

Knowledge Generation for the Teaching Profession: An Introduction to Practitioner Inquiry



Transforming Mathematics & Science Education

Through this Knowles Academy course, teachers will learn how to use a systematic process of inquiry to better understand and ultimately improve their teaching practice.

This sustained professional development course is designed for teachers who are seeking support in their use of inquiry as a means to better understand teaching and learning in their classrooms. Initiated by a two-day, in-person workshop—and supplemented with ongoing coaching sessions and follow up workshops—this course will help teachers develop the key skills and dispositions for teacher inquiry. Additionally, this course will help teachers learn to drive their own professional learning, support colleagues to do the same, and ultimately find ways to improve their teaching practice through systematic inquiry.

Course Objectives:

- Identify and explore a particular problem of practice in their own teaching by planning for, engaging in, and reflecting on a teacher inquiry process
- Examine a wide variety of data available from classroom teaching and explore several tools they can use to generate data from their own teaching practice
- Use a variety of protocols to collaboratively analyze data from their teaching practice with partners
- Develop skills for acting as critical friends to others while exploring questions within their teaching practice
- Make their learning public to others and determine action steps for improving their practice



“Our inquiry work was expertly structured such that I walked away with a clear vision of my next steps, renewed enthusiasm for my inquiry work, and supports in place to maintain accountability.”

Adrian Cheng
Chemistry and Physics Teacher,
Bellarmine College Preparatory,
San Jose, CA



For Teachers, By Teachers

The Knowles Academy offers professional development services that are designed and facilitated by experienced teachers.

- 01 Teachers supporting teachers:** Teachers learn best from other teachers. All professional development that we provide includes experienced teachers as instructors and coaches.
- 02 Professional community development:** Teaching can be isolating. All of our professional development services are designed to build teacher community so that participants can continue to support each other's learning and professional growth long after the professional development experience ends.
- 03 Long-term support for sustainable change:** Effective teacher professional development must be sustained and tied to classroom practice. All Knowles Academy programs include long term support from coaches, opportunities for teachers to ground their learning in current practice, and engage with other Knowles Academy participants over an extended period.
- 04 Professional expertise and leadership:** Designing and implementing effective professional development requires a diverse range of expertise and experience. All of our professional development services draw and build on the expertise developed within the Knowles community over the last 15 years.

The Knowles Teacher Initiative supports the efforts of high school mathematics and science teachers to improve education in their classrooms and beyond. We are committed to supporting a national network of mathematics and science teachers in developing as leaders and collaborators, facilitating exploration and innovation and ultimately improving mathematics and science education in the U.S. Visit www.knowlesteachers.org to learn more.

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Agenda:

Teachers will receive ongoing coaching that is initiated by a two-day, in-person, workshop and followed up by two in-person workshops (one day each).

Day 1: Introduction to Teacher Inquiry

- Understand inquiry practices and habits of mind
- Explore examples of teacher inquiry
- Engage with critical friends

Day 2: Using Teacher Inquiry to Understand my Practice

- Unpack problems of practice to raise inquiry questions
- Uncover new ways of understanding and using classroom data
- Plan for your own classroom data collection

Between Workshops:

- Generate data for inquiry from your classroom
- Analyze data with other participants
- Reflect on the limitations and new questions that emerged from analysis
- Collect a second round of data based on what was learned

Day 3: How to be Systematic and Intentional with my Inquiry

- Analyze data with critical friends
- Practical and ethical issues with teacher inquiry
- Revisit your inquiry question and plan

Between Workshops:

- Generate data for inquiry from your classroom
- Analyze data with other participants
- Reflect on the limitations, implications, and new questions that emerged from analysis
- Check-in and consult with Knowles instructor

Day 4: So What?: Understanding Implications and Taking Action

- Reflect on inquiry journey so far
- Make inquiry public: Teachers as knowledge generators

All Knowles Academy courses can be customized to meet the specific needs of schools and districts.

For more information, visit www.knowlesteachers.org/knowles-academy.