

DEPARTMENT OF MATHEMATICS

VIGRE Funding Report

(due 30 days after semester of support)

Semester/Summer and Year:

Fall 2008

Name: Joshua Chesler

List the graduate courses you have taken this semester (including independent studies), your grades, and the instructors:

Course	Title	Grade	Instructor
MATH 920	Dissertation	K	McGraw
SPAN 206	Intensive Spanish	O	Elia

List the title, date and location of any talks you have given, either here or elsewhere:

- What is Algebra? Views of Mathematicians, Mathematics Educators, and Teachers. November 26, 2008. University of Arizona, Tucson, AZ.
- What is Algebra? Views of Mathematicians, Mathematics Educators, and Teachers. December 2, 2008. Texas Christian University, Ft. Worth, TX.
- What is Algebra? Views of Mathematicians, Mathematics Educators, and Teachers. December 10, 2008. University of Texas at Dallas, Dallas, TX.

If you are working on your dissertation, include a one paragraph description of your research progress. If you have not yet begun dissertation research, describe your progress toward finding a dissertation topic and advisor and beginning that research.

In the Fall 2008 semester I have continued work on my dissertation. This semester, I have completed data collection which includes audio and video recordings. I have completed transcription of the data with which I am primarily concerned. I have also begun data analysis with the assistance of qualitative data analysis software called Transana. Preliminary results from this analysis were discussed in the talks listed above and were included in the publications listed below.

List publications, if any.

- Chesler, J. and McGraw R. "Collaborative mathematics instruction: An Analysis of the joint work of mathematics educators and mathematicians." Proceedings of the 8th Annual Hawaii International Conference on Statistics, Mathematics, and Related Fields, January 2009 (Accepted).
- McGraw, R., Chesler, J., and Cossey, J. "Teaching teachers mathematics: An Analysis of collaborations between mathematics educators and mathematicians." Proceedings of The Hawaii International Conference on Education, January 2009 (Accepted).

Check all activities you completed during the funded period:

Academics:

- Independent Study
- Oral Comprehensive Exam
- Commence Thesis Research
- Conference attendance
- Conference participation
- Complete PhD

Professional development and outreach:

- AP Calculus Visit
- High School Workshops
- Undergraduate Research Project
- Undergraduate Research Seminar
- Super TA
- Mentoring junior graduate students for the qualifying exams
- RTG (help organize)
- Research Seminar (help organize)

Other (please specify)

Academics: Continued thesis research, passed Spanish Examination (PhD requirement), attended various colloquia
Outreach: Weekly participation in the Mathematical Circle

Attach a brief statment about your academic progress and professional development during the period of support.

VIGRE Report – Part II
Joshua Chesler
Fall 2008

During the Fall 2008 semester I made significant progress on my dissertation and in achieving other professional development goals. Completion of my dissertation is dependent upon the transcription many hours of dialog and interviews. During the Fall 2008 semester I was able to complete the transcription of all essential audio recordings. Furthermore, I began the coding and analysis of this data. The preliminary results were initially presented in the Mathematics Graduate Student Colloquium at University of Arizona and then again as part of two “job talks” at two universities in Texas. The responses I got were favorable and indicated recognition of the progress I’ve made toward completion of my dissertation. These initial results were also partially reported in two papers which, during the Fall 2008 semester, were written, submitted, and accepted to two separate conferences in January 2009. On one of these papers I was the primary author; on the other paper I was secondary.

I was active in professional development during Fall 2008. I wrote research and teaching statements, compiled a teaching portfolio, created a website to appeal to potential employers, and applied for several tenure-track jobs in mathematics and mathematics education. I successfully completed my Spanish examination, a requirement for my PhD, by reading and commenting on a 40-page mathematics education research article written in Spanish. This activity, supplemented by sitting in on a Spanish class (SPAN 206), improved my Spanish skills; this supports my career goal to increase my involvement in working to improve mathematics education in urban settings where Spanish is often spoken. The Fall 2008 semester was also the first semester of the Tucson Mathematical Circle which brings local high school students to the University to work on interesting and challenging mathematics problems every week for two hours. My involvement included recruiting students, planning lessons, presenting mathematics content, and assisting the students. I participated in the Mathematics Circle almost every week during the Fall 2008 semester. This experience will be valuable as I have been searching for jobs in departments which value and promote the sort of community involvement and direct contact with K-12 students which are characteristic of the Tucson Mathematics Circle.

Fall 2008 was a productive semester, both in work toward my dissertation and in accomplishing professional development goals. VIGRE support was essential to my successes in Fall 2008.