CHAPTER 5

Global Competence Development through the Lens of Graduate Students in Action Research Courses

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Educators around the world are experiencing transformation at a rapid rate and need training and resources to better support their students "in light of global changes and movements of people" (Slapac & Coppersmith, 2019, p. xxi). With this accelerated pace and global interconnectedness, we see the importance of "global readiness" (Kerkhoff, 2017, p. 91) and global self-awareness (Slapac & Navarro, 2013) for every teacher and student. While practicing teachers may have an interest in teaching using a global lens, they may not have access to the appropriate training, the time, or the knowledge on how to proceed (Kerkhoff, 2017; Longview Foundation, 2021).

Global readiness "refers to the digital literacy and global citizenship needed in 21st-century private and public life to participate, communicate, and work anywhere with anyone in the world" (Kerkhoff, 2017, p. 6). The Globally Competent Learning Continuum is used to aid educators in assessing their global competence, including the "knowledge, skills, mindsets, and values needed to thrive in a diverse, globalized society" (Tichnor-Wagner et al., 2019, p. 3; see figure 12.1 in this book). Global competence is not a discipline in and of itself; it encompasses all disciplines and integrates topics within all subject areas. Thus, teacher educators "must consider how teacher candidates are prepared, examine curricula, and be equipped to redesign learning experiences, when possible, to more intentionally and regularly teach for global competence in teacher education" (Kopish, 2017, p. 21). Although preparing teachers for global readiness can involve many avenues (internationalizing the curriculum, crosscultural competence development, cultural proficiency, etc.), we focus on globally competent teaching and learning.

Global Competence in Schools of Education

Tichnor-Wagner et al. (2019) have grouped the components of globally competent teaching into three domains: dispositions, knowledge, and skills:

• Dispositions: empathy and valuing multiple perspectives and commitment to equity.

- Knowledge: global conditions and current events, global interconnectedness, intercultural communication, and experiential understanding of diverse cultures.
- Skills: communicating in multiple languages, classroom environments that value diversity, integrating global learning, facilitating intercultural conversations, developing "glocal" local to global partnerships, and finally, assessing global competence development. (Tichnor-Wagner et al., 2019).

In the United States, school districts, professional development providers, and colleges of education play a role in supporting K–12 teachers in developing global competence and advancing global learning (ASCD, 2021; Dimitrov & Deardorff, 2023; Tichnor-Wagner et al., 2019). While learning abroad has traditionally been one way to develop global-mindedness, preservice or in-service teachers do not always possess the required resources or time to travel. In light of this, global readiness may be developed and integrated in the teacher preparation curriculum, for both "content and pedagogical development" (Tichnor-Wagner et al., 2019, p. 230). Teacher education programs can model and infuse global understanding into a variety of courses that could impact teachers' future teaching in PreK–12 settings (Crawford et al., 2020; see chapters 12 and 15). Prospective teachers should be expected to be able to teach effectively in multicultural classrooms as well as develop dispositions of global competence in their future students (Dimitrov & Deardorff, 2023; Parmigiani et al., 2022; Romijn et al., 2021).

It is important for educators to access tools that allow intentional reflection on views, biases, and perceptions that impact their daily classroom decision-making (Tichnor-Wagner et al., 2019) and to ask, "What do we learn about teacher expertise that may inform the preparation of future and current teachers to prepare our youth for the world?" (Boix Mansilla & Chua, 2017, p. 79). We can begin to answer this question by looking at how preservice and in-service teachers can be guided to develop global competence using existing tools.

Globally Competent Learning Continuum

The Globally Competent Learning Continuum (GCLC) has been widely adopted in teacher education research and practice, as

[it] identifies the dispositions, knowledge, and skills that educators need to teach students from diverse backgrounds and prepare all students to thrive in a global society. [It] is a tool for self-reflection, used by educators wishing to reflect on their own level of global competence and to learn the characteristics included in higher levels to advance along the continuum. (ASCD, 2021)

In an effort to understand teacher candidates' global competence, Crawford et al. (2020) used the GCLC (ASCD, 2021; Tichnor-Wagner et al., 2019) as a resource for self-reflection. An exploratory qualitative case study of four English language teachers in Romania (Slapac, 2021)—to determine if English learning advances students'

global competence—also employed the GCLC to assess teachers' understanding and ability to explain how local context could affect global issues, and vice versa. Other studies (e.g., Crawford, 2021; Smith et al., 2021; Waite, 2021) used the GCLC as an instrument for preservice teachers to gauge progress toward global competence in teaching. These examples provide models for how the GCLC could be used for data collection as a self-assessment or reflection tool to be administered within teacher

education research courses.

