Career and Technical Education (CTE) Directors' Experiences with CTE's Contributions to Science, Technology, Engineering, and Math (STEM) Education Implementation

Bentry Nkhata

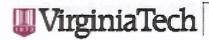
Dissertation submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of

Doctor of Philosophy In Career and Technical Education

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November 1, 2013 Blacksburg, VA

Key words: Career and Technical Education, Science, Technology, Engineering, and Math (STEM) Education, School District Directors of CTE, Curriculum Integration



Office of Research Compliance

Institutational Review Board

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MEMORANDUM

DATE:

May 17, 2013

TO:

Bill Price Jr, Bentry Nkhata

FROM:

Virginia Tech Institutional Review Board (FWA00000572, expires April 25, 2018)

PROTOCOL TITLE:

Career and Technical Education (CTE) Directors' Experiences with CTE's Contributions to Science, Technology, Engineering, and Math

(STEM) Education Implementation

IRB NUMBER:

13-475

Effective May 16, 2013, the Virginia Tech Institution Review Board (IRB) Chair, David M Moore, approved the New Application request for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report within 5 business days to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at:

http://www.irb.vt.edu/pages/responsibilities.htm

(Please review responsibilities before the commencement of your research.)

PROTOCOL INFORMATION:

Approved As:

Expedited, under 45 CFR 46.110 category(ies) 6,7

Protocol Approval Date:

May 16, 2013

Protocol Expiration Date:

May 15, 2014

Continuing Review Due Date*:

May 1, 2014

*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

FEDERALLY FUNDED RESEARCH REQUIREMENTS:

Per federal regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals/work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.

Draft 09/01/2009

(Questions? Concerns? Contact Gail McMillan, Director of the Digital Library and Archives at Virginia Tech's University Libraries: gailmac@vt.edu)

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Virginia Tech ETD Fair Use Analysis Results

This is not a replacement for professional legal advice but an effort to assist you in making a sound decision.

Name: Bentry Nkhata

Description of item under review for fair use: Figure 2.1

Report generated on: 11-14-2013 at: 10:27:11

Based on the information you provided:

Factor 1

Your consideration of the purpose and character of your use of the copyright work weighs: in favor of fair use

Factor 2

Your consideration of the nature of the copyrighted work you used weighs: in favor of fair use

Factor 3

Your consideration of the amount and substantiality of your use of the copyrighted work weighs: in favor of fair use

Factor 4

Your consideration of the effect or potential effect on the market after your use of the copyrighted work weighs: in favor of fair use

Based on the information you provided, your use of the copyrighted work weighs: in favor of fair use

Draft 09/01/2009

(Questions? Concerns? Contact Gail McMillan, Director of the Digital Library and Archives at Virginia Tech's University Libraries: gailmac@vt.edu)

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Name: Bentry Nkhata

Description of item under review for fair use: Figure 2.2

Report generated on: 11-14-2013 at: 10:29:13

Based on the information you provided:

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Your consideration of the purpose and character of your use of the copyright work weighs: in favor of fair use

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Factor 3

Your consideration of the amount and substantiality of your use of the copyrighted work weighs: in favor of fair use

Factor 4

Your consideration of the effect or potential effect on the market after your use of the copyrighted work weighs: in favor of fair use

Based on the information you provided, your use of the copyrighted work weighs: in favor of fair use

Draft 09/01/2009

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Name: Bentry Nkhata

Description of item under review for fair use: Figure 3.1

Report generated on: 11-14-2013 at: 10:30:29

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Your consideration of the purpose and character of your use of the copyright work weighs: in favor of fair use

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Your consideration of the amount and substantiality of your use of the copyrighted work weighs: in favor of fair use

Factor 4

Your consideration of the effect or potential effect on the market after your use of the copyrighted work weighs: in favor of fair use

Based on the information you provided, your use of the copyrighted work weighs: in favor of fair use