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TEACHER BELIEFS ABOUT IMPLEMENTING PROJECT GLAD (GUIDED LANGUAGE ACQUISITION DESIGN): A QUANTITATIVE STUDY THROUGH THE FRAMEWORK OF EXPECTANCY-VALUE THEORY

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DEDICATION

To my wife, Sara, and my sons, Daniel and Jesse, for their patience, love, and encouragement in support of this accomplishment.

To my parents, Dr. Frank and Linda Peterson, for being my role models and always believing in my ability to accomplish my dreams.

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ABSTRACT

This study investigated the barriers and facilitators to general teacher implementation of Project GLAD (Guided Language Acquisition Design) through the framework of expectancy-value theory. This research was a modified replication of a study by Foley (2011) which investigated the factors that impeded or supported teacher implementation of a different instructional innovation using expectancy-value theory as the theoretical framework. Quantitative data was gathered for this study through an online survey emailed to grade PreK-12 teachers throughout the United States that were trained in Project GLAD. Valid responses to the survey were provided by 173 teachers. The scaled independent variables studied were teacher self-reported perceptions of expectancy, value, cost, and certain types of support surrounding their use of Project GLAD. As in the study by Foley (2011) additional demographic and training independent variables were studied from teacher self-reported data on the survey including the level of Project GLAD training, the recency of Project GLAD training, current grade level taught, years teaching at current grade level, and old degree versus recent degree. The scaled dependent variable studied was teacher general implementation of Project GLAD in their instruction. Data from survey responses was analyzed using descriptive, linear, and multiple linear regression methodology. Teacher levels of expectancy, value and training were found significant positive predictors of general teacher implementation of Project GLAD. Similar to the study by Foley (2011), the findings indicate that increasing the level of particular types of school support to teachers, including coaching and earning higher certifications in Project GLAD will increase their levels of Project GLAD

implementation. Areas recommended for further research include teacher implementation of specific Project GLAD strategies, the particular types of support that facilitate implementation, and specific barriers and facilitators to implementation at the secondary grade levels. The use of observational and qualitative methodologies to confirm and expand the findings of this study is also recommended.

CHAPTER I: INTRODUCTION

Background of the Study

Nacimias, Mioduser, Cohen, Tubin, and Forkosh-Baruch (2004) stated that "educational change is a compound of complex and dynamic processes involving the transformation of teachers' behavioral patterns, changes in the school's identity, improvement of student performance and adaptation to environmental changes" (p. 292). Exploring the processes of educational change specifically related to what factors facilitate and impede changes in teacher behavior patterns for the implementation of Project GLAD (Guided Language Acquisition Design) is the specific topic of this research study. Studying teacher early implementation is important because if an instructional innovation is not implemented as designed, it may not achieve the intended outcome for student achievement. Yoon, Duncan, Lee, Scarloss, and Shapley (2007) stated that "even if professional development enhances teacher knowledge and skills and improves classroom instruction …inadequate implementation will make it difficult to detect any effects from the professional development" (p. 4). This study explores teacher perceptions because "successful implementation will depend on the attitudes of the teachers involved in the process" (Vaughan, 2002, p. 3). The context of my research is schools located in the United States with a student population that is predominately Latino, English language learners (ELLs), and from low income backgrounds. This type of student population is a key demographic that is being targeted with the instructional strategies of Project GLAD (Deussen et al., 2012).

Theory and Action Related to the Problem

The theory that will inform this study is expectancy-value theory. Foley (2011) defined expectancy-value theory as an explanation of "human behavior as a function of two factors: (a) the perceived value of the reward that certain behavior yields and (b) the expectation in the doer that certain behavior will actually yield that reward" (p. 199). According to Foley (2011), the theory originates from Vroom's (1964) expectancy model of work motivation and became more fully conceptualized as expectancy-value theory by Bandura and Lock (2003). Wozney et al. (2006) explained how expectancy-value theory can be used to investigate teacher motivation to implement instructional innovations when they state "innovations are more likely to be adopted if the perceived value of the innovation and the likelihood (or expectancy) of success are high, as well as if these benefits outweigh the perceived costs of implementation" (p. 177). According to Karabenick and Conley (2011), the component of value within expectancy-value theory can be further broken down into four subcomponents. These subcomponents are interest value, utility value, attainment value and cost (Karabenick & Conley, 2011).

Need for Further Study of the Problem as it Related to Project GLAD

Project GLAD has been recognized by the state of California and the U.S. Department of Education as an exemplary and effective model of instruction (Project GLAD, 2012). Despite this recognition of Project GLAD in the field, an EBSCO search using terms related to Project GLAD and implementation reveals a dearth of published research on Project GLAD implementation in schools. In particular, there is little published research on both the facilitators and barriers to implementation and on whether there is a problem of lack of teacher implementation after initial teacher training in

Project GLAD. There is, however, a current major federally funded study of Project GLAD underway in Idaho involving teachers of 5th grade students that includes implementation as one of its measures (Deussen et al., 2012). This research study will make a contribution to both the fields of implementation and Project GLAD by addressing this identified research gap and to provide corroborating data for the research study in Idaho.

Research Questions and Hypotheses

There are two research questions in this study which have been adapted and modified from the study by Foley (2011):

- To what extent are K-12 teachers using Project GLAD in their classrooms?
- To what extent do teacher efficacies in expectancy, value, and cost surrounding Project GLAD predict their perceived implementation levels of Project GLAD?

The null hypotheses for this quantitative study will be:

- There is no relationship between teacher expectancy that they will be able to implement Project GLAD to achieve the desired outcome and their level of Project GLAD implementation.
- There is no relationship between the degree that a teacher values Project GLAD as an instructional approach and their level of Project GLAD implementation.
- There is no relationship between teacher perception of the degree of cost of implementation (i.e. in time and energy) and their level of Project GLAD implementation.

The research hypotheses will be:

- There is a positive relationship between teacher expectancy that they will be able to implement Project GLAD to achieve the desired outcome and their level of Project GLAD implementation.
- There is positive relationship between the degree that a teacher values Project GLAD as an instructional approach and their level of Project GLAD implementation.
- There is a negative relationship between teacher perception of the degree of cost of implementation (i.e. in time and energy) and their level of Project GLAD implementation.

Purpose of the Study

The purpose of this research is to enable educational leaders and researchers to be able to make more informed decisions about how to support teacher implementation of Project GLAD and how to design both initial and ongoing professional development around this instructional model that supports implementation.

Approach of the Study

This study will take a quantitative approach using a closed question survey design to gather data. The data gathered from the surveys will be analyzed using multiple regression analyses in order to determine what independent variables, if any, predict the dependent variable of general implementation of Project GLAD.

Significance of the Study

Contribution to Knowledge, Theory, and Practice

This study will test the applicability of expectancy-value theory to the study of teacher motivation to implement Project GLAD. The study will also identify independent

and moderator variables that predict teacher implementation of Project GLAD. By identifying these moderator and independent variables, educational leaders will be able to design professional development around the specific needs of teachers for putting what they have learned about Project GLAD into classroom practice. This study will also contribute to filling a gap in the literature around the factors that support or impede teacher implementation of Project GLAD.

Limitations of the Study

There are several limitations to this study as well as to the study conducted by Foley (2011) which this study sought to partially replicate. Since the research design was quantitative, using a survey with closed questions, it was not able to explore the process of teacher Project GLAD implementation with the depth or breadth that a qualitative research design with open-ended survey questions or observations could provide. This limitation may have led to important factors relating to implementation being left out from the data or not fully explained. In addition, due to the need to keep the survey brief enough so that respondents will complete it, this study did not explore the factors which affect teacher implementation of specific Project GLAD strategies. Instead, the research sought to identify the factors which affect teacher general implementation of Project GLAD.

A limitation of the study conducted by Foley (2011) was that there were too few responses per survey item. Foley (2011) stated that "due to a low number of participants per survey item (about five per item), the findings are also limited. The required 10-15 participants-per-item for the confirmatory factor analysis was not met" (p. 212). In order to address this limitation, Foley (2011) recommended that "future investigations should

attempt to either reduce the number of independent variables or include sufficient numbers of teachers per survey item by increasing the sample or limiting the questions" (p. 212). This modified replication of the study by Foley (2011) did not reduce the number of survey items for the independent and dependent variables being studied. There were about 4.4 respondents per survey item studying the independent and dependent variables for this study vs. about 4.7 in the study by Foley (2011). The number of total variables were reduced for this study, however, by 1) having only one dependent variable, that of general implementation, and therefore eliminating the second dependent variable of specific implementation that was included in the study by Foley (2011); and 2) reducing the number of independent variables from twelve in the study by Foley (2011) to nine in this study. The reduction in the number of variables being studied as compared to the study by Foley (2011) also led to a reduction in the total number of survey items for this study. The total number of survey items was reduced from 70 to 51 and the total number of necessary responses (since some of the items in the CSIQ required multiple responses) was reduced from 87 to 51.

Reducing the number of survey items on the survey also addressed a potential limitation of a low response rate to the online survey. Foley (2011) calculated that out of the 400 surveys distributed, a 40% response rate was required to establish power. Foley (2011) achieved a 49% response rate. The response rate to this current study was 173 responses which is estimated to be approximately 6% based on an estimated 3280 teachers who were invited to participate in the survey. The lower estimated response rate was due to the current survey being online rather than mailed to respondents as was the case in the study by Foley (2011). The response rate did meet the minimum requirement

of 166 responses to achieve sample size power as calculated using GPower sample analysis software. According to Fowler (2009), online surveys that are emailed to potential participants tend to have lower response rates than mailed surveys.