The GCLC supports scaffolded self-reflection via five developmental levels within teacher dispositions, knowledge, and skills: Nascent, Beginning, Progressing, Proficient, and Advanced. For example, in the category of "Empathy and valuing multiple perspectives" in teacher dispositions, the continuum moves from "I have not yet explored how my personal beliefs have shaped my worldview" (Nascent) to "I challenge my personal assumptions to understand viewpoints that differ from my own. I value diverse perspectives, including those that challenge my own" (Advanced) (ASCD, 2021). Reflecting on the spectrum for each of the 12 elements of the GCLC provides a view of the full scope of possibilities for assessing one's developmental stage while becoming aware of best practices for globally competent teaching and learning. As a preassessment, the GCLC encourages reflection prior to an intervention, and as a postassessment, the tool questions or affirms the participants' growth along the continuum over time (see chapter 12).

Action Research Framework

Prior to this study, Slapac and Coppersmith participated in professional development (called the Internationalizing Teaching and Learning Inquiry Circles; see chapter 12) once per month for one academic year in the College of Education at their university. As part of the program, faculty were required to engage in an action research project. A template was provided to help guide the action research process and consisted of these sections:

- 1. Define the system or need. Describe the current process for addressing the identified area of need; how is it connected to the department/university mission and goals; what is the problem, and why are you/we selecting it? What is the current way this process is done or handled? What are the key measures for this process?
- 2. Assess the current situation. Review data to determine baseline performance in the specific area; how big of a problem is it? What data do I have in the area I'm/ we're trying to improve; what do the data tell us?
- 3. Analyze causes. Review the baseline data; what are the root causes that are producing the results I'm getting? What does the research say about how this system could be improved?
- 4. Try out Improvement Theory. What is the research-based best-practicel improvement theory? What changes are we implementing? Align these to the Association of International Educators (NAFSA) Global Lens for the Interstate Teacher Assessment and Support Consortium (InTASC) Model Teaching Standards, the

Association of American Colleges & Universities (AACU) VALUE rubric, or the Globally Competent Learning Continuum (GCLC).

- 5. **Study the results.** Assess the impact through data review; did our improvement theory work? How do these new data compare to the baseline data?
- 6. **Standardize improvements.** How can we incorporate the new way of doing things to make it part of our regular practice? How will we communicate this best practice/ improvement theory? What staff development is needed?
- 7. **Plan for continuous improvement.** How will we sustain the positive changes? What area will we work on next?

The modeling of the action research process in this professional development program supported us in infusing globally competent practices within our own courses and then fit particularly well within our own graduate teacher action research course as a model.

Theoretical Framework

Action research has traditionally encouraged participants to form a learning community, a community of practice (Wenger, 1998), where teachers rely on each other, support one other's inquiries, and learn and take action via the action research cycle together during times of challenge (Slapac & Navarro, 2011; Slapac et al., 2021). The theoretical framework for this study combines community of practice and reflective practice within education (Schön, 1983), creating reflection with inquiry and action (Dewey, 1933; Slapac et al., 2021). Working in a community of practice, educators can make or "negotiate" meaning together (Wenger, 1998, p. 72) toward (personal or professional) transformation. Transformative learning can occur when people reflect and examine prior "meaning schemes" (Mezirow, 1991, p. 167), ways of understanding the world, that may be outdated or in need of new perspectives. Action researchers must engage in professional habits of reflective practice, collaborative work, and meaning-making to create an optimal environment for positive impact within their setting and beyond.

Context and Participants

We conducted this study at a midwestern university in the United States, in a teacher education program with graduate students as participants. Data were collected from two courses that are part of the required core courses to obtain a Master of Education degree, specifically Action Research I and Action Research Capstone. The data came from six iterations of this pair of courses (12 courses in total).

Participants were primarily full-time K–12 teachers, a few were part-time (substitute) teachers, and some were not employed as teachers. See table 5.1 for participant demographics. Slapac and Coppersmith taught the courses and invited Cheng, a graduate research assistant, to collaborate on data analysis.

Table 5.1. Participant Demographics

Table 5.1. Participant	201 *	Post (N = 80) * *
Majors	Pre (N = 89) *	29%
Elementary Education	26% 22%	24%
Special Education Secondary Education	52%	48%

^{*}Identified as female: 78; identified as male: 11. **Identified as female: 71; identified as male: 9.

In Action Research I, an eight-week prerequisite course for the Capstone (also eight weeks), the students learned about the action research systematic cyclical selfinquiry process (reflect, observe, act, and evaluate) to improve their professional practice (Hendricks, 2017). The course objectives were that students would be able to:

- identify and review targeted literature on a problem of practice;
- integrate the knowledge into the analysis and interpretation of data by writing a literature review on their topic;
- articulate their understanding of the structures and goals of teacher research, drawing on qualitative or quantitative traditions;
- enhance K-12 student learning through the use of interventions that foster effective working relationships with students, school colleagues, families, or community
- advocate for student learning in ethically and socially just ways; and
- develop a research design within a feasible timeline, including developing and implementing interventions within their settings.

