

APPENDIX A

Cover Letter: Perceived needs of beginning secondary school science teachers and their perceptions of preparation by preservice education

Dear Future Teacher,

My name is Jim Heath, and I am a student pursuing a doctoral degree in Science Education at the University of Texas at Austin. For my dissertation I am doing a study of the needs of beginning science teachers, and how well preservice education prepares beginning teachers to meet these needs. Since preservice education students such as yourself are about to become true experts about these needs, I want to go directly to you for answers to these questions. I hope that all of your "methods class" classmates will work with me on this voluntary project.

I will combine the information you provide with a larger-scale survey of science teachers all over Texas to try and get a coherent picture of what skills and information are important to a first-year secondary science teacher, as well as an idea of how good a job preservice education is doing at supplying these skills and knowledge. This information can then be used to inform science teacher education with data straight from the mouths of teachers and future teachers, to better prepare science teachers for the often-difficult task of the first year. This in turn can help improve science teaching in general and reduce beginning teacher "burnout." I also hope that you will personally benefit from a chance to reflect on your preservice education.

I would like for you to keep a reflective journal during your time in the methods class, recording specific incidents from the class, and your thoughts and feelings about the process. During the methods class, I would like to meet with everyone in the class for two "brainstorming" sessions. During the sessions, we will discuss things that happened during the methods class, and your expectations for student teaching and full-time teaching. We'll do a first-look analysis of these data as well and see what major "themes" emerge. This brainstorming will guide the rest of my research process, so it's a very important step that I think you can contribute greatly to.

This process is intended to be anonymous. I want your reflective journals to be submitted anonymously, and you will be known to me by a pseudonym during the brainstorming process. Because of these concerns with anonymity, I do not anticipate any sort of risk to you as a result of this project, or any discomfort aside from an expenditure of time. Your participation (or non-participation) in this project will not affect your grade in the methods class, nor any other relationship with the University. The benefits to science education, however, could be great. Participation in this survey is entirely voluntary. You may withdraw from the project at any time, for any reason, and I will honor any request not to use the data that you have personally generated. Please keep this cover letter for your records. If you would like a copy of the results of analysis, please give contact me at the phone number or electronic mail address below, or send a post card to the address on the return envelope.

I aspire to be a teacher educator myself, so the issues involved in this project is very important to me. I know your time is valuable, but I hope you will take some of that time to register your personal experiences. If you have any questions about this project, please do not hesitate to contact me by phone (512) 339-1811 or via e-mail at jimheath@mail.utexas.edu. You may also contact my dissertation supervisor, Professor James P. Barufaldi, Ph.D., at (512) 471-7354 or via e-mail at jamesb@mail.utexas.edu. Thank you for your consideration.

Yours Sincerely,

James E. Heath, jr.

Cover letter for first part of small group study

APPENDIX B

Cover Letter: Perceived needs of beginning secondary school science teachers and their perceptions of preparation by preservice education

Dear Future Teacher,

My name is Jim Heath, and I am a student pursuing a doctoral degree in Science Education at the University of Texas at Austin. For my dissertation I am doing a study of the needs of beginning science teachers, and how well preservice education prepares beginning teachers to meet these needs. Since preservice education students such as yourself are about to become true experts about these needs, I want to go directly to you for answers to these questions. I hope that many of your fellow student teachers will work with me on this voluntary project.

The data from this project can be used to inform science teacher education with data straight from the mouths of teachers and future teachers, to better prepare science teachers for the often-difficult task of the first year. This in turn can help improve science teaching in general and reduce beginning teacher "burnout." I also hope that you will personally benefit from a chance to reflect on your student teaching.

I would like for you to continue to keep a reflective journal during your time as a student teacher, recording specific incidents, and your thoughts and feelings about the experience. I would also like to do two one-on-one interviews with each of you, at the beginning and the end of your student teaching. The interviews should take no longer than an hour, and will deal with incidents during student teaching, and your thoughts on preservice education. In the middle of student teaching, I would also like to have another group meeting like the one we will have at the end of the methods class. During this session, we will discuss things that happened during student teaching, your reflections on preservice education, and your expectations for full-time teaching. We'll do a first-look analysis of these data as well and see what major "themes" emerge. In summary, what I ask of you are two one-hour interviews, an afternoon group session, and a reflective journal.

This process is intended to be anonymous. I want your reflective journals to be submitted anonymously, and you will be known to me by a pseudonym during the brainstorming process and the interviews. Interviews will be audio taped; the tapes will be kept in a locked cabinet prior to transcription, and erased immediately afterward. Because of these concerns with anonymity, I do not anticipate any sort of risk to you as a result of this project, or any discomfort aside from an expenditure of time. Your participation (or non-participation) in this project will not affect your grade in any class, nor any other relationship with the University. The benefits to science education, however, could be great. Participation in this survey is entirely voluntary. You may withdraw from the project at any time, for any reason, and I will honor any request not to use the data that you have personally generated. Please keep this cover letter for your records. If you would like a copy of the results of analysis, please contact me at the phone number or electronic mail address below, or send a post card to the address on the return envelope.

I know your time is valuable, but I hope you will take some of that time to register your personal experiences. If you have any questions about this project, please do not hesitate to contact me by phone (512) 339-1811 or via e-mail at jimheath@mail.utexas.edu. You may also contact my dissertation supervisor, Professor James P. Barufaldi, Ph.D., at (512) 471-7354 or via e-mail at jamesb@mail.utexas.edu. Thank you for your help.

Yours Sincerely,

James E. Heath, jr.