Assumptions

A key assumption in this current study was that the framework of expectancy-value theory is theoretically valid and applicable to the study of the teacher implementation of Project GLAD. In addition, it was assumed that the study by Foley (2011) could be replicated and modified in order to effectively test the hypotheses of this study. Another assumption was that Project GLAD is an appropriate and effective model for the instruction of elementary students who are ELLs. The purpose of this study was not to study the effectiveness of Project GLAD; rather, it was to study teacher implementation of the model.

Vocabulary of the Study

The predictive relationships between the independent variables of teacher expectancy, teacher value, and teacher perceptions of the cost and the dependent variable of teacher general implementation of Project GLAD (Foley, 2011) was tested. *Self-efficacy* was defined as a teacher's sense of competence in their ability to implement an instructional innovation (Foley, 2011). A related term is *expectancy* which is defined as the teacher's belief or expectation that they will be able to effectively implement the innovation and achieve the desired results (Foley, 2011). *Teacher value* is defined as the priority that teachers give to the innovation in the face of competing activities to perform instructional goals (Obara & Sloan, 2009). *Cost* is a subtractive barrier which hinders teacher ability to perform the innovation (Foley, 2011).

Summary and Forecast

Chapter One provided an introductory overview of the main elements of this study including the background, purpose, research questions and hypotheses, theoretical framework, approach, and limitations. Chapter Two of this dissertation reviews the relevant literature in regards to teacher implementation of Project GLAD and of classroom instructional innovations in general. Chapter Three describes the research design of this study including the methodology employed in the procedures for data collection and analysis. Chapter Four is a description of the study results including an analysis of the data. Chapter Five is a discussion of the results with conclusions for supporting the implementation of Project GLAD.

CHAPTER II: LITERATURE REVIEW

Introduction

Under No Child Left Behind legislation, many primary and secondary schools have been identified as not meeting their state goals for increasing the academic achievement of their students identified as ELLs (Project GLAD, 2012). One strategy that primary and secondary schools are implementing to support the academic achievement of ELLs is called Project GLAD (Guided Language Acquisition Design). The level and fidelity of implementation of this research-based innovation will determine its impact on student achievement. The purpose of Chapter II was to identify the themes in the literature relating to the barriers and facilitators of teacher implementation of Project GLAD and to teacher implementation of classroom instructional innovations in general.

Review of Research and Theory of Project GLAD

Project GLAD Explained

Project GLAD was developed by Brechtel and Haley (1981). Project GLAD is a model of instruction that incorporates 35 teaching strategies shown to be effective for increasing the academic achievement of students, particularly those who are ELLs (Brechtel, 2005; Project GLAD, 2012). Project GLAD (2012) states that "the strategies and model promote English language acquisition, academic achievement, and cross-cultural skills…tied to standards, the model trains teachers to provide access to core curriculum using local district guidelines and curriculum" (para. 1). Project GLAD (2012) lists and explains the key research-supported concepts and instructional implications of the Project GLAD model as follows:

1. Teach to the Highest

2. Brain Research—Metacognition

3. Brain Research and Second Language Acquisition

4. Reading and Writing To, With, and By Students

5. Active participation in all components of the unit, negotiating for meaning, comprehensible output personal interactions and 10/2 (Long, Cambourne, Cummins, Swain, Goldenburg, Costa)

6. A theme, year planning, and strategies that foster standards-based learning respect, trust, identity, and voice. The use of personal interaction values oral ideas and cross-cultural respect. (Cummins, Wiggins and McTighe, Berman, Baron).

7. Ongoing assessment and evaluation using a variety of tools to provide reflection on what has been learned, how it was learned and what will be done with the information. Assessment, ongoing and summative, based on strengths as well as needs. Direct teaching of test language and test taking skills. (Costa, Wiggens, Farr, Treadway, Lazear) (para. 5)

Hahn (2009) states that there are seven Project GLAD strategies most commonly used in the primary classrooms which are the focus of this study. These strategies are total physical response (TPR), sentence patterning chart, inquiry chart, cognitive content dictionary, 10/2, and chants (Hahn, 2009). Table 1 on the following page adopted from a table developed by Hahn (2009, p. 57) provides a brief description of each of these strategies.

Table 1

Description of Seven Common Project GLAD Strategies

Project GLAD Strategy	Project GLAD Strategy Description	Practice	Researched Strategy
Total Physical Response (TPR)	*Students learn hand signals or actions for target words they are learning along with their definition.	Build on the students native language	*Use loanwords *teach cognate strategies *teach and demonstrate keywords
Sentence Patterning Chart	*chart with 4-5 columns, each color coded and labeled adjective, noun, verb, prepositional phrase and adverb on occasion. Students brainstorm words and learn new vocabulary along with sentence structure as related to the topic they are learning about.	Teach basic words and word meaning	*high frequency words *tier I words *teach words in-depth *collocations
Inquiry Chart	*charts are designed with columns to access student background knowledge, introduce information, preteach words and concepts and is similar to the K-W-L chart: What do we know about, what do we want to learn or what have we learned?	Integrate vocabulary across content	*engagement activities *word-rich environment *thematic units *pictorial schemata
Cognitive Content Dictionary	*a chart that highlights specific academic words. Students in whole group predict the meaning of the chosen word, draw a picture to help them remember the word meaning, and use the word in a sentence,	Teach academic vocabulary	*semantic mapping *relationships and connections of words *oral language processing time *intentional teaching
10/2	*For every 10 minutes of direct instruction students orally process their understanding of concepts with a partner for 2 minutes	Teach academic vocabulary	*oral language processing time *intentional teaching
Big Books	Big books can be utilized by students in the classroom to reinforce vocabulary word meaning and concepts that were previously learned	Review and reinforce vocabulary	*read alouds and retells *review vocabulary words
Chants	*chants are designed with content vocabulary and can be reviewed or practiced after the unit to reinforce	Review and reinforce vocabulary	*mnemonic strategies *incidental learning

(Hahn, p. 57, 2009)

The initial training of teachers in Project GLAD is conducted in two parts over a total period of six to seven days. The first part is a two day introduction to the model. This training provides a broad overview of the model and provides evidence from research to teachers that supports the use of Project GLAD strategies to increase student achievement. This two day introductory training seeks to establish the value of Project GLAD with teachers as an approach to increase the academic achievement of all students, and particularly that of ELLs. The second part to this initial training is the four to five day demonstration. The purpose of this demonstration is to build teacher sense of self-efficacy for implementing Project GLAD as well as continue to build teacher value for the model. Project GLAD (2012) states regarding the importance of the demonstration part of the training that "seeing successful strategies with students is the most effective method of promoting change" (para. 4). During the demonstration, teachers spend the mornings of the training watching a Project GLAD trainer teach a class of students using the strategies. The class being observed is usually similar to the observer's own classrooms. A second Project GLAD trainer is also present during the demonstration to answer teacher questions and provide further explanation regarding the strategies observed being used. In the afternoons, teachers debrief about the demonstration and start planning Project GLAD units and developing materials for their own classroom instruction.

In addition to this core six to seven day teacher training, Project GLAD (2012) also recommends additional elements and professional development to embed the implementation of Project GLAD in schools and districts. These added components include an initial one day training of administrators to provide an overview of Project

GLAD and help educational leaders plan to guide teacher implementation, follow up coaching by Project GLAD coaches and trainers that is differentiated to the needs of individual teachers and schools, and the further training of lead teachers to become Project GLAD trainers in their school and district. It is the experience of this researcher that the implementation of these added planning, professional development and coaching components varies among schools and districts due to factors beyond those related to embedding the use of Project GLAD strategies in a particular school or district. For example, the cost in time and money to implement these additional components can be a deterrent to some schools and districts. The core six to seven day teacher training can cost as much as $2,000 per teacher including training fees and the cost of substitutes to release teachers for the training. The cost of having a Project GLAD trainer return to the site for follow up professional development or coaching can cost $1,000 per day. Particularly during lean periods in the budgetary cycle, it can be difficult for schools and districts to find the resources to pay the costs of these additional Project GLAD professional development components, such as the cost of having a Project GLAD trainer return to the site for coaching. Competing demands from other school or district initiatives for professional development time can also hinder the implementation of these additional components. This study included an investigation of whether higher levels of training and support in Project GLAD (or a lack thereof), has an effect on general teacher implementation of Project GLAD.

Project GLAD has been recognized for its effectiveness by multiple government education agencies. The Project GLAD model was awarded an exemplary honor by the California Department of Education in 1991 (Project GLAD, 2012). It was also

recognized as a Project of Academic Excellence by the U.S. Department of Education, Office of Bilingual Education and Minority Language Affairs (OBEMLA) in 1991(Project GLAD, 2012). In addition, Project GLAD was the recommended K-8 project by the California State Superintendent of Schools for teachers of ELLs (Project GLAD, 2012). Also, Project GLAD is highlighted as a California Department of Education "Best Practices" program for Title III professional development funding (Project GLAD, 2012). Furthermore, Project GLAD is a model reform program for the Comprehensive School Reform Design, and training model for five Achieving Schools Award Winners (Project GLAD, 2012).

