

Session 2: Teacher Preparation Standards - Science

Facilitator: Michael Clough

Note Taker: Linda Espey

Location: Rassmussen 210

Formed small groups; participants were asked to discuss the following question:

1. Given individuals will/must learn a great deal about teaching when they begin teaching, what makes science methods courses essential? Conversation framed in the context of policy-makers and some teachers questioning the value of teacher education (e.g., why not let everyone learn how to teach through teaching?)
 - Application of content knowledge - allows novice teachers to develop a more informed teaching practice.
 - Faculty model effective teaching techniques which help prospective science teachers better understand what effective science teaching looks like.
 - What they learn in a science methods course is important- but what specifically is important?

Questions and Observations

- Are methods courses tied with practicum course? Generally, yes.
- Who is the experimental student? Throwing people into a teaching situation means that some students are going to get a lower quality education.
- If experience equates with expertise, then given the age of the current science teaching workforce, we should be in a situation where we have stellar teachers. This is not the case.
- Alternative licensure - intent is to change delivery systems, NOT lower the quality.
- How do we view teaching? Is it a skill set we happen to be born with or is it a profession?
- One of the biggest problems in preparing highly effective secondary science teachers is generally the poor quality of post-secondary science teaching (NSF is emphasizing the need to improve post-secondary science education).

Two points in response to a post-secondary science faculty member query about teaching secondary school science:

- Would it be possible for high school teachers to teach some introductory post-secondary science courses? Perhaps we have already moved in this direction.
- Some students pursuing advanced degrees in science disciplines are now including teacher education courses in their preparation for becoming a faculty member at a college or university. That is, some recognize that teaching requires knowledge and experiences they don't have.