Cover letter for second part of small group study

APPENDIX C

Cover Letter: Perceived needs of beginning secondary school science teachers
and their perceptions of preparation by preservice education

Dear Teacher,

My name is Jim Heath, and I am a student pursuing a doctoral degree in Science Education at the University of Texas at Austin. For my dissertation I am doing a study of the needs of beginning science teachers, and how well preservice education prepares beginning teachers to meet these needs. Since as a new science teacher you are about to become a true expert about these needs, I want to go directly to you for answers to these questions.

The information you provide will be combined with information from many other sources. The data from this project can be used to inform science teacher education with data straight from the mouths of teachers and future teachers, to better prepare science teachers for the often-difficult task of the first year. This in turn can help improve science teaching in general and reduce beginning teacher "burnout." I also hope that you will personally benefit from a chance to reflect on your teaching.

I would like for you to continue to keep a reflective journal during your time as a first-year teacher, recording specific incidents, and your thoughts and feelings about the process. I would also like to do a series of one-on-one interviews, about once a month, with you. The interviews should take no longer than an hour and a half, and will deal with incidents during teaching, and your thoughts on preservice education. I would also like to come in and observe your classes, about once every three weeks. I will also be available to you any time to talk about teaching.

This process is intended to be anonymous. I want your reflective journals to be submitted anonymously, and you will be known to me by a pseudonym during the interviews. Interviews will be audio taped; the tapes will be kept in a locked cabinet prior to transcription, and erased immediately afterward. Because of these concerns with anonymity, I do not anticipate any sort of risk to you as a result of this project, or any discomfort aside from an expenditure of time. The benefits to science education, however, could be great. Your participation (or non-participation) in this project will not affect your relationship with the University of Texas in any way. Participation in this survey is entirely voluntary. You may withdraw from the project at any time, for any reason, and I will honor any request not to use the data that you have personally generated. Please keep this cover letter for your records. If you would like a copy of the results of analysis, please contact me at the phone number or electronic mail address below, or send a post card to the address on the return envelope.

I know your time is valuable, but I hope you will take some of that time to register your personal experiences. If you have any questions about this project, please do not hesitate to contact me by phone (512) 339-1811 or via e-mail at jimheath@mail.utexas.edu. You may also contact my dissertation supervisor, Professor James P. Barufaldi, Ph.D., at (512) 471-7354 or via e-mail at jamesb@mail.utexas.edu. Thank you for your consideration.

Yours Sincerely,

James E. Heath, jr.

Cover letter for focused qualitative study

APPENDIX D

Person as Instrument Statement

James E. Heath, jr.

As a researcher, I firmly believe that when doing research with human beings, a researcher should have the best interests of the “researchees” at heart. While this may seem axiomatic, I think it is important to go beyond “do no harm,” and actually aggressively pursue the betterment of the lives of research participants. The “subjects” are providing their time, energy, and emotion, and the researcher should work to make that sacrifice worthwhile. I also believe that research that does not inform practice is not a prudent use of anyone’s time. Again, this may seem axiomatic, but when people give of themselves so that you can “study” them, pursuing knowledge primarily for its own sake is neither particularly ethical nor moral. To my mind, the primary goal of education research should be the direct improvement of education, and research should always result in practical, concrete suggestions to improve practice. I believe that much of the cynicism that I encounter from practicing teachers regarding educational research is a reaction to researchers downplaying or even forgetting this simple maxim. This cynicism, if allowed to grow, can only hurt educational research by draining the pool of potential teacher collaborators willing to provide information. This is one reason why I feel it is in the best interest of education research to focus on helping teachers in the field. I believe that the words of Fuller and Bown (1975) should be engraved on the side of every Education Department building in Academia:

Researchers tend to discover unflattering things about teachers... No wonder research has little impact on the teacher. She finds it both useless and alien... All in all, teachers do not feel much helped by research and researchers. The research base, an ever-present help in time of need for other professions, is not the teacher’s friend.

I am also an unabashed teacher advocate. I believe that teaching is a noble profession and an extraordinarily different job, and that teachers need all the assistance that we researchers can give. I am consistently amazed by the resiliency and determination of the public school teacher, and admire their efforts to strive against the odds to serve their students. Undoubtedly, this admiration will occasionally cause me to give teachers the benefit of the doubt over other groups such as administrators, students, and education researchers. I am frequently dismayed by

the way teachers are viewed and treated in education research. The words of Adams and Tillotson (1995) resonate with me:

Often prospective and beginning teachers are viewed as objects to be studied, rather than as collaborators in an endeavor to develop common understandings between researchers and practitioners. The extant research... does not contribute to the enhancement of science teacher education per se... Genuine communication about the nature of the teaching enterprise ought to be a serious goal.

I have no experience teaching in the public schools. In fact, I have taught in just about every other context: I have taught at the university and community college level, worked at a private school, tutored homeschooled students, and even hosted an educational television show broadcast into classrooms all over the nation. But my experience in a secondary school classroom is limited to my student experiences over two decades ago. I'm sure that on some level this limits my ability to relate the experiences of my collaborators to my own experience, and may inhibit my ability to properly interpret what they say. I am grateful for the process of member checking, which will hopefully help to ameliorate this. On the other hand, I feel that my relative inexperience has the potential to afford me a fresh perspective on what my collaborators are saying, unclouded by my own personal "war stories." Although I am not a secondary school teacher, I am still a teacher, and I hope the commonality of the academic community will provide me with the connection I need.

I firmly believe that only by understanding the "lived reality" of the classroom teacher can we as researchers serve the cause of education. To that end, my goals as an education researcher are to study programs of teacher preparation and professional development, always with the goal of informing and improving such program.

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