While there is a strong research base showing that the use of Project GLAD strategies supports increased student academic achievement, “there is limited research that is available that recognizes the (Project) GLAD strategies under their (Project) GLAD label” (Hahn, 2009, p. 56). In addition, while the National Training Center for Project GLAD at the Orange County Office of Education (2011) states “the highest levels of implementation occur in schools where administrators support, monitor and celebrate teacher implementation, provide collaborative planning and reflection opportunities and access to resources” (para. 5), there is limited published research specific to Project GLAD implementation available to support this assertion. This study therefore explored the literature on teacher implementation of other instructional innovations in order to identify common themes relating to facilitators and barriers to teacher implementation in general that may be applicable to teacher implementation of Project GLAD. In addition, this review of relevant literature on previous studies indicated the gaps in the knowledge or limitations of previous studies that this dissertation study sought to address.

Review of Research on Teacher Implementation of Instructional Innovations

Klingner, Awhee, Pilonieta, and Menendez (2003) conducted a year-long qualitative study of teacher implementation of four research-based reading practices. The research "objective was to better understand the barriers and facilitators experienced by teachers" (Klingner et al., 2003, p. 413). The 29 teacher sample was grouped by high implementers (HI), moderate implementers (MI) and low implementers (LI).

Teachers attended a two week summer institute at the beginning of the study in which facilitators introduced the strategies and teachers received modeling of the practices and hands on training in their use. In addition, "researchers and teachers discussed barriers they might encounter… (and) planned…how they will account for these barriers in approaching their own implementation" (Klingner et al., 2003, p. 418) through the development of individual teacher implementation plans. Teachers received additional support during the year from a resource consultant that visited their classrooms once per week and provided modeling and helped teachers problem solve. Teachers also had follow up "booster sessions" where they could share information about implementation. Data collection included pre and post interviews with each teacher and weekly observations. Data analysis of observations was conducted weekly.

The results of the study indicated that there were nine teachers who were HI, nine that were MI, and eleven that were LI. "The most frequently cited barriers by teachers were a lack of sufficient instructional time, too many competing demands on time, and a lack of materials" (Klingner et al., 2003, p. 420). The researchers also observed that as their implementation level increased teacher mention of barriers to implementation decreased (Klingner et al., 2003). Insufficient time for implementation was the biggest

barrier reported by all teachers (Klingner et al., 2003). The facilitators of implementation that "teachers reported included students liking the strategies, students performing well during strategy implementation, administrative support, support from the research team, teachers feeling sufficiently prepared for strategy implementation and materials being provided" (Klingner et al., 2003, p. 423). The biggest facilitator reported by HI and LI teachers was administrator support. The biggest for MI teachers was coaching, but they also found administrative support important. The authors concluded that both LI and MI teachers needed greater support to learn how to use the strategies than had been provided to them (Klingner et al., 2003). The researchers felt there will always be a continuum of implementers and therefore the focus of administrative support is best directed towards increasing the implementation level of MI teachers (Klingner et al., 2003The authors state "our data indicate that the MI teachers in this study valued our weekly presence in their classrooms, but will have benefited from more administrative support, more assistance learning the critical components of the strategies, and more information about student benefits" (Klinger et al, 2003, p. 426).

Dove and Freeley (2011) conducted a study of the effects of leadership on the implementation of program innovations. Their "investigation focused on the implementation of the Dunn and Dunn Learning-Style Model, an innovative framework for teaching and learning" (Dove & Freeley, 2011, p. 27). The authors "examined the factors that initiated and fostered the process of …implementation through the end of its third year" (Dove & Freeley, 2011, p. 27). The factors affecting implementation that were studied in the research by Dove and Freeley (2011) can be viewed in the context of their

impact on the variables being studied in this dissertation study, which are teacher perceptions of expectancy, value, and cost.

The research design by Dove and Freeley (2011) was a case study using mixed methods with the primary data collection method being in-person interviews with the major stakeholders. Dove and Freeley (2011) also collected additional data "through …class-observation field notes and checklists, electronic teacher surveys, achievement-test-score evidence, and selected photographs and videotapes" (p. 27). Through purposive sampling, the researchers conducted only 19 interviews. The researchers observed a stratified random sample consisting of 35 total classrooms over a period of six weeks.

Dove and Freeley (2011) note several findings in the results of their study. They identified that democratic administrator leadership styles with a coaching orientation were both most common and most impactful on implementation by teachers (Dover & Freeley, 2011). The researchers do not provide evidence of this impact, however, and do not compare the impact of these styles to that of administrators using other styles. The authors also found that collaboration and leadership by teachers was more effective in changing practices in the schools than that of outside consultants (Dove & Freeley, 2011) but they do not explain what evidence in the data led them to this conclusion (Dove & Freeley, 2011). The researchers also found that administrative stability was a key factor facilitating the implementation (Dove & Freeley, 2011).

A major limitation of this research by Dove and Freeley (2011) is that the authors did not specifically answer some of their research questions. They did not state, for example, what were the obstacles to implementation. Also, the authors did not state the level implementation that occurred. This dissertation study of teacher implementation of

Project GLAD addressed some of these limitations in the study by Dove and Freeley (2011). Teacher levels of implementation of Project GLAD, for example, were specifically measured to identify whether different independent variables have a greater impact on teacher implementation than others. In addition, this dissertation study provided more in depth information by having tested the moderating effects of specific demographic and training variables, such as teacher grade level and recency of Project GLAD training, on the relationship between the independent variables and teacher implementation of Project GLAD.

Foorman and Moats (2004) conducted two mixed methods studies investigating the "conditions essential to sustaining and scaling research-based reading instruction…and major obstacles" (p. 51). The studies were undertaken over four years and "involved 1,400 children in 17 high poverty, low-performing schools in Houston and in the District of Columbia" (Foorman & Moats, 2004, p. 54). The authors report that the research methodology and procedures in both studies were similar, and the strategies being measured for implementation were similar as well. What was different between the two studies was the level of teacher professional development offered, with the teachers in the District of Columbia receiving significantly more support.

Based on teacher interviews and analysis of student achievement data, the authors concluded that although the professional development "was enthusiastically endorsed by participating teachers,…more objective measures…only begin to show modest relationships among teacher knowledge, teaching behavior and student outcomes" (Foorman & Moats, 2004, p. 56). Furthermore, Foorman and Moats (2004) also did not discern a difference between the studies in the academic achievement of students even

though teachers in the D.C. study received more professional development. Foorman and Moats (2004), however, noted a key difference between the Texas and D.C. schools in that the Texas schools were "flagship schools" recognized for high standards and effective practices whereas the D.C. schools were not. The authors did not address whether this difference could have effected implementation. Foorman and Moats (2004) further stated that "In our view, the primary obstacle to sustaining and scaling up sound practices in early reading is the dearth of informed instructional leaders who can press a well-articulated initiative for several years" (p. 58) but do not offer evidence to support this claim. Foorman and Moats (2004) did not attempt to measure the effectiveness of the specific type of professional development used in their study as it relates to teacher perceptions of expectancy, value, and cost. This dissertation research differs from the study by Foorman and Moats (2004) in that it does measure the direct impact of specific types of professional development in Project GLAD as a moderating variable on implementation. The study by Foorman and Moats (2004) of the impact of teacher professional development provides relevance to this dissertation study because the variables of teacher expectancy and value studied for this dissertation are influenced by professional development (Abrami, Poulsen, & Chambers, 2004; Brahier Shaffner, 2004).

Over three years Brahier and Schaffner (2004) studied a total of 48 teachers who participated in year-long study groups, each consisting of 16 teachers. The objective of the study groups was to support teachers in reforming their teaching practices in mathematics. Teacher volunteers were selected for the study groups from parochial and public schools.

The authors used a mixed methods research approach to study participants, Brahier & Schaffner, 2004). A pre and post self-report inventory was used to collect the quantitative data and qualitative data was collected through focus group interviews. In addition, site visits and teacher-provided videotape evidence were used to triangulate the data.

Members of the study group reflected on their instruction, developed their own unit plans and provided feedback to each other on their teaching(Brahier & Schaffner, 2004) During the second half of the study, they also planned and implemented outreach activities. Also, principals from the schools participating in the study met together in a Principal Advisory Committee to discuss and share ideas about the study group process.

The results of the study indicated that the "the teachers that had the greatest gains were those whose experience ranged from 11 to 25 years of experience. (Brahier & Schaffner, 2004). In addition, teachers from parochial schools made significantly greater gains than public school teachers.

Brahier and Schaffner (2004) reported from their data analysis that "teachers made gains in their confidence (feelings of self-efficacy) in teaching mathematics (and) collegiality and collaboration increased" (p. 175). Brahier and Schaffner (2004) concluded by asserting that "the use of a study-group approach to professional development showed a significant effect on the knowledge, beliefs, and practices of in-service elementary teachers" (p. 175).

The study by Brahier and Schaffner (2004) related to this dissertation research because it studied the variable of teacher confidence, which is related to the variable of self-efficacy studied in this dissertation study (Abrami et al., 2004). In addition, like this

dissertation study, it studied the link between this variable of teacher confidence and the variable of teacher implementation of instructional practices. An additional link is that Brahier and Schaffner (2004) studied the impact of a particular type of professional development on the variables of teacher confidence and implementation. The teachers surveyed for this dissertation study also had the same particular type professional development in common which consists of the same two day introductory overview course followed by a four to five day in-class room demonstration of Project GLAD strategies being taught to students. Also, unlike the study by Brahier and Schaffner (2004), this dissertation study did not measure differences between public and private school teachers. Another important difference with the study by Brahier and Schaffner (2004) was that this dissertation study went beyond studying the effect of teacher self-efficacy as it relates to expectancy on implementation but also studied the effects of teacher perceptions of value and costs.