In addition to readings and resources related to action research and methodology, we provided materials related to global education and, in particular, to the importance of global teacher readiness and competence development. The GCLC served as a framework for students to "reflect on their own level of global competence and to learn the characteristics included in higher levels to advance along the continuum" (ASCD, 2021). Thus, another goal was for the students to assess their knowledge, skills, and dispositions of global competence at the beginning of the prerequisite course and again 16 weeks later, at the end of the Capstone course.

Following the prerequisite course, the students continued their action research study (interventions, data collection, and data analysis) in the Action Research Capstone course and presented their findings at the end of the course. External evaluators (e.g., doctoral candidates, former graduates, and other practitioners from various school districts) were invited to review the presentations and share feedback.

Methodology

We employed a mixed methods design that included qualitative and quantitative methods of data collection and analysis. The participants were found via purposive sampling (students enrolled in the two courses in the study who volunteered to participate by having their course artifacts analyzed). The research questions (RQ) were:

- 1. What are the graduate teacher action researchers' perceptions of their own global competence? (RQ1)
- 2. What are the graduate teacher action researchers' perceptions of global competence in relation to the teacher action research process? (RQ2)
- 3. Which elements of teacher dispositions, knowledge, and skills on the GCLC are highest (and lowest) among participants? (RQ3)
- 4. Which elements of teacher dispositions, knowledge, and skills on the GCLC show change from pre-self-assessment to post-self-assessment? (For those who completed the GCLC reflection pre and post.) (RQ4)
- 5. What strategies are the graduate students planning to use and engage in from the GCLC? (RQ5)

DATA COLLECTION

Data were collected from twelve, 8-week online graduate courses (six Action Research I courses and six Action Research Capstone courses). We gathered two sets of data from each 8-week course, reflections and self-assessments (table 5.2).

Reflections

The qualitative data consisted of written reflections that students posted to an online discussion forum in response to these prompts:

- **Reflection 1** Are you a globally competent teacher? How do you know? How can you be/become more aware of your biases? Why is this issue critical in how you formulate and frame an Action Research question?
- **Reflection 2** Why would being a globally competent teacher be significant as an action researcher? What strategies have you used in your study and beyond this semester to advance on the Globally Competent Learning Continuum? Be specific.

Think of your growth since the beginning of your Action Research 1 course. What plans do you have to enrich your knowledge, skills, and dispositions in working with students from culturally and linguistically diverse backgrounds and continue to grow as a globally competent teacher/educator?

Self-Assessment Using the GCLC

At the beginning of the Action Research I course and at the end of the Capstone course, participants selected a level from Nascent to Advanced (five levels) for each of the 12 elements in the GCLC. Each of these was assigned a value (i.e., Nascent = 1 and Advanced = 5).

Table 5.2.	Data	Sources
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Table 5.2. Data s	Research Questions		
Course	Data Gathered	RQ1, RQ2, RQ3	
Action Research I	Reflection 1 Preintervention self-assessment using GCLC	RQ1, RQ4, RQ5	
Action Research Capstone	Reflection 2 Postintervention self-assessment using GCLC	17 1, 1764, 1760	

GCLC, Globally Competent Learning Continuum.

Findings and Discussion

We examined the two data sets collected from each course by comparing, contrasting, and analyzing via triangulation of quantitative and qualitative data to answer the research questions related to participants' perceptions of their overall global competence, their competence as related to each element of GCLC, and their perceptions of global competence as teacher action researchers. The quantitative data from pre- and post-GCLC were analyzed using descriptive and inferential statistics.

QUALITATIVE DATA ANALYSIS

We used deductive coding and an a priori approach to analyze the qualitative data (reflections), where the list of codes came directly from the key questions asked of the participants (Miles et al., 2020). This was followed by focused coding to refine our themes (Saldaña, 2021), which resulted in the following:

- · Participants' perspectives on their own global competence
- Relationship of global competence in formulating and framing action research
- Ways to continue to grow as a globally competent teacher.

We elaborate on each of these themes in the following sections.

Participants' Perspectives on Their Own Global Competence

Participants responded to the reflection prompts on the discussion boards by giving thought to their current teaching practices balanced against what they were learning from the action research process and the GCLC. Responses revealed reflections on the impacts of their self-appraised global competence on their learners. Their perspectives were chosen from Nascent (not yet considering), Beginning (recognizing), Progressing (understanding), Proficient, and Advanced (critically analyzing). See table 5.3 for examples of participant perspectives on their own global competence.

