

Northern Kentucky Algebra Community

Transitional Algebra Course Meeting Minutes

NKU Student Union

March 30, 2009

- I. Attendance.** There were 23 people in attendance, including high school mathematics teachers, curriculum specialists, assistant administrators, university professors, and the director of the Kentucky Center for Mathematics. The turn out was good for a working group to open discussions about curriculum materials for a high school transitional algebra course.
- II. Opening Remarks.** Mike Waters, mathematics education professor at NKU, opened the discussion with the following objective in mind: To develop a set of curriculum materials that could be in a transitional high school algebra course and shared with local teachers.
- III. Summary of Discussions.** A summary of the Kentucky Online Testing project was given by Steve Newman, mathematics professor at NKU. A discussion ensued about the purpose and value of the KYOTE project and its relationship and support by NKU. Ted Hodgson, mathematics education professor at NKU, spoke about the possible research opportunities for teachers in developing transitional course materials. Teachers spoke about what materials are currently being used in transitional algebra courses. A survey was given and discussion ensued about what a transitional algebra course should include. Both content and pedagogy were discussed.

Notes:

1. Those at NKU and local teachers interested in the project desire to work collaboratively in collecting, reviewing, classroom-testing, and disseminating transitional high school algebra course materials.
2. An electronic reporting system designed to record the process (and collect information) for these materials will be put in place.
3. There is a desire to seek funding (in addition to possible funding already in place) to classroom-test (videotape and examine) materials collected by the group.
4. **Materials currently used in fourth year courses:**
 - a. Some used textbooks (or supplement existing texts) such as Larson/Hostetler's *Elementary Algebra*, etc. A more complete list can be found in previous minutes.
 - b. Some teachers have a wealth of curriculum materials, gleaned from years of experience teaching college preparatory mathematics and use these materials regularly in their classrooms. One teacher has developed a number of stand-alone project-oriented units, designed to address varying ability levels in a single class.

5. Ideas about what might be included in a transitional course:

- a. Professional resources for teachers
- b. A focus on important basic skills (necessary, though not sufficient for achievement in college-level algebra and beyond), but including important connections for retention, reasoning, and problem-solving.
- c. An emphasis on why a student would want to learn the material (whether it be to improve cognition or to see real-world connections) and motivational activities that support this.
- d. Appropriate assessments (formative and summative) to gauge students' progress and identify specific student's mathematics deficiencies.
- e. A coherent and cohesive set of materials that hangs together and includes appropriate college readiness (ADP and KY) standards, not simply a collection of materials with no organization.
- f. Fractions, decimals, and percents.
- g. Pretests and posttests to determine if students are meeting goals.

6. Results of the survey:

- a. All seem to agree that an appropriate balance among necessary skills, conceptual understanding, and problem-solving should be contained in a high school transitional algebra course.
- b. All seem to agree that a strong alignment with college readiness standards is important.
- c. There is less agreement on the use of appropriate technology to solve algebra problems (echoed in the discussion).