A limitation to the study by Brahier and Schaffner (2004) was that all the teachers were volunteers rather than having been randomly selected. Since these teachers were motivated enough to volunteer, one wonders if they would not have been high implementers of the reform regardless of their participation in the study group process. Another limitation is that over half (54%) of the teachers worked in parochial schools. Although Brahier and Schaffner (2004) stated that both public and parochial school teachers made gains, they do not explore the differences between the two groups in the study. This is an important implication for generalizing the results of the study. A further threat to validity is that the videotapes submitted by teachers as evidence of their changed practice may not be an authentic representation of daily implementation.

This dissertation study avoids some of these limitations in the study by Brahier and Schaffner (2004). It does not require participants to become part of a lengthy study group process as part of the research. This study therefore may have attracted a wider sample of respondents including those teachers that would not have had the time to participate in the study group process as was required of participants in the study by Brahier and Schaffner (2004). Lastly, this dissertation study relied only on teacher self-reports about their level of implementation rather than on a teacher provided videotape. The reliance on self-reporting in this dissertation study may not be more reliable as evidence of implementation than a teacher selected and submitted video tape, but the anonymous nature of the dissertation survey instrument may provide different results than the confidential, but not anonymous, teacher videotapes used by Brahier and Schaffner (2004).

Carter and Van Norman (2010) studied the effects of consultation for preschool teachers on their implementation of class-wide positive behavior supports and student engagement. All teachers involved in the study were volunteers from one childhood development center. Teachers had one initial group presentation, an individual consultation meeting, and then one follow up consultation meeting in which the researcher shared observation data with the teacher about their implementation. Teachers had the opportunity for further consultation sessions but only one teacher opted for it. The methodology for data collection was quantitative and consisted of observers recording three times per week, for 25 minutes per observation, student engagement and teacher implementation.

In the results of the study, Carter and Van Norman (2010) report the "range of implementation increased between 33% and 100% across skills and classrooms" (p. 283). They also report, however, that there was no significant increase in student engagement. While the study by Carter and Van Norman (2010) did not show an increase in student engagement, it did show that the professional development methods increased teacher implementation of the instructional strategies. This dissertation study of teacher implementation of Project GLAD explored whether similar professional development methods, including group presentations and individual feedback to teachers, had an effect on the level of teacher implementation.

A limitation in the study acknowledged by Carter and Van Norman (2010) was that the duration appears to have been only for between three weeks and 6 weeks depending on the teacher and it was at the end of the school year. Carter and Van Norman (2010) also acknowledged the limitation of the study that the classrooms sampled were from one childhood development center which may hinder generalization of findings. This dissertation study of teacher implementation of Project GLAD addressed the limitations in the study by Carter and Van Norman (2010) by surveying teachers from multiple school sites in multiple geographic areas in the United States Also, in order to support the measurement of long term implementation in response to initial and follow up professional development this dissertation study was not limited to teachers who had initially been trained in Project GLAD relatively recently in the past two years, but it also included respondents that had been trained two or more years previously.

Gilbertson, Singleton, and VanDerHeyden (2007) studied the "effects of response dependent performance feedback on teacher implementation of math interventions" (p.

311). The study was conducted at a single elementary school. Teachers who referred students that needed academic support in math were asked to participate in the study. (Gilbertson et al., 2007). The primary outcome measured was how accurately teachers were able to implement the intervention according to the plan (Gilbertson et al., 2007). Consultants provided initial training to teachers on the use of peer tutoring and then teachers demonstrated to the consultant for one session in their classrooms implementing the intervention. The consultants monitored future treatment integrity through a review of permanent products. At the end of each day, researchers collected intervention boxes which included all of the materials and student products from the intervention for data analysis. Teachers were initially given daily performance feedback on their implementation based on the consultant's review of their permanent products from the previous day. This feedback was gradually phased out as teacher implementation integrity became more consistent with teachers only receiving feedback on days where implementation from the previous day had not met standard. Gilbertson et al. (2007) stated that upon entering the maintenance phase after phased support ended, "the teacher was not informed that…feedback had been discontinued (but) data collection procedures continued" (p. 317).

The results of the study indicated that high levels of implementation only continued for some of the teachers after faded support ended. A limitation of this study was that the researchers did not follow up to investigate whether those teachers that implemented the intervention after the phased support ended continued to do so after the study was over and the consultants had left. The small sample size and the fact that teachers were selected to participate in the study because they had previously asked for

help may indicate that teachers that did implement with fidelity were already motivated to do so regardless of the performance feedback.

Another limitation with this study by Gilbertson et al. (2007) is that it may not be realistic to provide daily performance feedback to teachers given current resource shortages in public schools. This dissertation study of teacher implementation of Project GLAD sampled primarily respondents who work in public schools in the Pacific Western U.S. where there have been considerable reductions in administrative and teacher staffing over the past several years due to budget cuts. Traditional methods of providing feedback to teachers on implementation by observations from site administrators or teacher coaches have inevitably become less frequent as a result of these cuts. Also, the research by Gilbertson et al. (2007) appears to have relied more upon measuring teacher implementation in response to external reinforcement mechanism of researcher feedback to teachers on their level of implementation. Unlike this dissertation study, the study by Gilbertson et al. (2007) did not measure teacher beliefs about the innovation, such as perceived value, efficacy, or cost, in relation to their level of implementation.

Pedersen and Liu (2003) examined through a year-long case study 15 teachers' beliefs about student-centered learning (SCL) and key issues that developed while the teachers implemented an SCL program. Pedersen and Liu (2003) cited prior research to assert that there is a link between teacher beliefs about what they are implementing and their implementation level. Unlike this dissertation research study, Pederson and Liu (2003) did not actually measure the implementation level of teachers and compare it to their corresponding beliefs about SCL. This dissertation study of teacher implementation of Project GLAD, however, measured teacher beliefs about the instructional innovation

and their corresponding implementation level. Pedersen and Liu (2003) also did not identify a theoretical framework to study teacher beliefs although they appear to have used some behaviorist methodology in having researchers provide specific and fading feedback to teachers about their implementation. In contrast to Pederson and Liu (2003), this dissertation study explored teacher cognition and explicitly used expectancy-value theory to measure the impact of teacher's beliefs on their level of implementation.

There were several limitations to this study. Pedersen and Liu (2003) stated that teachers need to believe that what they are implementing is useful and that all components of the innovation or there will not be fidelity of implementation. Pedersen and Liu (2003), however, did not investigate this assertion in their own study. They did suggest that future research is needed to explore the relationship between teacher beliefs and implementation, which is what this dissertation study of teacher implementation of Project GLAD sought to accomplish.

A key finding from the study was that "teachers do not all define terms in the same way and their different definitions may lead to miscommunication and discrepancies between the teacher's implementation of student-centered programs and the designers' intentions" (Pedersen & Liu, 2003, p. 74). In order to address this issue, Pedersen and Liu (2003) suggested teachers be provided with specific examples of strategies, such as through modeling, and collaboration time to discuss these practices together which will help "teachers link theory and practice, and figure out ways to apply their theoretical beliefs within the … the classroom" (p. 74). Teachers being surveyed for this dissertation study have received this modeling and collaboration time suggested by Pederson and Liu (2003) as part of the teachers' initial professional development training

in Project GLAD. A key component of the professional development provided to teachers of Project GLAD is the four to five day demonstration of the Project GLAD strategies being taught to students by a Project GLAD trainer. The afternoons of the demonstration days are spent by teacher trainees collaborating around how to plan Project GLAD units in their own classrooms.

Obara and Sloan (2009) conducted "a qualitative case study…to investigate the classroom experiences of three sixth-grade teachers and their mathematics coach as they worked with new instructional materials during the implementation of a new state-mandated curriculum based on performance standards in mathematics" (p. 349). The duration of the study was one school year. Obara and Sloan (2009) stated that the "geographic accessibility" of the school and the "willingness of the teachers and mathematics coach to participate" (p. 353) were the primary reasons that the site was selected for the study.

The results indicated that "the teachers in this study thought they had made 'big changes' in their practice but during classroom observations, it was hard to see what big changes the teachers were talking about" (Obara & Sloan, 2009, p. 368). Obstacles identified were teachers not having the skills to implement the standards with the large proportion of their students who were ELLs. In addition, it was found that collaboration sessions degenerated into individual planning time which researchers attribute to the mathematics coach not having time to structure the meetings appropriately for the teachers. Also, due to the teachers feeling pressure from their administration to increase standardized test scores, teachers supplemented the new curriculum extensively with drill and practice activities that they felt will positively affect student test scores. This

undermined the quality and fidelity of implementation. Obara and Sloan (2009) conclude by stating that "additional research is necessary to identify those resources that could provide these teachers, and others, with the support they need when coping with the ever-changing cultural landscape that we call the mathematics classroom" (p. 369). This study by Obara and Sloan (2009) identified a potential limitation of this dissertation study in that respondents to the survey about their implementation of Project GLAD could over-report their level of implementation. The survey of teacher implementation of Project GLAD attempted to address this issue by asking multiple survey questions to teachers (with each question written differently) about their level of implementation in order to identify inconsistencies in teacher responses which could indicate teacher over or under reporting their level of implementation. Surveys that were identified as having inconsistencies in responses were discarded. In addition, the survey was pre-tested with respondents to identify tendencies of respondents to over or under identify their level of implementation based on the question design.