Table 5.3. Globally Competent Learning Continuum: Examples of Participant Perspectives

GCLC Element	Participants' Perspectives on Their Own Global Competence
Empathy and valuing multiple perspectives	(Proficient) I think it would be difficult not to include your personal beliefs into your teaching. Those beliefs are essentially what make you who you are. I could improve by challenging my personal assumptions and viewpoints and exploring the viewpoints of others that differ from my own. (Elementary Special Education teacher)
Commitment to promoting equity worldwide	(Progressing) We try to provide equitable outcomes regardless of the demographic base of our students, but my student base is Han Chinese, which leads me to believe that when I teach to a more diverse American classroom, I will need to adjust my style of teaching in order to help students succeed on standardized tests. (Elementary TESOL Teacher)
Understanding of global conditions and current events	(Progressing) Although I am educated in this area, the group of students I currently have are struggling to learn basic phonic skills and, to introduce such a higher level of learning to them would be very difficult for them to grasp. I could improve by implementing a national news broadcast and having group discussions about the material. (Elementary Education Teacher)
Understanding of the ways that the world is interconnected	(Progressing) In my current curriculum, I incorporate very basic lessons on different environments around the world. We read books and complete activities about regions in the world. I could improve in this area by incorporating a higher level of knowledge through technology-based activities and interesting research projects. (Elementary Education Teacher)
Experiential understanding of multiple cultures	(Beginning) To reach a higher level in this element, I could incorporate a Culture/Author Study into my curriculum. I think the students might enjoy the exposure. (Secondary Education Teacher)
Understanding of intercultural communication	(Beginning) International Children's Library would be a great resource to explore. It may be too complicated for my students, but it is definitely something I am interested in looking into. (Elementary Education Teacher)
Communicate in multiple languages	(Nascent) Although I took several years of Spanish, I am not fluent, nor do I remember enough to confidently teach a group of students. However, I have a colleague who her and her son are currently learning another language from Duolingo. Incorporating this on a very small scale may be fun for my students. I do have concerns introducing a second language since most of my students are still learning the alphabet and basic phonic skills. It is definitely something I will have to do more research on. (Elementary Education Teacher)

(continued)

Table 5.3.	(continued)
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GCLC Element	Participants' Perspectives on Their Own Global Competence
Create a classroom environment that values diversity and global engagement Integrate learning experiences for students that promote content-aligned explorations of	(Beginning) During Christmas, and throughout the year, we learn about different cultures, their traditions and how they are alike and different from our country and where we live. A resource and different from our country and where we live. A resource I could incorporate into my lesson plans within these units I would be Better World Ed to implement more videos and would be Better World Ed to implement areas and social stories connecting global topics with content areas and social emotional skills. (Elementary Education Teacher) (Nascent) In researching the resources within this element, I am definitely going to look into the Reach the World program. I could incorporate this into a social studies lesson, and as a class we could make a travel brochure to go along with the places they are being introduced to. (Elementary Education Teacher)
the world	(Nascent) I believe at times my reluctance to offend, or
Facilitate intercultural and international conversations that promote active listening, critical thinking, and perspective recognition	with students is a barrier, I must address internally to more effectively integrate cultural and global conversations and communications. This is where my personal history comes into play, having spent my whole life seeing that race/culture was not a conversation to have, not to notice, to now initiate these conversations as a norm in my classroom is a struggle. (Flementary Education Teacher).
Develop local, national, or international partnerships that provide real-world contexts for global learning opportunities	(Nascent) If I taught in a general education classroom, I would definitely incorporate a STEAM project from the resources from the Level Up Village. That seems as something the students would truly engage in. (Special Education Teacher)
Develop and use appropriate methods of inquiry to assess students' global competence development	(Nascent) I am an elementary special education teacher, and my curriculum is based on their personal IEP goals. Although I understand the importance of global competence, I have not had much, if any experience in assessing their global competence development. (Special Education Teacher)

GCLC, Globally Competent Learning Continuum.

In Action Research I, the participants interacted with readings, completed assignments, and engaged in discussions while simultaneously crafting and executing the action research cycle within their own K–12 teaching environments. The reflections and online discussions with colleagues regarding the GCLC facilitated critical examination of their own meaning schemes (Mezirow, 1991) and the creation of new meaning schemes related to their perceptions and resulting impacts on current and future classroom teaching. Example evidence from reflections revealed teachers' perspectives on their own global competence:

(Nascent) My classroom environment/type does pose many "road blocks" for this as I only have thirty minutes for each group and am required to work on very specific IEP goals. This will certainly present challenges for me to create such a diverse and engaging environment. I believe I will need to do so by finding ways to address these concepts as well as the students' IEP goals. (Special Education Teacher)

(Proficient) I work with a very diverse group of students who come from low-income families. I provide snacks for my kiddos on a daily basis. Sadly, for many students, school is where they receive the majority of their meals. I also send home resources and activities to help families aid in their child's education at home. To improve in this area and reach the advanced level, I could lead a program that would assist in this area at my school. (Elementary Education Teacher)

A teacher of English, who was at the time teaching in China, related to these ideas, which represent a reflection on the needs of diverse learners and questions and doubts about their own global competence:

(Progressing) Prior to [reflecting on the GCLC], I had the thought . . . that I am going to be rather higher in all of the areas. However, I [wondered] what type of impact my lack of integrating this within my classroom has on both the behaviors and the academic success of my students. Many of my students come from different backgrounds, not only from each other, but from myself as well. Has my lack of creating a classroom environment that values diversity and global engagement impacted them in a negative way? Would my students become more engaged if they felt more diversity engagement during their time with me?

