The Development of an Instrument for K12 Coordinators Implementing Curriculum Videoconferencing and a Model to Predict Utilization of Videoconferencing

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Research Background

"Curriculum Videoconferencing"

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- Some equipment sits collecting dust.
- The videoconference coordinator is key to the implementation in the school.

Research Timeline

2004: Qualitative study of online class of coordinators

2006: USDA RUS Grant Implementation

Spring 2007: Coordinator Survey Development and Pilot Data Collected

Summer 2007: Beginning of Leadership PhD Program; Start of Literature Review

April 2008: Proposal Approved

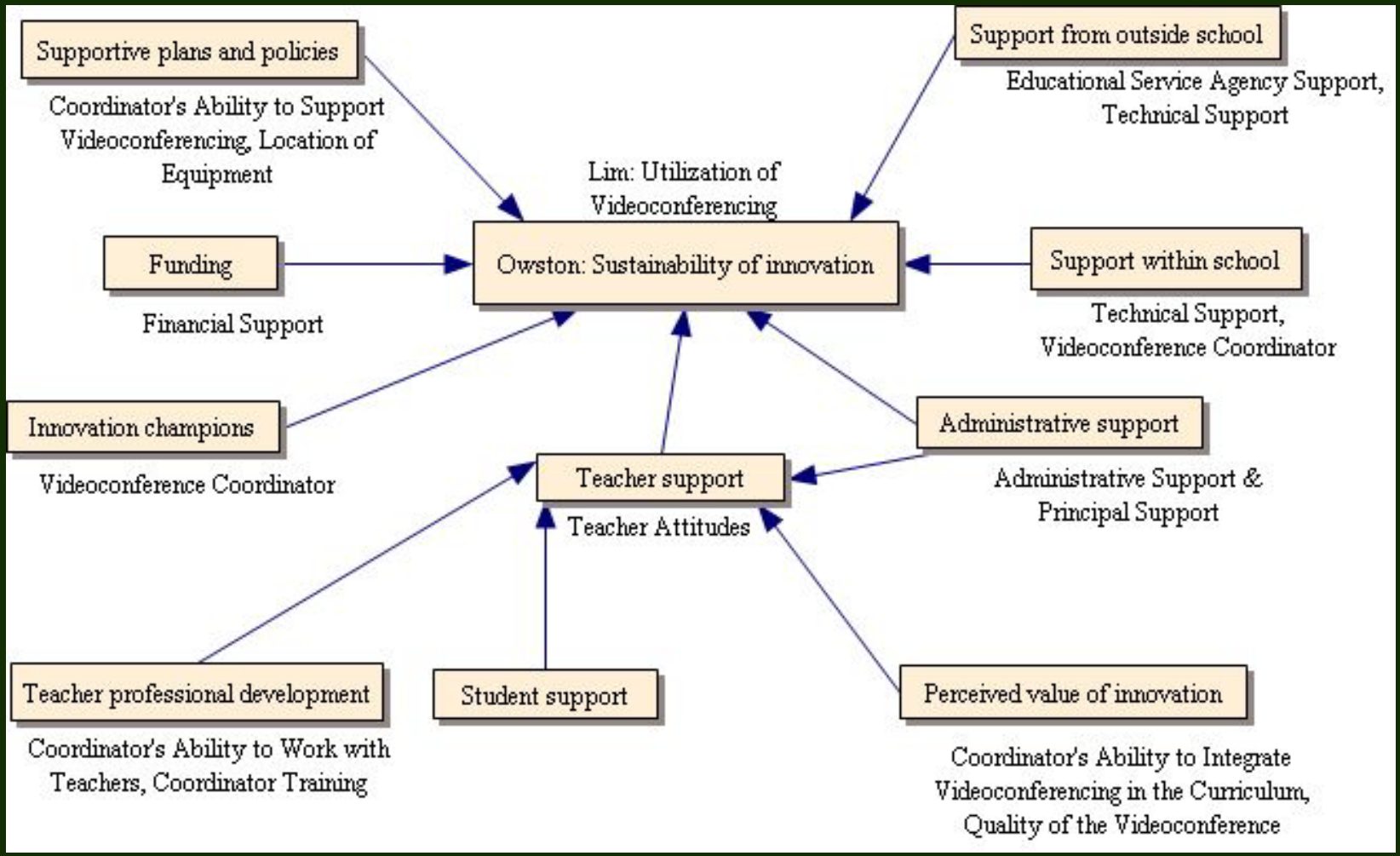
May 2008: Data Collected

Fall 2008 – Spring 2009: Results and Discussion

Problem

The role of the coordinator and factors affecting their ability to support curriculum videoconferencing in relationship to the utilization of videoconferencing in the school have not been thoroughly studied. The focus of this study is the videoconference coordinator and their influence on the utilization of videoconferencing.

Theoretical Framework: Owston's Model



Research Design: Ex Post Facto

- Independent variables cannot be manipulated or has already occurred (i.e. school demographics, coordinator demographics, etc.)
- Dependent variable (utilization of videoconferencing)
- Demonstrate relationships only, not causation.

Population and Sample

- Videoconference coordinators from 5 listservs internationally (5,500)
- Respondents: 277 participants in 6 countries, 31 U.S. states
- Goal from Newman & McNeil 1998:
  - 90% confidence level, 259 sample from 6000 population

Instrument

- Online Zoomerang survey
- Demographic and support variables
- K12 Curriculum Videoconferencing Implementation Scale
  - Developed from 2004-2006 qualitative study
  - Piloted spring 2007

Research Questions

How do the **demographic and support** variables predict the school's utilization of videoconferencing?

1. School demographics
2. Coordinator demographics
3. Regional educational service agency
4. Administrative, financial and technical support

Research Questions

How do the **Scale** variables predict the school's utilization of videoconferencing?