Sy and Glanz (2008) "examined factors associated with teachers' implementation of a smoking prevention curriculum in a clustered randomized trial called Project SPLASH" (p. 264). The mixed methods study was conducted using process evaluation data with a sample of 60 teachers through the use of teacher interviews and training evaluations, student questionnaires, and the Project SPLASH database. The teachers were selected randomly from "the schools participating in a larger randomized trial" (Sy & Glanz, 2008, p. 265). The results of the qualitative data indicated "that most teachers …implemented most of their lessons, (with) 71.4% of …teachers reporting high implementation" (p. 269). The results of the qualitative data indicated that "more teachers

who taught in year-long class schedule formats and those who indicated having high self-efficacy fully implemented their lessons…. (and) more teachers who indicated that their curriculum was complex only partially implemented their lessons" (Sy & Glanz, 2008, p. 270).

The results of the study by Sy and Glanz (2008) using mixed methods supported the research hypothesis of this dissertation study that there is a relationship between teacher perceptions of their self-efficacy (related to expectancy) and their level of implementation. Limitations to this study were the relatively low sample size and that teacher fidelity of implementation was not fully explored (Sy & Glanz, 2008). This dissertation study of teacher implementation of Project GLAD addressed the sample size limitation in the study by Sy and Glanz (2008) by having a significantly larger sample with an effect size established as sufficient power through previous similar studies by Foley (2011) and Abrami et al. (2004). The dissertation study also confirmed the sufficiency of the sample size using G*Power sample size estimation software.

Foley's (2011) Study of Teacher Implementation

Foley (2011) used expectancy-value theory to explore K-3 teacher implementation of comprehension strategy instruction (CSI). Foley (2011) defined expectancy-value theory as an explanation of "human behavior as a function of two factors: (a) the perceived value of the reward that certain behavior yields and (b) the expectation in the doer that certain behavior will actually yield that reward" (p. 199). Foley's study was "also influenced by the Abrami, Poulsen, and Chambers (2004) who used expectancy-value theory to explore teacher implementation of a classroom pedagogy called cooperative learning" (p. 199).

In identifying the purpose for the study Foley (2011) stated that "improved understandings of teacher perceptions about implementing CSI will provide information for future decision-making regarding supports in primary literacy instruction" (p. 196). Teacher perceptions of their self-efficacy was a particular focus of the study because Foley (2003) asserted that teachers needed to feel competent to do the intervention or they will not be able to expect that implementing the innovation will provide the desired and valued result. The research questions for the study were: "(a) to what extent are primary teachers K-3 using CSI in their classrooms? (b) to what extent do teacher efficacies in expectancy, value, and cost surrounding CSI predict their perceived implementation levels of CSI?" (p. 200). This dissertation study of teacher implementation of Project GLAD was a modified replication of the study by Foley (2011).

A quantitative method was chiefly used to conduct the study although Foley (2011) also alluded to using qualitative open ended interviews. 197 randomly selected teachers responded to a survey regarding their training in and implementation of CSI. The survey was modeled on the "same scale" as the CL survey by Abrami et al. (2004)" (p. 201).

The results of the survey indicated that "three factors showed significance for predicting the implementation of specific comprehension strategies and delivery methods… (a) school support (b) expectancy, and (c) value" (Foley, 2011, p. 207). In addition, Foley (2011) found that the subtracted variable of cost in the expectancy-value equation "was not found to be a significant factor in predicting implementation levels of specific strategies" (p. 207). Foley (2011) found that teacher's expectancy and value

levels correlated with their degree and fidelity of implementation. Also, Foley (2011) found that teacher implementation increased in the higher grade levels studied. Furthermore, the more years of teaching experience a teacher had at their current grade level, the higher their level of implementation. Finally, the frequency of school support that a teacher received correlated with their level of implementation.

Foley (2011) recommends from her analysis of the survey data that teachers receive more support to "learn and engage in pedagogies new to them." From Foley's (2011) analysis of participant interview data which is not detailed in the article, she further recommends specific ongoing support to teachers from coaches. In addition, Foley (2011) recommends that "teachers stay in the same grade level for 8 years to build efficacy in management and curriculum so that low skills in these factors due not inhibit the implementation of innovations" (p. 211).

A limitation of this study noted by Foley (2011) is that more research is needed regarding specific supervisory action that can support teacher implementation and that "participants may have overstated or misrepresented their actual feelings and practices in the surveys" (p. 212). In addition, because teachers in this study did not receive the same initial training in CSI, it does not identify which professional development methods effected teacher beliefs in relation to their implementation. This dissertation study of teacher implementation of Project GLAD will sample teachers who had the same type of initial training. It also identifies respondents that had additional types of training, such as follow up coaching. This enabled this study of teacher implementation of Project GLAD to identify a correlation between the specific type of Project GLAD training strategy as a

moderating variable and the variables of teacher beliefs (independent variables) and teacher implementation (dependent variable).

Discussion

Synthesis of Common Themes Identified in the Literature

Facilitators of implementation. While there is relatively little research on teacher implementation of Project GLAD, there is significant research on teacher implementation of instructional innovations which were relevant to this dissertation study. Dove and Freeley (2011), Foley (2011), Foorman and Moats (2004), Gilbertson et al. (2007), Klingner et al. (2003), and Obara and Sloan (2009) all identified administrative support as a significant facilitator to teacher implementation of instructional innovations. Also, teacher coaching was identified by Klingner et al. (2003), Dove and Freeley (2011), Carter and Van Norman (2010), Gilbertson et al. (2004), Pedersen and Liu (2003), and Foley (2011) as being a significant facilitator. Dove and Freely (2011), Brahier and Schaffner (2004), and Pedersen and Liu (2003) identified teacher collaboration as being a significant facilitator. Obara and Sloan (2009) found collaboration to not be a facilitator, but they noted that the teacher collaboration in their study was not well structured with mechanisms for teacher accountability. Foley (2011) also identified teaching experience as a significant facilitator. In addition, Foley (2011), Klingner et al. (2003), Brahier and Schaffner (2004), Sy and Glanz (2008), and Obara and Sloan (2009) identified teacher self-efficacy as a facilitator of implementation. An additional facilitator to implementation identified by Foley (2011) was more teacher years of experience teaching at the same grade level.

Barriers to implementation. Klingner et al. (2003) and Sy and Glanz (2008) identified perceived complexity of the innovation to be a barrier to teacher implementation. Sy and Glanz (2008) contrasted self-efficacy as a facilitator and perceived complexity as a barrier in observing from their research that teachers "having high self-efficacy fully implemented their lessons…. (and) more teachers who indicated that their curriculum was complex only partially implemented their lessons" (p. 270). Based on the conclusions by Sy and Glanz (2008), this researcher speculates that the level of perceived complexity of Project GLAD could affect teacher perceptions of cost and their feelings of self-efficacy that they can expect to implement it effectively, although this dissertation study did not specifically study teacher perceptions of the level of complexity of Project GLAD.

Additional barriers were also identified in the studies. Klingner et al. (2003) and Sy and Glanz (2008) identified teacher perceived lack of time as an impediment to implementation. In addition, Klingner et al. (2003) and Obara and Sloan (2009) identified competing demands or goals as impediments to implementation, such as a competing goal for teachers to focus their instruction on drill and practice in order to prepare students for high stakes testing. Klingner et al. (2003) identified lack of teacher access to materials as a barrier to implementation. Wozney, Venkatesh, and Abrami (2006) identified perceived financial cost as a barrier. The resources required for Project GLAD, therefore, could affect teacher perceptions of cost to implement.

In addition, Klingner et al. (2003) found differences in barriers and facilitators to implementation between groups of teachers organized by implementation level. This dissertation study, however, did not include within its scope the organization of teachers'

responses by implementation level in order to explore any differences between the different groups.

Relevance of Identified Barriers and Facilitators to Expectancy-Value Theory

Abrami et al. (2004), Bandura and Lock (2003), Wozney et al. (2006), and Foley (2011) studied the role of the expectancy-value theory in teacher implementation of instructional innovations. The common barriers and facilitators identified in the studies can be grouped and synthesized according to the variables of expectancy-value theory.

The common facilitators of teacher collaboration, administrator support and coaching build teacher feelings of self-efficacy which facilitates their expectancy that they have the ability to successfully implement the innovation. These same facilitators also support teacher value of the instructional innovation. As teachers collaborate with peers in the implementation of the innovation, they are able to reinforce to each other the positive impact of the innovation as well as providing support to one another in implementing it. Administrators can support the building of teacher value of the innovation by regularly communicating its importance, including through holding teachers accountable for implementation, and by ensuring there are no other competing instructional priorities or goals that conflict with implementation of the innovation. Administrators can also provide support to build teacher expectancy by allocating sufficient time and other resources for sufficient teacher training in the initiatives. Coaches can help build teacher expectancy for the innovation through providing individualized feedback and modeling to teachers that build their sense of self-efficacy. Also, the fact that a coach is being provided by administrators communicates to teachers

that this innovation is important and valuable, and is further reflection of administrator support.

The similarly identified barriers to implementation can similarly undermine the development of teacher expectancy and value, as well as increase teacher perceptions that the cost to implement is too high. The lack of or insufficient level of the above facilitators is one of the most significant barriers to implementation. For example, while the teachers in the study by Obara and Sloan (2004) received collaboration time, it was poorly structured, and rendered ineffective as a facilitator. In addition, insufficient time to learn and implement the innovation while also meeting other teaching demands is an example of a significant barrier (Klingner et al., 2003; Sy & Glanz, 2011). This barrier of insufficient time is perceived as a cost to teachers of implementation.