Evidence from this process of reflection revealed that participants examined and questioned their existing meaning schemes (Mezirow, 1991) for their own global competence, particularly in relation to the impacts on their own students. Participants showed evidence of transformation (Mezirow, 1991), leading toward personal and professional global readiness. For example, an elementary educator began to critically examine her own perspective in several ways:

(Proficient) There are various ways my bias could affect the students in my classroom, from the books we read to my expectations of them and from the class discussions we have. This was a great way to reflect on this and apply it within my teaching daily.

This evidence portrays some of the thinking and inquiry processes regarding participants' own educational practices. Other themes developed through analysis included confidence over time, looking back at prior teaching, regrets, skills lacking and needed, plans for the future, and incorporating specific curricular themes in their current and future action research.

Relationship of Global Competence in Formulating and Framing Action Research

We situated reflection prompts for the students within the GCLC framework. When they pondered their own global competence in relation to their action research projects, their metacognition revealed thoughtfulness about aligning the competencies with their action research studies:

I have immersed myself in the literature surrounding my project. I found many resources that directly affect the demographics of my students (ex. urban, low-income, African-American), and it has shown me the importance of changing my pedagogy and practice. For example, I am committed to making a switch from reactive responses to a proactive approach in how manage the behaviors in my classroom. (Elementary Education Teacher)

To put it another way, perhaps the GCLC, along with the reflections, helped participants associate their action research plans with global competence within their own learning trajectories as action researchers, as shown in these excerpts from discussion/reflection prompts:

It is important to frame an action research question that is unbiased and transferable to students of all cultures. I believe education should incorporate a wider variety of cultures into the curriculum and environment of the school. One of the reasons I believe this is because, through the advances in technology, we are able to communicate easily with people of varying cultures. (Secondary Education Teacher)

One participant explained their thinking regarding how culturally responsive pedagogy relates to culturally inclusive interventions within their study of classroom belongingness:

As I begin formulating my action research plan, which will focus on belongingness in the school and how belongingness impacts my students' sense of being accepted, appreciated, validated, and treated fairly, . . . I have to consider how the lack of clear socially and culturally responsive teaching could be impacting some of my students' lack of belonging. I must use this information to not only evaluate the data I have gathered in terms of individual belonging scores, [but, for] example, did race or cultural differences impact a student's assessment of belonging? I must guide my planned interventions to not only address social/emotional aspects but possibly global/cultural and inclusive interventions. (Elementary Education Teacher)

Most students pointed out the importance of collaboration, something that was emphasized throughout the action research courses, and valued by all our graduate students. For example, this teacher reflects on the power of collaboration:

My classmates were a tremendous help giving feedback and relating to my study. I was also fortunate to have a peer in the classroom with me on most days. Being able to lean on her for ideas and advice was invaluable. (Special Education Teacher)

Other students discussed the relevance of being open-minded and inclusive as a meaningful asset as a researcher, who beyond the classroom environment, connects with other teachers/peers in the course, in schools, or in the community. For example, a teacher in secondary education discussed the connection between being an action researcher and accepting multiple perspectives:

Being a globally competent teacher is important as it opens our understanding and respect of others' opinions and perspectives. . . . It also challenges us to get out of our own comfort zone and work with a diverse group of people we may normally not work with. As a researcher, we pose questions and provide feedback to our peers that will further support their own research, regardless of our own personal beliefs.

Students reflected on their practices, changes, challenges, and ways they overcame them within their environments. Reflexivity was perceived as a necessary step toward global competence development, in addition to being part of the cycle of action research inquiry:

Being a globally competent teacher is significant as an action researcher because both require one to be reflective . . . both [are] symptoms of being curious and respectful of the world and understanding one's place at intersections of culture, race, and identity. It is often necessary to challenge one's own thinking and perception of self, as well as the systems that created that perception. (Secondary Education Teacher)

Some students argued that a good researcher needs to have the skills of a globally competent teacher, embrace other cultures, and value multiple perspectives, while being able to assess their students' global competencies and their own:

Being globally competent is important in the context of action research because in research, especially using qualitative methods, . . . the researcher needs to be aware of their place in the world and how it affects their perspective. The more the researcher has learned and is seeking to learn about other perspectives, the better the quality of their work. (Secondary Education Teacher)

As an action researcher develops their study, they need to think critically about what they want to explore from a global perspective. This ensures that educators are learning and teaching from multiple perspectives, creating a

curriculum with a global perspective, and have an understanding of their students' global competencies. Through action research, we can assess our curriculum and students' understanding of global competency. (Elementary Education Teacher)

Overall, teachers (students in this course) as researchers were able to make several connections between what it meant to conduct quality action research and being a globally competent teacher. Global competence became a necessary characteristic for them as researchers vis-à-vis the insider/outsider stance (Cochran-Smith & Lytle, 1993; Herr & Anderson, 2005) regarding researcher positionality.