5. Technical aspects
6. Coordinators' ability to support VC
7. Coordinators' ability to integrate VC in the curriculum
8. Coordinator's ability to work with teachers
9. Coordinator's perception of teacher attitudes towards videoconferencing
10. Coordinator's perception of principal support of videoconferencing

Research Questions

11. Do any of the above variables or combinations of variables **predict** the utilization of videoconferencing?

A Measure of Utilization (2007-2008 school year)

- Total videoconference events / number of students in the school
- Total student events / number of students in the school
- Percent of teachers who used videoconferencing

- Sum: Total Utilization Score

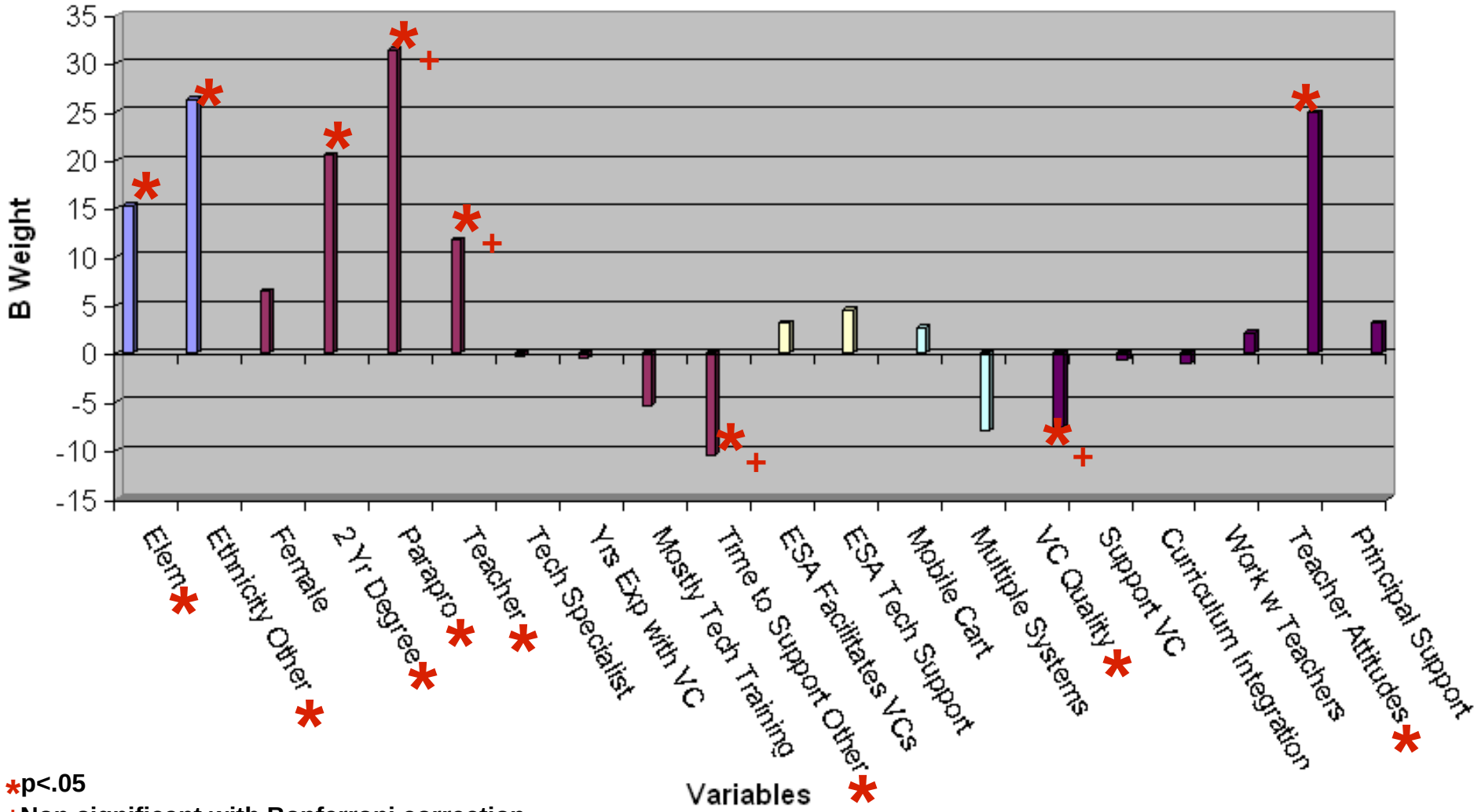
Statistical Analysis

- Descriptives for each variable set
- Factor analysis on scale components
- Correlations for each hypothesis
- Multiple regression analysis for each hypothesis
- Built a final regression model
- Cross validation of final regression prediction

Final Prediction Model

- School demographic variables:
  - Elementary school (*B*=15.27)
  - Ethnicity, “other” (*B*= 26.25)
- Coordinator demographic variables:
  - 2 year degree (*B*= 20.54)
  - Paraprofessional (*B*= 31.41)
  - Teacher (*B*= 11.75)
  - Time to support VC: “other” (*B*= -10.46)
- Scale variables:
  - VC quality (*B*= -7.61)
  - Teacher attitudes (*B*= 24.90)

B Weights of Predictors



*p<.05

+Non significant with Bonferroni correction

Contributions to the Literature

- Development of the K12 Curriculum Videoconferencing Implementation Scale
- A multidimensional perspective can be used to predict the usage of videoconferencing

Recommendations for Practice

1. Establish a School VC Coordinator
2. Provide Videoconference Coordinator Training
3. Develop Positive Teacher Attitudes
4. Install in Elementary Schools

Accomplishments

- Scale Development – Formative Assessment and Evaluation
- Measure of Utilization of Videoconferencing
- Multi-dimensional Model to Predict Utilization