Literature Review Concept Map

The literature concept map (p. 28) is structured on the variables of expectancy-value theory. The first level of mapped concepts states the variables of teacher expectancy, teacher perceptions of value, and teacher perceptions of cost. Under each of these concepts are mapped the factors that are related to these variables as well as factors that facilitate or are barriers to them. The variables of expectancy-value theory are linked in red with the equation developed by Wozney, Venkatesh, and Abrami (2006) as expressed by teacher expectancy, plus perceptions of value, minus perceptions of cost, equals level of implementation.

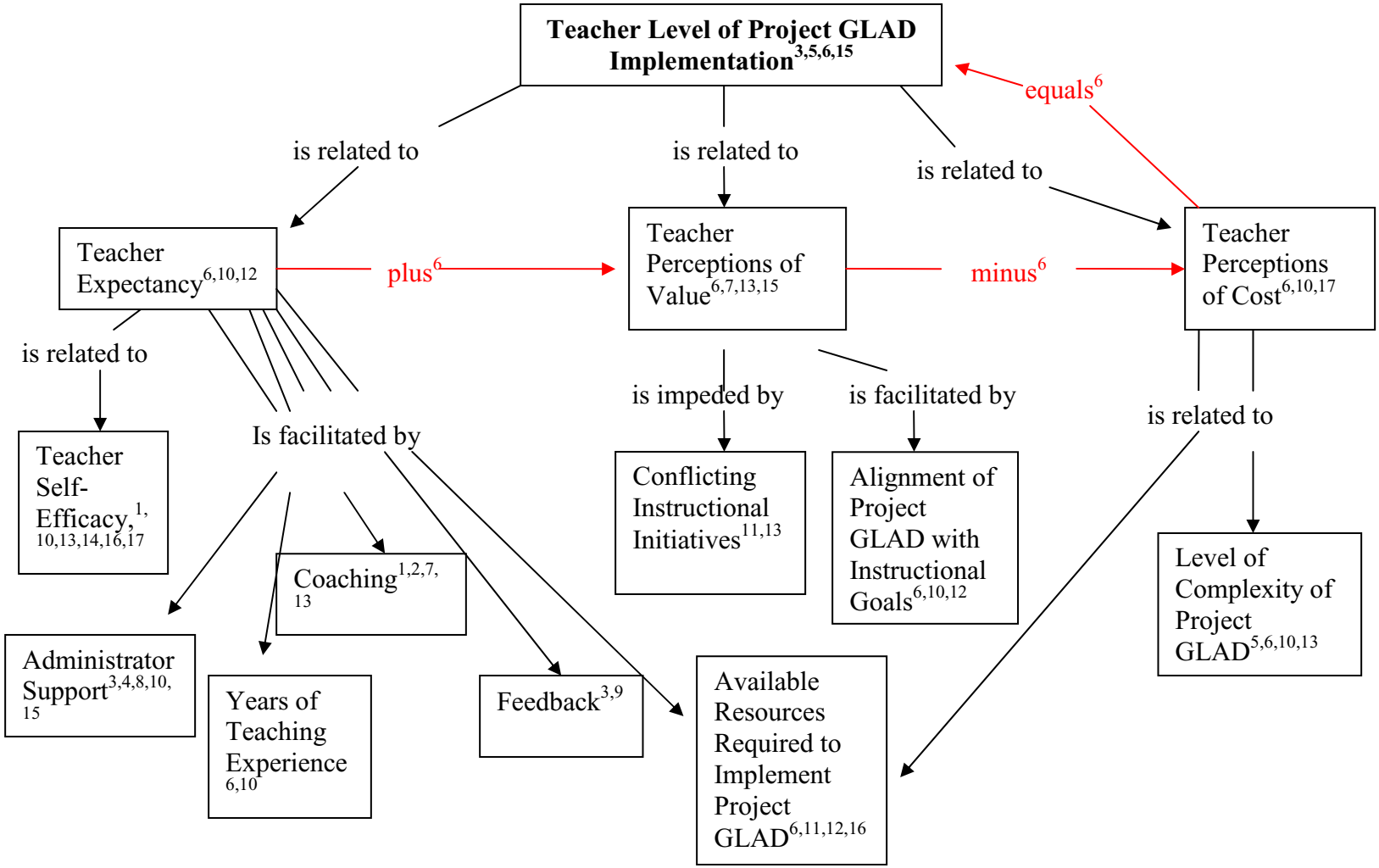

Figure 1 Concept Map

Gaps in the Research

A key gap in the knowledge is detailed information about what particular types of support by administrators are shown to be most effective in facilitating teacher implementation. Another gap is research on identifying specific facilitators of fidelity of implementation. An additional gap is the lack of unobtrusive studies of teachers who were not volunteers. The voluntary nature of most of these studies could have led to the teacher participants being more motivated to implement than the average teacher. A further gap is that only the studies by Dove and Freeley (2011), Klingner et al. (2003), Foorman and Moats (2004), and Foley (2011) examined differences in the level of implementation in response to different facilitators and barriers.

Conflicts in the Research

A major conflict identified between the findings of the different studies related to the impact of cost as a barrier to teacher implementation. The studies by Klingner et al. (2003) and Obara and Sloan (2009) found that costs in time or in distractions from other instructional goals were significant barriers to implementation. In Foley's (2011) study, however, cost was not found to have had a significant effect on the level of teacher implementation.

There were also significant differences between the studies in design quality and in the depth and quantity of data that was revealed. The study by Foley (2011) was the only one to provide a theoretical basis for conducting the research through the use of expectancy-value theory. This theory provided a useful lens for this researcher for the analysis of the other studies. The studies by Foley (2011), Sy and Glanz (2008), and Klingner et al. (2003) also appeared from their descriptions to be the most well

designed with appropriate consideration of inter-rater reliability, research question design, instrumentation, and sample size appropriate to methods used. These researchers also provided specific statistics from both qualitative and quantitative measures to address issues of significance and correlation which made the results more credible to this researcher. The organization of participants by level of implementation by Klingner et al. (2003) allowed for more depth of analysis. This aspect added particular credibility to their study because it separated out participants that may have not been affected by the obtrusiveness of the research and the Hawthorne effect. Areas for further research related to the needs of teachers of students that are ELLs include determining the applicability of the expectancy-value theory to the implementation of Project GLAD and whether there are any particular obstacles and facilitators to implementation that are particular to Project GLAD and teachers in schools with a high number of students who are ELLs.

Conclusions from the Literature for the Implementation of Project GLAD

Based on the results of these studies and the themes and patterns which emerged, a research-supported set of strategies that an instructional leader can draw from in order to support implementation of Project GLAD within the framework of expectancy-value theory will include the following characteristics, some of which were measured by this survey: 1) providing regular time to teachers for structured collaboration in planning and problem solving around implementation, 2) avoiding sending mixed messages to teachers by providing other instructional goals which conflict with implementation goals (i.e. emphasizing strategies for short term test prep for standardized testing while emphasizing implementing Project GLAD strategies), 3) provide teachers with

sufficient time to implement the strategies, 4) providing regular opportunities for coaching to teachers on the strategies, 5) differentiating support to teachers based on their specific needs (i.e. different support to MI teachers vs. HI teachers), 6) ensuring that teachers receive sufficient training and follow up support so that they sufficiently value the instructional innovation and develop appropriate levels of self-efficacy in the skills required and the expectation that they will be able to implement the strategies to achieve the desired outcomes, 7) providing less experienced teachers with support in behavior management, curriculum, and other areas which could otherwise distract from the teachers ability to focus on implementing the innovation, 8) providing access to sufficient materials and other resources to teachers which are necessary for implementation, 9) developing individual implementation plans with teachers that addresses potential obstacles to implementation and which the administrator can utilize to help hold teachers accountable for implementation, and 10) utilizing a theoretical basis as a focusing lens for providing and assessing implementation, such as that of expectancy-value theory (Brahier & Schaffner, 2004; Brechtel, 2005; Carter & Van Norman, 2010; Dove & Freeley, 2011; Foley, 2011; Foorman & Moats, 2004; Klingner et al., 2003; Obara & Sloan, 2009; Pedersen & Liu, 2003; Sy & Glanz, 2008). While there may be other obstacles and facilitators for implementation to Project GLAD that are specific to a particular school or teaching context, the themes and patterns and the related strategies for implementation that emerged from this review of current research informed the development of the survey instrument and the conclusions drawn from the survey results.

CHAPTER III: METHODS

Research Approach and Methodology

This study replicated a quantitative study conducted by Foley (2011) that examined teacher implementation of an instructional innovation in the Rocky Mountain West using expectancy-value theory as the theoretical framework. This dissertation study used a survey design that measured categorical, ordinal, and interval variables.

Research Questions and Hypotheses

There were two research questions adapted and modified from the study by Foley (2011) which are:

- To what extent are K-12 teachers using Project GLAD in their classrooms?
- To what extent do teacher efficacies in expectancy, value, and cost surrounding Project GLAD predict their perceived implementation levels of Project GLAD?