Continuing to Grow as a Globally Competent Teacher

The students were prompted to think about the skills that they will continue to implement or seek to acquire on their path of growing as globally competent teachers. The strategies that were mentioned most often were related to creating a classroom environment that values diversity, empathy, and multiple viewpoints, with efforts to understand different cultures in their classrooms and to facilitate intercultural dialogues. The following examples highlight the students' thinking with regard to dispositions, skills, and knowledge related to global competence, in particular to openness to multiple viewpoints, collaboration, belonging and inclusion, multilingualism, and student-centered practices:

I want to challenge my personal assumptions to understand different view-points. To continue to grow as a competent teacher I want to recognize how different personal beliefs and experiences shape everyone's view of the world. (Elementary Education Teacher; Dispositions)

To enrich my knowledge, I will be sure to reach out to the families of my students in order to get to know them better, and I will promote classroom discussion in order to better understand our diverse backgrounds. (Secondary Education Teacher; Skills and Knowledge)

In my own future classroom with ELs (English Learners), I want to create an environment that welcomes all cultures. If I have a diverse class of learners from different countries and who speak another language, that is a learning experience in which they can teach their peers of their culture and language. I believe in teaching our next generation of the importance of valuing one another and have the confidence to share with their peers. (Secondary Education Teacher; Skills)

I need to learn more languages. I speak French and have never used it outside of France and university. It would make much more sense to acquire skills in the languages represented in my community. . . . on the continuum survey, I have been consistently "nascent" in providing cross cultural opportunities for my students. I would like to turn my focus toward community engagement. Finally, immersing myself in cultures represented at my

school would be more valuable I believe than filling my library with diverse authors. (Secondary Education Teacher; Skills and Knowledge)

I am not teaching yet, but I am very drawn to student-centered practices. I think students learn best when they are able to have agency and choice. As a teacher, I want to guide and support them in their learning and engage them. To do any of that well, I need to understand the students' current perspectives and be able to make the lessons relevant and accessible to them. Whether my students are diverse or not, it is important to me that they are given experiences that show them the diversity in science. (Secondary Education Teacher; Dispositions, Skills, and Knowledge)

I think being an ELL teacher gives me a better insight into working with students from different cultural and linguistically diverse backgrounds. [Coming] from a culturally and linguistically diverse background influences my teaching. I believe I know my students, but I could get more insight into their culture by having more conversations with my students and facilitating deeper intercultural conversations instead of just focusing on enhancing their academic skills. (Secondary Education Teacher, TESOL; Dispositions, Skills, and Knowledge).

Although most teachers (students in this course) focused on implementing their skills within their classrooms, some mentioned seeking to learn another language, planning to travel internationally, and continuing to engage in global learning and intercultural or international experiences.

After acquiring another language in two [to] three years I plan to teach internationally. I have made connections with other TESOL certified instructors who will help me with finding a good program/or who have connections with international teaching programs. I would like to immerse myself in a few cultures to get more knowledge and skills. I would then like to bring those skills back to the youth I work with. (Secondary Education Teacher; Knowledge and Skills)

Overall, based on the final discussions in the Action Research Capstone course, all participants stated that they had plans to either continue their strategies within the GCLC in their local practices or to engage in new ones that were deemed at the Nascent stage (such as learning and communicating in another language, or creating national and international partnerships).

QUANTITATIVE DATA ANALYSIS

The GCLC data captured participants' self-assessment on each element of the continuum. Participants selected a level from each category from Nascent to Advanced (five levels). Each of these was assigned a value (i.e., Nascent = 1 and Advanced = 5). In table 5.4, we present the means and standard deviations (SD) for the pre-experience self-assessment using the GCLC.

Table 5.4. Globally Competent Learning Continuum Self-Assessment Values at Time 1 (N = 89)

Time 1 (N = 89)	Mean	SD
Element	4.03	.689
Empathy and valuing multiple perspectives	3.42	.854
Commitment to promoting equity Worldwide	3.17	.944
Us devotes ding of global conditions and Culter level is	3.23	.798
Understanding of the ways that the world is interest in a	3.31	.806
Experiential understanding of multiple cultures	3.19	1.086
Understanding of intercultural communication	2.35	1.226
Communicate in multiple languages Create a classroom environment that values diversity and global	3.06	1.142
engagement Integrate learning experiences for students that promote	2.53	1.169
content-aligned explorations of the world Facilitate intercultural and international conversations that promote active listening, critical thinking, and perspective	2.02	1.118
recognition	1.60	.977
Develop local, national, or international partnerships that provide real-world contexts for global learning		
opportunities Develop and use appropriate methods of inquiry to assess students' global competence development	1.75	1.048

SD, standard deviation.

Self-Assessment Results at Time 1

The self-assessment at the beginning of the first course (Time 1) (N = 89) showed that the two strongest elements per the means were "Empathy and valuing multiple perspectives" and "Commitment to promoting equity worldwide" (See table 5.4), and the weakest two elements were "Develop local, national, or international partnerships that provide real-world contexts for global learning opportunities" and "Develop and use appropriate methods of inquiry to assess students' global competence development."

