

Assessing Program Quality with Noyce Scholars

Anderson Norton

Catherine Ulrich

Virginia Tech



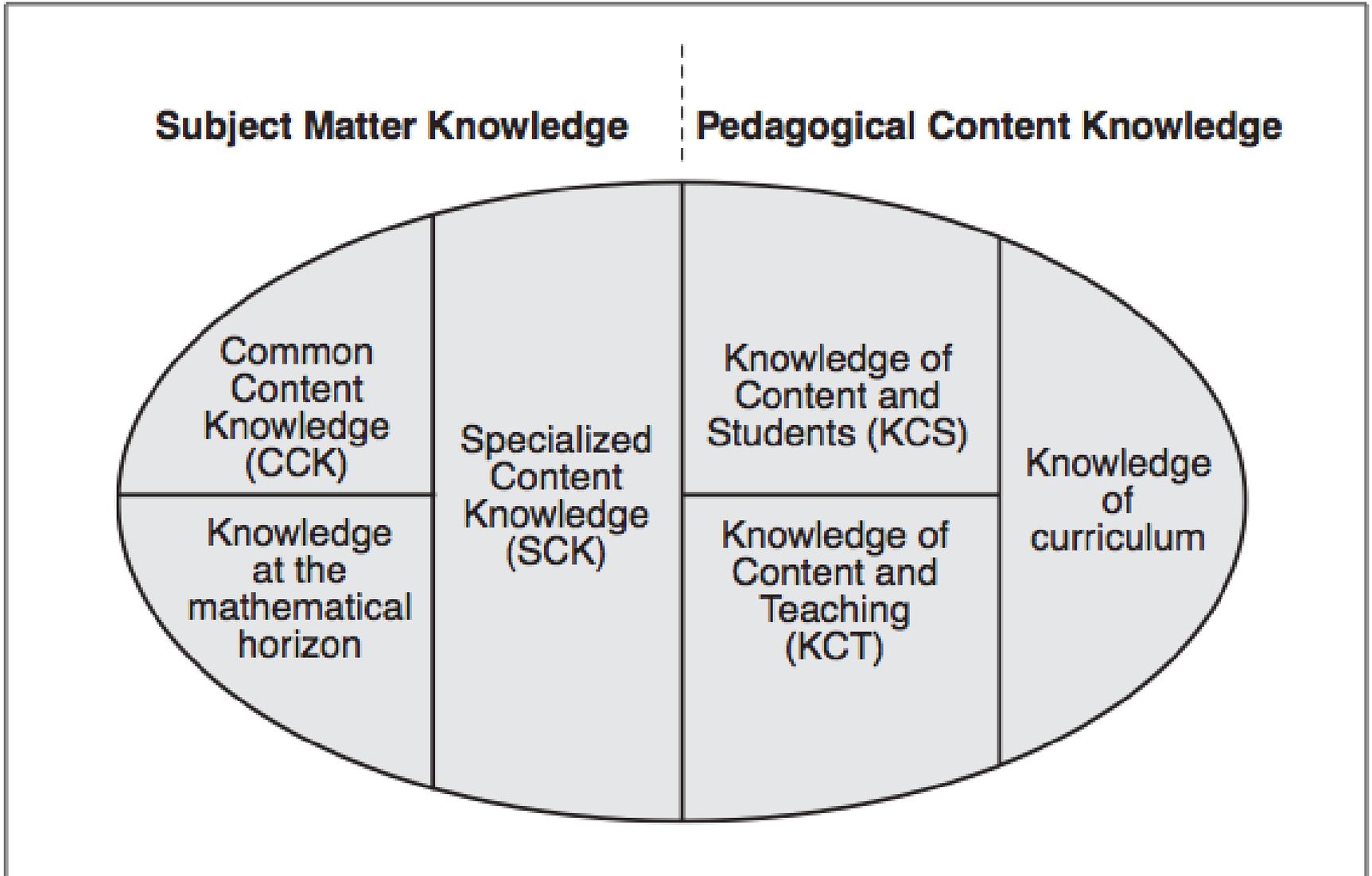
Virginia Teach: Phase I

- Five-year program, beginning with a BS in Mathematics and culminating in an MAEd
- 30 scholarships awarded across five cohorts (28 continue to teach mathematics in high needs schools)
- Scholarships awarded for senior year and fifth year (MAEd)
- Community support includes travel to the annual VCTM conference, an annual colloquium, campus meetings, and online social networking