The null hypotheses were:

- There is no relationship between teacher expectancy that they will be able to implement Project GLAD to achieve the desired outcome and their level of Project GLAD implementation.
- There is no relationship between the degree that a teacher values Project GLAD as an instructional approach and their level of Project GLAD implementation.
- There is no relationship between teacher perception of the degree of cost of implementation (i.e. in time and energy) and their level of Project GLAD implementation.

The research hypotheses were:

- There is a positive relationship between teacher expectancy that they will be able to implement Project GLAD to achieve the desired outcome and their level of Project GLAD implementation.
- There is positive relationship between the degree that a teacher values Project GLAD as an instructional approach and their level of Project GLAD implementation.
- There is a negative relationship between teacher perception of the degree of cost of implementation (i.e. in time and energy) and their level of Project GLAD implementation.

Research Purpose

The purpose of this research was to enable educational leaders and researchers to be able to make more informed decisions about how to support teacher implementation of Project GLAD and how to design professional development around this instructional model that supports implementation.

Study Procedures

Creating and Field Testing the Survey

This researcher conducted an anonymous teacher self-administered survey using a modified existing survey instrument developed by Foley (2011) to measure teacher implementation of an instructional innovation. The survey instrument was modified to fit the specific needs of this study. Permission was obtained from Foley (2011) to replicate her study and use the survey instrument, with modifications, for this purpose. The survey instrument was empirically-validated by Foley (2011) and is modeled on the scale from another survey instrument on teacher implementation, the Cooperative

Learning Implementation Questionnaire (CLIQ), that was that was developed and empirically tested by Abrami, Poulsen, and Chambers (2004).

The CLIQ was developed by Abrami et al. (2004) for their study of the implementation of cooperative learning by teachers. Foley (2011) used the CLIQ scale as a model in the design of the questionnaire for her study of the implementation of comprehension strategy instruction by teachers. Foley (2011) named her survey instrument the Comprehension Strategy Instruction Questionnaire (CSIQ). The survey instrument is grounded in expectancy-value theory and measures teacher perceptions of expectancy, value, and cost in regards to the implementation of instructional innovations (Abrami et al., 2004; Foley, 2011). The survey instrument also includes a section that measures the teacher level of implementation so that teacher perceptions of the variables of expectancy, value and cost can be correlated to the actual level of teacher implementation. Some of the survey items were removed or rewritten to make the survey more applicable for this study of the teacher implementation of Project GLAD.

The instrument scale for the questionnaire has been used effectively in two different studies which adds support to its reliability and validity. In the study by Abrami et al., the questionnaire was administered in person to 1,031 respondents during staff meetings. 98 of the respondents were eliminated because of missing data, noticeable unreliability in their responses (indicating guessing) or they clearly misunderstood the instructions. The researchers were thus able to effectively measure 90.5% of the sample. Foley (2011) mailed the survey to 400 teachers and achieved a response rate of 197 or 49%. Foley (2011) held that the return rate was above the

minimum 40% that was calculated as necessary "to reach reliability" (p. 201). Foley also pilot tested the survey to ensure that it was a valid measure of what was intended to be measured regarding teacher implementation.

Data Collection Methodology

The survey for this dissertation study was conducted online using cloud-based SurveyMonkey software. The link to the survey was distributed via email using a snowball sampling strategy. The National Training Center (NTC) for Project GLAD provided their email list of current and active Project GLAD trainers for the researcher to contact to distribute this survey to teachers they had trained in Project GLAD. Some of the trainers who were teachers took the survey as well. The NTC also provided access for this researcher to their Project GLAD email listservs and online forums for distributing the survey directly to potential respondents. In addition, this researcher distributed the survey to approximately 145 teachers who were trained in Project GLAD in the school district where this researcher worked. Approval to distribute the survey was provided by the school district's research review board. The survey was also distributed by a Project GLAD training company affiliated with the NTC that was local to the area and school district where this researcher worked.

Modification of the CSIQ for this Study

The modified survey instrument contained three main parts: one that collected demographic and training information, a second that collected data on teacher implementation of Project GLAD strategies, and a third that collected data on teacher perceptions on implementing Project GLAD through the framework of expectancy-value theory using a Likert scale. The CSIQ was modified in order to ensure that: 1) the

survey items measured the research questions and hypotheses of this particular study of teacher implementation of Project GLAD, 2) the survey was kept sufficiently short to encourage more respondents to complete it, and 3) the items measuring variables found not to have a significant effect on teacher implementation in the study by Foley were removed. In order to shorten the survey, the portion of the second section in the CSIQ that measured the implementation of specific strategies was removed. Also, the demographic and training survey items in the first section of the CSIQ were pared and modified to eliminate the measurement of some of the demographic and training variables found in the study by Foley (2011) to not significantly affect general implementation and to add variables specific to Project GLAD implementation. The six demographic and training variables studied in this dissertation survey were old vs. new degree, current grade level taught, years teaching in current grade level, degree of school support, level of Project GLAD training, and recency of GLAD training. In addition, items that measured specific aspects of Comprehension Strategy Instruction were either reworded to measure GLAD or were removed if modification was not possible. As in the CSIQ, both positive and negative survey items were used in the survey in attempt to elicit more valid and reliable responses. Through the process of paring down and modifying the CSIQ for the purposes of this study, the number of total survey items was reduced from 70 to 51, and the number of total necessary responses (since some items in the CSIQ required multiple responses) were reduced from 87 to 51.

GLADQ Belief Item Categories

Like the CSIQ, the GLADQ belief items were organized into categories to measure specific teacher perceptions relating to the variables of expectancy-value theory. The belief survey items for the category of expectancy were further disaggregated into four survey item subcategories: support (S), student characteristics (SC), environment (EV), and self-efficacy (SC). The belief survey items for the category of value were disaggregated into five item subcategories: career advancement (CA), student achievement (SA), interpersonal skills (I), improved attitudes (IA), and philosophy. The belief survey items for the category of cost were disaggregated into three item subcategories: time (T), effort (E), and money (M).

Table 2

GLADQ section III belief item categories including numbers of items and polarity

Category	Specific survey items that measure each subcategory	Total number of positive items per subcategory	Total number of negative items per subcategory
E = Expectancy subcategories			
SE = Self-efficacy	1,2,3	2	1
EV = Environment	4,5	1	1
S = Support	6,7,8	2	1
SC = Student Characteristics	9,10,11,12	0	4
V = Value subcategories			
SA = Student achievement	13,14,15,16	2	2
P = Philosophy	17,18,19	2	1
CA = Career advancement	20, 21	1	1
I = Interpersonal skills	22	1	0
IA = Improved attitudes	23	1	0
C = Cost subcategories			
EF = Effort	24,28	0	2
M = Money	25,26,30	1	2
T = Time	27,29,31	1	2

Instrumentation

Nature and Appropriateness of Survey Technique

The use of a survey as the instrument of data collection for this study enabled this researcher to be able to efficiently gather specific data to test the hypotheses. The selected survey instrument scale to be modified for this study has been used effectively in two similar studies by Foley (2011) and Abrami et al. (2004) to test the same or similar variables.

Research Sample

As part of the sampling plan the surveys were distributed to an estimated minimum of 3,280 teachers from the target population of current teachers trained in Project GLAD in the United States. Foley (2011) calculated for her study that a sample size of at least 180 survey respondents was necessary in order to establish 80% power based on an effect size of $r^2 = .10$, a 95% confidence level, three predictor variables, and up to 12 moderating variables. A sample size analysis for this dissertation study using G*Power with the same effect size and confidence level used by Foley (2011), but with only nine covariate or moderating variables (nine predictor variables for G*Power calculation purposes) calculated that a sample size of 166 respondents was the minimum sample size necessary for this dissertation study. The specific statistical test used to make this calculation was a linear multiple regression, fixed model, r^2 deviation from zero (F test). One hundred seventy-three participants provided valid responses to this survey. The minimum sample size was therefore achieved for this study.

The sampling plan of this study was primarily snowball sampling of 173 teachers located throughout the United States. This is a departure from the sampling plan by Foley (2011) which used quota sampling of proportionate numbers of teachers from different grade levels that were randomly selected to participate from clusters of districts that were also randomly selected in a state in the Rocky Mountain West. Unlike Foley (2011), Abrami, et al. (2004) did not indicate that they used random sampling methods to select respondents for their similarly scaled survey of teachers at faculty meetings regarding their implementation of cooperative learning strategies.

The survey for this dissertation study was sent to different groups of teachers trained in Project GLAD. It was directly emailed to approximately 2,136 teachers on NTC listservs for Project GLAD-trained teachers and teacher trainers. It was also emailed to 63 Project GLAD trainers affiliated with the NTC with the request that the trainers forward the survey to teachers that they had trained in Project GLAD. Some of the Project GLAD trainers were classroom teachers and also took the survey. Based on email response from some of the trainers, it is estimated that the survey was forwarded to at least 980 additional teachers. Also, the research review board of the school district where this researcher works gave permission to the researcher to email the anonymous survey to approximately 145 district teachers trained in Project GLAD. There were 210 valid and invalid responses to the survey. Based on the timing of the responses, it is estimated that approximately 20 of the responses were received from teachers on the NTC listservs or who were referred to the survey by colleagues on the listservs. Approximately 150 of the responses were received from teachers who were referred to the survey by their trainer or by other teachers who had taken the survey after being referred to it by their trainer. Approximately 40 of the responses came from teachers trained in Project GLAD from the district where this researcher works. Teachers that completed the survey and redeemed a gift card incentive were sent a follow up email encouraging them to invite their Project GLAD-trained teacher colleagues to complete the survey.

