Appendix B: Details of Towson's Field Experience (Early Teaching) Course

Course Overview

There are six to eight sections of the field experience course offered each semester; each section meets once per week for four hours at a Baltimore City or Baltimore County public elementary school. Course activities include an hour of teaching time, coaching from the classroom mentor teacher, lesson planning under the supervision of the course instructor, and methods/content discussions and activities. The planning sessions and methods/content activities are conducted in a central meeting space (e.g., an unused classroom) provided by the school.

After trying a number of different teaching formats for our field experience course, the project team has now settled on a single teaching and planning format that is (ideally) used in all sections of the course. In this format, the ~13-20 interns in any given section are spread across a small number of classrooms in a single school; ideally, between four and six interns are placed in each science classroom. During the allotted teaching time, the classroom is broken into four to six groups of elementary students, with each small group being led through an inquiry-based science activity by a single intern. The same interns that teach shoulder-to-shoulder in a classroom also plan their lessons together, with the result that the lessons that are taught concurrently in the different intern groups are nearly identical – although there is certainly room for variation and creativity from group to group if the interns so desire. Occasionally, if appropriate, the interns might also alternate between small-group and whole-class instruction within a single lesson. For example, in a particular lesson, each intern might guide her own group through a discussion or experiment, at which point the different student groups might then share their ideas or results with the entire class; the lesson might then conclude with the students returning to their own small groups to make sense of the data or discussion with the help of their "teacher" (i.e., that group's permanently assigned intern).

Another key component of our course format is the fact that the interns are not expected to create lesson plans from scratch. Instead, for the first three or four weeks, the course instructor typically provides the interns with inquiry-based lesson plans (or lesson plan outlines, minimally) for the interns to flesh out and implement. These lesson plans tend to consist of official school lessons that have been modified by the instructor to be more closely aligned with our principles of inquiry. After the first few weeks, once the interns have grown more comfortable with inquiry-based teaching, the course instructor stops distributing lesson plans to the interns; from that point forward, the interns are expected (with the help of the instructor) to analyze each upcoming activity from the official curriculum, modify the official activity to make it more inquiry-based, and then implement the modified version of the official activity.

Before the start of the internship, to obviate the need for week-by-week coordination between the course instructor, mentor teachers, and interns, the

instructors and teachers carefully negotiate which specific activities and/or content units from the official school curriculum will be taught by the interns during the semester.

Finally, it should be noted that the interns are not expected to teach science lessons as soon as they begin the internship. To ease the interns into the course, the first one to three class meetings – which are four hours in length, just as they are for the remainder of the semester – are held at the university campus. These early meetings provide an opportunity for the interns to engage in preparatory activities that focus on inquiry-based science instruction, lesson planning, and the specific science concepts relevant to the interns' upcoming lessons.

Benefits of the "Multiple Interns per Classroom" Model

There are a number of different reasons why, from the instructor's perspective, placing multiple interns in the same classroom works well. The primary benefit to the instructor is that each section of the early teaching (field experience) course can be located in a single school, which means that the instructor is able to see every single intern during each class session. Having contact with interns during each session is important due to the fact that face-to-face coordination and support tends to be more convenient and effective than email or phone contact – especially when requests for support often come at the last minute (i.e., just before instruction). Email and phone contact is more common in field experience courses where interns are placed one or two per classroom; in these situations, unfortunately, the instructor is less able to provide the last-minute words of advice, conceptual clarifications, and friendly assurances that increase the likelihood of the interns' science lessons being successful.

Beyond the logistical benefits provided by the multiple-interns-per-classroom model, we also find that most of our interns have learned something new by the end of the course: that group lesson planning is a valuable, worthwhile process. Each class session, during the allotted time for group planning, the members of each group become *de facto* peer mentors: they share lesson plan ideas, engage in formal and informal teaching discussions, and provide motivational, pedagogical, and content-related support for one another. Evidence for the interns' appreciation for group planning is most visible in their summative course reflections, a portion of which is often dedicated to the interns' recognition that group planning is helpful – although the interns often wistfully recognize that this sort of group support may not be present during their upcoming student teaching semesters.

Support concerns aside, there are also pedagogical reasons for having interns plan lessons in small groups. Group planning offers a natural context for the interns to have substantive debates about teaching theory, philosophy, and practice that are connected to actual teaching experiences with children. Given the abundance of research that shows that teachers' stated orientations toward teaching often do not translate into practice, combined with the research that shows the importance of

practice-centered professional development, the interns' group planning is a crucial part of their pedagogical training. In our experience, the differences of opinion and interpretation that get glossed-over during a discussion in the university classroom come out in sharp relief during group planning sessions, making the way for further progress.

A final benefit of the multiple-interns-per-classroom model is that, in teaching science to a small group of elementary children, interns have the opportunity to get to know their student's thoughts and personalities in a deep and meaningful way – much more than they would in the traditional model where one to two interns are assigned to a classroom. Moreover, in only having to oversee four to six students, the interns can shift their instructional focus from classroom management to other instructional issues more directly relevant to inquiry-based teaching: the elicitation of students' prior knowledge and experience, data collection, and the students' use of evidence-based reasoning to come to consensus on scientific conclusions and explanations.