The element with the highest percentage of participants who chose the "Advanced" (25.8%) or "Proficient" (51.7%) category prior to the intervention was "Empathy and valuing multiple perspectives." The elements for which the most participants, by percentage, scored themselves the lowest (Nascent) on the pre-self-assessment were "Develop local, national, or international partnerships that provide real-world contexts for global learning opportunities" (64.8%) and "Develop and use appropriate methods of inquiry to assess students' global competence development" (58.4%). A telling, but not surprising, result for "Communicate in multiple languages" was that more than two-thirds of the participants (70.8%) rated themselves at the "Nascent" or "Beginning" level, confirming the situation in the United States where most teachers are monolingual, particularly in the Midwest, where this study was undertaken.

Self-Assessment Results at Time 2

Of the 89 participants who completed the GCLC self-assessment at Time 1, we captured postintervention self-assessment results from 80 of those participants at Time 2 (table 5.5). The fact that the postexperience data includes nine fewer responses makes it difficult to draw concrete conclusions. However, despite having fewer postexperience responses, several elements showed that the participants perceived at least some growth in that area. When interpreting the raw data in table 5.5, for each element, the darker the cells in the post row in the "Proficient" and "Advanced" categories (right side of the table) when compared to the pre cells for the same element in these two categories, the greater the likelihood of (self-assessed) improvement for that element. With this in mind then, we see that *every element* except "Communicate in multiple languages" showed growth from Time 1 to Time 2 (despite having nine fewer responses at Time 2).

Table 5.5. Values for Each Element of the Globally Competent Learning Continuum at Time 1 and Time 2

Element		n	Nascent	Beginning	Progressing	Proficient	Advanced
			Disposi	tions			
1: Empathy and valuing	TI	89	0	0	20	46	23
multiple perspectives	T2	80	0	0	5	42	33
2: Commitment to promoting	T1	88	0	9	45	22	12
equity worldwide	T2	80	0	2	26	37	15
			Knowle	dge			
3: Understanding of global conditions and current events	71	89	0	25	32	24	8
	T2	80	0	6	30	36	8
4: Understanding of the ways in which the world is interconnected	TI	88	0	14	46	22	6
	T2	79	0	3	33	30	13
5: Experiential understanding of multiple cultures	T1	89	0	11	47	23	8
	T2	79	0	3	35	28	13

(continued)

^{1.} Conversely, for each element in table 5.5, the *lighter* the cells in the post row in the Nascent and Beginning categories when compared to the pre cells for the same element in these two categories, the greater the likelihood of (self-assessed) improvement for that element.

Table 5.5. (continued)				n- ginning	Progressing	Proficient	Adva
Element		n	Nascent	Beginning			Advance
(. Un developeding	TI	89	0	33	18	26	12
6: Understanding of intercultural communication	T2	79	0	6	26	29	18
Contract of the Children			Skil	s			
A STATE OF S			20	43	12	3	11
7: Communicate in multiple	TI	89	20				
languages	T2	80	19	35	12	5	9
	T1	89	9	18	31	21	10
8: Create a classroom environment that values	-			WALLEY			
diversity and global engagement	T2	80	1	7	14	41	17
				01	27	15	4
9: Integrate learning experiences for students	71	89	22	21			
that promote content-						21	•
aligned explorations of the world	T2	78	6	7	35	21	9
						10	0
 Facilitate intercultural and international 	T1	89	38	25	14	10	2
conversations that promote active listening,							
critical thinking, and perspective recognition	T2	77	21	7	25	19	5
perspective recognition							
al .	77	00	E7	16	10	3	2
 Develop local, national, or international partnerships 	TI	88	57	10	10	J	
that provide real world contexts for global learning opportunities							
	T2	80	26	15	24	13	2
10. Payelon and use		0.5		0 10			0
12: Develop and use appropriate methods of inquiry to assess students' global competence	T1	89	52	17	10	10	U
	T2	0.5		11712494			2
development		80	16	20	23	18	3

DISCUSSION OF RESULTS

We compared qualitative data with the quantitative data to gather an understanding of participants' self-reports on their global competence at the beginning and at the end of their action research coursework and practice. We found that participant reflections frequently aligned with the quantitative data. For example, one participant noted: "I do have concerns introducing a second language since most of my students are still learning the alphabet and basic phonic skills. It is definitely something I will have to do more research on," which relates to the element on communicating in multiple languages where participants scored themselves at the lowest level. However, the response also indicates an awareness and interest in learning more about how to improve in this area. Another example is participants describing strategies and knowledge developed within classroom or school settings but not beyond (e.g., global interactions, international partnerships, etc.). This aligns with the quantitative data showing that participants scored themselves in the Nascent category for "Develop local, national, or international partnerships."

