing how they're educated. Although Henry did brainstorm some approaches for integrating globally-focused content into his physics pedagogy – as reflected in an example he provided for the Final Exam about

¹¹ In the interviews, both Aaron and Henry referenced the Country Quizzes assessment, which comprised 20% of PSTs' overall grade and consisted of several 'country quizzes grouped by world region' (Syllabus, p. 5).

'how much force an Indian cricket player's bat exerts on the ball' – it was the emphasis on diverse pedagogical approaches and ways of teaching/learning that stuck with him.

Several months later and in the following semester while completing a school-based teaching placement, Henry voluntarily followed up via email to further share his insights. He reminisced about EDS309 and how its various components helped him 'look past the exterior of these students', whom Henry perceived as being more diverse than those he had encountered previously: 'I'm on my way to being a culturally responsive teacher. I have a hard time telling myself that trying is enough because it isn't, but I hope through more experience I can be even better for all my students.' Here Henry recognised that learning to teach and understanding cultural diversity are ongoing processes, yet he still found the incorporation of global (and cultural) themes into his instruction to be elusive: 'For science, I still believe it is really difficult to explicitly bring in culturally relevant content.' Henry addressed this ongoing conundrum by taking 'a step back' and asking himself, 'Do I need to be thinking so hard about how to incorporate cultural physics problems, or do I need to teach my content in a way that will be effective for my wide variety of students?' He answered these questions by 'presenting my material in a variety of ways for all my students', again emphasising pedagogical approaches in his conceptualisation of what it means to be a globally engaged educator. 'I feel just acknowledging that my students do have different backgrounds and cultures and therefore different learning styles, I have become a more competent educator.' In short, Henry felt the 'the best way that I could see, to incorporate those global themes' was to 'just alter my teaching style on certain days to show them [students] that there's, you know, other techniques out there that other countries use.'

This conceptualisation notwithstanding, the aspect of EDS309 that was most profound for Henry had little to do with global education or CIE; rather, it was my curricular emphasis on 'teaching teaching' that caught – and perhaps kept – his attention. In our interview, I asked Henry about the aspects of EDS309 he liked most.

I really like the focus that you put on, like, the meta-pedagogical standpoint....I really appreciate when you take time to have us analyze what you just did, and how that worked, and how it didn't work and stuff like that.

For Henry (and some other PSTs in the course), these moments of pedagogical reflection seemed to be the carrot enticing investment in the course.¹² In an email after the course, Henry again noted that the 'most relevant' part of the course was the opportunity 'for us to analyze your pedagogical techniques in the classroom', which Henry felt ultimately lead to 'a great ability to self-reflect on my own teaching.' In sum, while Henry had some interest in learning about and perhaps borrowing pedagogical approaches from other countries, he believed the insights gleaned from our meta-pedagogical discussions (Thomas & Yehle, 2018) would be the most beneficial and enduring aspect of EDS309.

Lessons from Curricular Conundrums

These cases highlight a curricular conundrum perceived by two physics PSTs in teacher education in Wisconsin. The tension of subject matter integration within global education is not uncommon (Tichnor-Wagner et al., 2016), but I concur with Estellés and Fischman (2020) that 'paying attention to the difficulties teachers usually face' (p. 7) in the application of global education is vitally important to enhancing its impact. While global education is intended to be interdisciplinary and relevant across content areas (WDPI,

¹² Survey data show 94% of PSTs rated the importance of these meta-pedagogical discussions as 'extremely' or 'very important' on a six-point Likert scale. By comparison, only 69% of PSTs rated course content as highly.

2006), greater attention to the educative processes of cultivating PSTs' global knowledge and commitments and, crucially, applying and translating global education into their content areas seems warranted.

In this study, both focal participants arrived at different approaches for these acts of application and translation, though some overlap exists. Aaron generally prioritised teaching about other countries through real-life examples, and gained confidence after reframing his approach to curriculum design and lesson planning. Henry was more reticent to incorporate global knowledge and themes into his instruction, instead prioritising diverse pedagogical approaches. While Aaron's approach might enhance global content knowledge and geographical literacy, Henry's may lead to deeper understandings of the pedagogical relationships between teachers, learners, and knowledge itself. Given this paper's explicit focus on the teacher education coursework they completed, more research on their future pedagogical enactments would offer further insight. Henry's perspective also highlights the blurred boundaries and pedagogical aims of multicultural and global education (e.g., Kubow & Blosser, 2016; Merryfield, 2000; Pashby, 2013), as many of his comments and much of his work in EDS309 seemed to emphasise diversity and culture within the Wisconsin context. Moreover, his perspective also raises questions about the affordances and challenges of emphasising meta-pedagogy - or other approaches to teaching teaching - within educational foundations coursework. Does this emphasis serve as an attraction or distraction, or both? Regardless, it is evident from comparing these two cases that PSTs with relatively similar identities can resolve curricular tensions in global education in varied ways.