The *Virginia Teach* Community



The Egg



Data from Scholars

	Alexis	Brando n	Belle	Beth	Charles
Scholar pre-observation interview	2S, 3F	2F	1S	1S, 2F	1F, 2F
Classroom Observation	2S, 3F	2F, 2S	1S, 2F	1S	1F, 2S, 2F
Scholar post-observation interview	2S, 3F	2F	1S, 2F	1S	1F, 2F
Other correspondence			1F	2F	
Peer interview	2S, 3F	2F	1S, 2F	1S	1F, 2F

Alexis

- “She does have a very deep knowledge of geometry. She provides the students with hands-on real-life concepts too. She was working on circles and so she had them use paper plates and they drew cords and all that stuff and it went well.”
- “full of energy”
- “going to be one of the best ever”
- But this assistant principle expressed concern that Alexis might be too confident in her approach and therefore less open to suggestions from peers, even challenging authority.

What do we learn from Alexis?

- Do you have scholars like Alexis?
- What do scholars like Alexis teach us about teacher quality?
- What do they teach us about program impacts?
- What are the implications for program design and Noyce project plans?

Brandon

- “They have the ability to break it down from the advanced abstract to pieces so the children can understand it, and they will adjust it to whatever level the child is at... They show them different ways, or if this works, great, but if it doesn’t, then they show them another way. So they are already doing a lot of things I would normally do [as a special education co-teacher].”

What do we learn from Brandon?

Belle

- “There are a lot of people who have an understanding of math. It’s not as easy to be able to teach that. And she does seem to have the ability not only to present lessons but to modify in a way so that if somebody’s not getting it, that they will pick it up. We’ve been very impressed.”

--Belle’s instructional coach

Beth

- A visit from the President of the Black Farmer's Association of America: "Two of her students showed him hands-on engagement and hands-on technology that they would use in the classroom... He was amazed to see how the mathematics had come to life with the technology." --Beth's principal
- "I know the kids. I have more understanding of what they understand and what they don't understand and what they might need more work on."

Charles

- “What I’m trying to get them to understand is, how to do it isn’t the procedure; how to do it is understanding the concept.”
- Charles principal: “All seems fine as Chris starts the class until he hits one bump in the road, and then he loses his focus and things go astray for the rest of the class period.”

What do we learn from Charles?

Questions

- 1) How can we assess teacher quality among our Noyce teachers?
- 2) How can we assess the impacts of our teacher preparation programs on teacher quality?
- 3) How can we use these assessments to further improve our teacher preparation programs?
- 4) How might Noyce Phase I personnel design Phase II proposals to address these issues?

Virginia Teach: Phase II

- Continue building and supporting the Noyce community
- Partnering with community colleges to build closer relationships with high-need school districts (urban and rural)
- Formalizing partnership with Roanoke City School (urban school district)
- Implementing English Language Learners project
- Building professional relationships

Abstract

- We collected data from 15 first, second, and third year Noyce teachers who had completed Virginia Tech's five-year mathematics education program. This paper reports on indicators of teacher quality and program impacts resulting from classroom observations and interviews with the teachers and their peers. Findings suggest the critical role mathematical knowledge for teaching plays across several aspects of successful instruction, but only if teachers can leverage that knowledge to generate flexible instruction that responds to students' mathematical thinking. Findings also illuminate the pressures and obstacles that high quality teachers face in their first few years of professional practice.
- Our presentation will share five case studies of Noyce teachers to illustrate teacher quality and program impacts. We will share implications of the study for improving our teacher education program and our Phase II Noyce project. Then, we will invite discussion among workshop participants on each of the following:
 - 1) How can we assess teacher quality among our Noyce teachers?
 - 2) How can we assess the impacts of our teacher preparation programs on teacher quality?
 - 3) How can we use these assessments to further improve our teacher preparation programs?
 - 4) How might Noyce Phase I personnel design Phase II proposals to address these issues?