As described previously, participants believed that their global competence improved on 11 out of the 12 elements. This indicates that they were more cognizant of the elements of global competence and what these entail in each step along the development continuum from Nascent to Advanced. These results suggest that while taking part in the action research courses and while practicing action research, students' awareness and perceptions of their levels of global competence showed movement in a positive direction, impacting their current and future teaching. It is also worth noting that the students appreciated the readings and the opportunity to reflect on their own global competence, which may also have had an impact on their growth from Time 1 to Time 2.

While recognizing their own competence on many levels, the students also recognized empathy as being a disposition they currently practice, a common skill and value for educators in general. The majority had had few opportunities for international exchanges or interactions, and some worked as part-time/substitute teachers or volunteers with even fewer opportunities for global interactions. However, some students acknowledged the possibilities and relevance of social interactions within local settings, such as this English Language Arts teacher:

There is a misconception that cultural/global competence is based on international encounters solely, as if the social interaction has to take place in another country outside of your own. However, these experiences can take place right in our schools and classroom with the correct tools, knowledge, support, and motivation. As our world becomes more globalized, it continues to create environments, such as schools, that consist of a diverse group of individuals, who have to learn how to "exist and operate" in the same environment. (Secondary Education Teacher)

The reflections from the participants highlight the importance of being intentional about building global competence within teacher education. From the pre and post results to the teachers' self-evaluation on each element, we can surmise that when working in a community of practice in the framework of action research best practices, transformative learning toward global competence can occur. The GCLC served as a tool for launching transformation, as participants reflected on prior meaning schemes

and what their results meant for their own teaching and for their students now and into the future. Figure 5.1 illustrates the process.

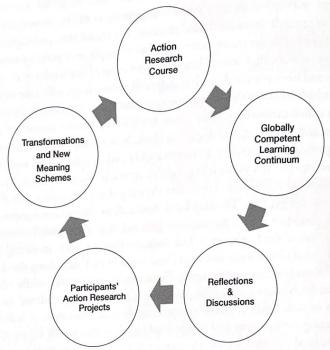


Figure 5.1 Transformative Learning via Action Research

Limitations

One of the limitations of this study was the short time frame (16 weeks total for the two courses), which likely was not enough time to solidify some of the GCLC elements of globally competent teachers. However, it was clear that the students gained awareness regarding global competence and were challenged to think more deeply and pay more attention to ways in which they might create a global mindset for themselves and their own students as a result of these courses. Another limitation was the fact that not all students submitted the post-self-assessment (however, all participants did submit their reflections and discussions in both courses).

Students' experiences, biases, knowledge, skills, and dispositions could have affected their responses. Additionally, although we provided resources and readings, some students may not have engaged with them. For example, one participant revealed a careful examination of their prior meaning perspective, which came to light during the action research process: "Depending on the subject matter I tend to be anti-confrontational and stay away from potentially heated debates." This perspective revealed what may be common for teachers as they navigate challenging teaching and learning situations and their resulting stances on addressing or not addressing issues that they may view as "heated." Therefore, despite the readings, discussions, and the

use of the GCLC, students' own background, personal and professional experiences, personalities, values, and other factors (such as, self-reported data, possibly "aiming to please" the instructors) could have affected their responses.

Conclusion

This study illustrates the possibilities for including a global competence lens within teacher education programs and implementing the GCLC as a tool for facilitating transformative learning. The results of our study showed that teacher action researchers were reflecting on changes they wanted to make for personal and professional growth. The introspection into their own global competence also revealed their own misperceptions, as some thought, for example, that they were at the Proficient, or Progressing levels or some even at Advanced levels on the GCLC, only to realize that they were actually at the Nascent or Beginning levels. This self-discovery—as a result of the readings, resources, and peer-to-peer and instructor interactions (online text-based discussions)—helped them pay more attention to the ways in which they could continue to develop their own and their students' skills, dispositions, and knowledge and further connect locally and globally with others.

Including a focus on global competence within an action research framework allows practicing teachers to plan, reflect, discuss, and execute transformative practices directly within their professional settings. Teacher educators should include readings and resources on global education and provide opportunities for (self) reflection, international collaborations, and intercultural dialogues. Teacher education programs should be intentional in regard to providing supports for developing knowledge, skills, and dispositions on global competence for K–12 teachers, and such endeavors should begin at the certification level (undergraduate) and continue with more in-depth active listening, critical thinking, and perspective recognition (Tichnor-Wagner et al., 2019) at the graduate levels.

The courses in this study are usually among the last courses required in this degree program. While the opportunity for reflection was received well by the students, we believe that it would be beneficial to engage in such opportunities for self-reflections and global learning much earlier in the program. The results of this study provided insights, not only into our students' knowledge, skills, and dispositions regarding global competence but also into their needs and challenges in this area. We also have a better understanding of the ways in which we, as teacher educators, need to continue to refine our action research courses, be action researchers ourselves, and commit to preparing our students for global citizenship.

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