Meanwhile, I was left wrestling with several conundrums of my own. What should I prioritise in this global education course, and how do my choices affect the learning of my PSTs as well as their future efforts to *do* global education? In analysing the student-level

data as well as my own reflections and discussions with colleagues, several lessons emerged that may extend more broadly to the process of internationalising teacher education. First, my own curricular commitments to CIE, global education, and teaching teaching led to tensions across this tripartite conceptualisation. All three emphases were evident in the student-level data: (1) Aaron and Henry draw on CIE principles in analysing educational systems vis-à-vis instances of global competition (see Mundy et al., 2008) and the deeper value of comparing pedagogical processes (especially Henry; see Vavrus & Bartlett, 2011); (2) they implicitly reference conceptualisations of global education from WDPI (2006, 2015), such as learning and knowing about the world, and explicitly mention the course's Country Quizzes assignment; and (3) both PSTs engaged in pedagogical reflection similar to our meta-pedagogical discussions in class. On one hand, having three curricular entry points to EDS309 may have helped maintain students' interest and engagement; whereas a more narrow and prescriptive focus might have discouraged investment. On the other hand, these multiple foci may have diffused the EDS309 learning experience; whereas emphasising a smaller set of core concepts and curricular aims may have enhanced its focus as PSTs explored how to enact global education, including with/in subjects perceived as unreceptive, such as physics.

A second and related tension concerns how to assess these curricular emphases. My intent with the Country Case Study was to bring together aspects of CIE, global education, and teaching practice, as suggested in the assessment description:

This project affords us the opportunity to examine in-depth a specific country and how the educational experience for students in that country reflect both local and global influences. It also provides us the opportunity to educate our peers and, in

doing so, practice infusing our teaching with global themes and ideas towards the development of global competence.

Following self-reflection and discussion with a critical friend, I was struck by the complexity of this assessment and the range of things it sought to assess, particularly for an assignment completed in pairs by primarily second-year PSTs. Elsewhere, the Country Quiz assessment, referenced by both Aaron and Henry, entailed a low-level cognitive task – memorising most of the countries of the world – but was more firmly grounded in a global education and geographic literacy approach with the aim of ensuring students knew various countries existed (perhaps including where Angela Merkel was Chancellor). Nonetheless, the alignment of these and others assessments across the three curricular foci emerged as a tension and clearly influenced the PSTs' learning and perspectives, perhaps in unintended ways.

Third and finally, this research project brought into sharp relief the intensity of EDS309, particularly for a mandatory two-credit course. In addition to the considerable labour required to complete the assessments – including the Country Case Study, Country Quizzes, Final Exam, and periodic Checks for Understandings related to course readings – the PSTs were expected to traverse and understand a wide range of topics in their required readings (CIE as a field, international large-scale assessments, gender and development, inclusive pedagogy, social reproduction, etc.). The 'attendance, participation, and engagement' requirement/assessment further outlined my expectations for PSTs to arrive to each session with an ability to intelligently discuss the readings and topics as well as dissect my own pedagogy. It seems my loves for CIE, global education, and teaching teaching led to an abundance of knowledge, skills, and dispositions addressed in EDS309, and perhaps overly-high expectations for PST learning. Removing some content may have

allowed further space for these activities as well as recalibrated my expectations for novice PSTs learning how to teach (Zeichner, 2010), but the broader implication is that my curricular commitments – perhaps even 'loves' – seemingly led to an intense, though hopefully worthwhile, experience for my PSTs.

Conclusion

This paper highlights the numerous curricular conundrums evident in the enactment of global education for both teacher educators and PSTs. Both focal PSTs initially expressed scepticism of doing global education with/in physics, but found resolution, albeit in varied forms. I am still pondering my own conundrums, but posit that efforts to internationalise teacher education are most effective when teacher educators carefully consider their various curricular commitments and emphases. Finally, deep and concerted investigations of internationalisation efforts – especially at the institutional/classroom level – are warranted and I invite other teacher educators to engage in similar examinations of teaching global education with teachers.

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