Title of Project: Using Portfolios to Assess Learning in Chemistry: One School’s Story of Evolving Assessment Practices

Principal Investigators: Starlin D. Weaver and Thomas G. Teates

I. Purpose of the Research

The purpose of this research study is to investigate the process of implementing a program of portfolio assessment in chemistry classrooms. This study will focus on the concept of portfolios, defined by the teachers and students of a small math, science, and technology school. Teacher and student beliefs and perceptions about portfolios and their use as assessment tools will be examined. A total of three chemistry teachers and twelve of their students will be the participants of the study.

The primary research questions, as they are presently framed in the study are: 1] How do the teachers define portfolios? 2] How do the teachers implement portfolios in their classrooms? 3] How do the teachers’ definitions of portfolios change during the trimester when they initially implement the procedure? 4] What are the students' understandings of portfolios and how they are used? 5] How do students’ definitions of portfolios change over the trimester? 6] Do teachers and students believe that portfolios accurately represent the learning occurring in the science classroom? and most importantly, 7] Do the data collected via this study show that portfolios are a valid means of assessing student progress?

II. Procedures

The research will be conducted during the fall trimester and the beginning of the winter trimester and will include information collected from classroom observations and three separate individual interviews. The individual interviews will be approximately forty-five minutes in length and will include questions dealing with the process of implementing portfolio assessment at the research site. Your child will be audio taped during the interviews. Interviews will be conducted during the regular school day and at the research site. Interviews will in no way disrupt the normal school schedule of classes. Your child’s portfolio will be photocopied and used as a source of data.

III. & IV. Risks and Benefits

There are no foreseen risks in this study. The overall benefits of this study may help improve the portfolio assessment process at this school next year. It may also benefit other educational
institutions undergoing a shift from traditional assessment procedures to an alternative system which includes portfolios. At the conclusion of the study, the primary investigator will present a forum and discuss the results/findings of the study.

V. Extent of Anonymity and Confidentiality
The identity of each participant will be masked by the investigator. A pseudonym will be assigned to each participant. These pseudonyms will be used in any reporting of the data. Data collected, that will identify the participant, will be deleted or altered to assure confidentiality. All audiotapes will be secured, transcribed and stored by the principal investigator. At the completion of the defense of the dissertation, all audiotapes will be destroyed.

VI. Compensation
Your child’s participation in this project is voluntary. He/she will not be monetarily compensated for their participation.

VII. Freedom to Withdraw
You are allowed to withdraw your child from this study at anytime without any penalty by contacting any of the persons listed at the end of this form. Your child is free not to answer any questions posed during the interview.

VIII. Approval of Research
This research proposal has been submitted to and approved, as required, by the Institutional Review Board for Research Involving Human Subjects at Virginia Polytechnic Institute and State University and by the Department of Teaching and Learning and The Mountain Valley Governor’s School for Science and Technology.

IX. & X. Participant’s Responsibilities and Permission
I have read and understand the Informed Consent and conditions of this project. I have had all of my questions answered. I hereby acknowledge the above and give my voluntary consent for my child’s participation in this project. If my child participates, he/she may withdraw at any time without penalty.

_________________________ _______________
Parent/Guardian Signature Date

Should I have any questions concerning this research or its conduct, I may contact:
Informed Consent of Student Participants

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The research will be conducted during the fall trimester and the beginning of the winter trimester and will include information collected from classroom observations and three separate individual interviews. The individual interviews will be approximately forty-five minutes in length and will include questions dealing with the process of implementing portfolio assessment at the research site. The questions asked will include how you define what a portfolio is, what you believe the purpose of a portfolio is and how portfolios are being used in your classes. Questions will also address any past
experiences you have had with portfolios and how you believe teachers can best tell that you have
learned the material they are teaching you. You will be audio taped during the interviews. Interviews will be conducted during the regular school day and at the research site. Interviews will in no way disrupt the normal school schedule of classes.

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APPENDIX C

Participant Signature

Date

Should I have any questions concerning this research or its conduct, I may contact:

______________________________ 953-7099
Starlin D. Weaver, Investigator  Phone

______________________________ 382-0542
Thomas G. Teates, Committee Chair  Phone

______________________________ 231-5281
Tom Hurd  Phone
Chair, IRB
Research Division