Descriptive Statistics from the Sample

One hundred seventy-three teachers provided valid responses to the survey. The response rate of valid responses is estimated to be 6%. An additional 37 responses were received that were deemed invalid by the researcher and were not included in the analysis. Reasons for finding survey responses invalid included 12 respondents indicating that they were not classroom teachers as was required, ten respondents completing the survey too quickly with responses that appeared at random, and 15 blank surveys submitted. This rate of invalid responses is attributed primarily to the attraction of the $10 gift card incentive for completing the survey which may have led some participants to provide invalid responses in order to participate or in attempt to more quickly reach the end of the survey and receive the incentive.

Table 3 provides the descriptive statistics for responses to the survey question regarding how recently teachers completed their last degree. Similar to Foley's (2011) methodology, a degree earned by a respondent more than four years previously was considered old, and a degree was considered new if it was earned four or less years prior to the respondent's taking the survey. One hundred forty-four respondents completed their latest degree prior to 2010, and 29 completed their latest degree in 2010 or more recently.

Table 3

Frequency Table for Old Degree vs. Recent Degree

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Old Degree	144	83.2	83.2	83.2
	Recent Degree	29	16.8	16.8	100.0
	Total	173	100.0	100.0	

Table 4 provides the descriptive statistics for the survey question which measured the current grade level(s) that respondents taught. Of the 173 participants in the sample, a high proportion of teachers (84.9%) taught in single-grade or consecutive two-grade combination classes at the elementary level (kindergarten through fifth grade). Only 7.2% taught single-grade or consecutive two grade combination classes at the secondary level (sixth to twelfth grades).The percentage of teachers at each grade level was relatively similar at the elementary level in the sample. The percentage of teachers categorized as “Other” that taught more than two and/or non-consecutive grades was 8.1% (n = 14). Teachers that taught different combinations of multiple grade levels were separated out in order to prevent duplication in the calculation of teachers at each grade level for the testing.

Table 4

Frequency Table of Grade Level Taught

	Frequency	Percent
None	2	1.2
Preschool	1	.6
Transitional Kindergarten	1	.6
Transitional Kindergarten/Kindergarten	2	1.2
Kindergarten	21	12.1
1st	23	13.3
1st/2nd	3	1.7
2nd	20	11.6
2nd/3rd	3	1.7
3rd	23	13.3
3rd/4th	1	.6
4th	21	12.1
4th/5th	3	1.7
5th	22	12.7
5th/6th	1	.6
6th	6	3.5
7th	1	.6
7th/8th	1	.6
8th	2	1.2
10th	1	.6
12th	1	.6
Other	14	8.1

Total	173	100.0

Table 5 provides the descriptive statistics for the survey question which measured the number of years respondents had taught at their current grade level(s). Teachers generally trended to have fewer years of experience at their current grade level. The majority of respondents (54.4%) had taught at their current grade level for four years or less. The percentage of teachers that taught for 10 years or less was 81.5%.

Table 5

Frequency Table for Years Taught at Current Grade Level

	Frequency	Percent	Valid Percent	Cumulative Percent
<1	15	8.7	8.7	8.7
1	13	7.5	7.5	16.2
2	29	16.8	16.8	32.9
3	24	13.9	13.9	46.8
4	13	7.5	7.5	54.3
5	12	6.9	6.9	61.3
6	14	8.1	8.1	69.4
7	4	2.3	2.3	71.7
8	6	3.5	3.5	75.1
9	7	4.0	4.0	79.2
10	4	2.3	2.3	81.5
11	5	2.9	2.9	84.4
12	5	2.9	2.9	87.3
13	3	1.7	1.7	89.0
14	3	1.7	1.7	90.8

15	3	1.7	1.7	92.5
16	1	.6	.6	93.1
17	2	1.2	1.2	94.2
18	2	1.2	1.2	95.4
19	3	1.7	1.7	97.1
20	2	1.2	1.2	98.3
21	2	1.2	1.2	99.4
31+	1	.6	.6	100.0
Total	173	100.0	100.0	

Data Analysis

SPSS was used to conduct multiple linear regression analyses of the data in order to determine whether, and to what effect, the different scaled belief variables and categorical and ordinal demographic and training variables predict the dependent variable of teacher level of implementation. The scaled belief variables were teacher expectancy, value, cost and levels of perceived support. The demographic and training variables were education (old degree vs. new degree), current grade level taught, years teaching in current grade, level of Project GLAD training, and recency of Project GLAD training. The categorical and ordinal variables related to demographics and training were included to adjust for teacher differences within the sample. Other demographic and training variables that were included in the study by Foley (2011) but which were not found to have a significant effect on implementation in Foley's (2011) study were not be included in this study. The elimination of these additional variables lowered the number of survey items and increased survey reliability by increasing the

number of responses per survey item. Two demographic and training variables which are specific to Project GLAD were included in the survey. These variables were level of Project GLAD training and how recently respondents completed their Project GLAD training.

The investigation was conducted using closed question surveys of teachers regarding their perceptions of the effects of the nine independent variables noted above on their level of implementation. Data was numerically coded and entered into SPSS to identify correlations and to be standardized for comparative purposes (Creswell, 2012). This researcher used the pre-developed survey instrument that had already been tested and developed by Foley (2011) in order to explore the correlation between teacher motivations via the expectancy-value model and self-reported use of Project GLAD strategies (Foley, p. 199, 2011). The instrument both measured the level of general teacher implementation of Project GLAD and it measured teacher beliefs regarding the effects of the variables of expectancy, value, and cost on their level of implementation. The survey used a Likert scale with a numerical range of 1 to 5. The sample frame contained at least 3,280 teachers at the prek-12 level that were invited to complete the survey primarily through snowball sampling techniques. Out of this sampling frame, 210 of those contacted chose to respond and 173 provided valid results that could be included in the sample analysis. The 37 responses not included in the analysis were removed for the following reasons: the respondent indicating they were not a classroom teacher, the survey being left blank, or the survey having been completed too quickly (less than 3 minutes and 10 seconds) and the responses appearing to have been provided at random.

Data was analyzed descriptively and inferentially to answer the quantitative hypotheses by summing "the scores from the items within the expectancy, value, …cost," support and demographic and training factors (Foley, p. 203, 2011) and then the data was entered into SPSS for statistical testing. Descriptive statistics for each survey item and for each survey factor were computed including mean, median, mode, frequency, range, and standard deviation (Creswell, 2012; Foley, 2011). Significance was established at the .05 level. Like the study by Foley (2011), this dissertation study added "training and selected demographic variables … to adjust for differences in teacher characteristics (e.g., grade level experience)" (p. 204).

A multiple regression test was selected as the appropriate statistic to use because it can test for a relationship between the independent variables (expectancy, value, cost, school support, old degree vs. new degree, current grade level taught, years taught in current grade level, level of training, and recency of training) and the one dependent variable of general teacher implementation (Creswell, 2012). A "multiple regression (or multiple correlation) is a statistical procedure for examining the combined relationship of multiple independent variables with a single dependent variable" (Creswell, 2012, p. 350). Both the independent variables and the dependent variable being continuous is also required for a multiple regression test (Creswell, 2012). The multiple linear regression analysis was conducted using a backwards elimination methodology.

Normality

A Shapiro Wilkes test for normality was conducted to determine if the survey results were parametric, or normally distributed. The scaled item sections of the survey were tested separately in the Shapiro Wilkes test including the sections measuring the

teacher belief factors of expectancy, value, and cost. Responses for the scaled item section measuring teacher general implementation were also tested.

Table 6 provides the results of a Shapiro-Wilk normality test for the scaled variables. The results at $p < .05$ indicate that the variables of expectancy at .113 and cost at .06 are the normally distributed. The variables of implementation at .002 and .value at .000 were found to be not normally distributed. This may have been because some of the respondents self-selected to participate in the sample and the sample frame also had elements of convenience sampling.

Table 6

Normality Test Results for Study Variables

	Shapiro-Wilk		
	Statistic	df	Sig.
Teacher Expectancy	.987	170	.113
Teacher Value	.958	170	.000
Teacher Cost	.985	170	.060
Teacher Level of Implementation	.973	170	.002

The results of the Shapiro Wilk test indicated that the factors of value and general implementation were not normally distributed. A Spearman's Rho test for nonparametric data was therefore conducted in order to determine if there was an association between the scaled study variables of expectancy, value, cost and general implementation.

As with the study by Foley (2011) a Cronbach's Alpha test was also conducted to determine the level of internal consistency of the survey instrument (Salkind, 2011).

The scaled sections of the survey were tested separately in the Cronbach's Alpha test including the sections measuring the teacher belief factors of expectancy, value, and cost. Then the belief factors were tested all together. Responses for the section measuring teacher general implementation were also tested and a final test was conducted for the total instrument.

Internal Consistency Reliability

Table 7 provides the results of the calculation of the internal consistency reliability statistics for the 39 scaled survey items included in the calculations measuring the predictor variables of expectancy, value, and cost, and the predicted variable of implementation. The result of the calculations indicates high internal consistency with all scales above .800 except for cost.

The Cronbach's Alpha reliability coefficient for the cost scale was originally calculated to be .654, but a review of the instrument found cost item number 31 to be ambiguous. The decision was made to remove item number 31 from the testing and the cost coefficient rose to .748 which was deemed an acceptable level. Foley (2011) also found in their study that the alpha for the cost coefficient was low compared to the other scales at .564 and speculated that the cause was "respondent ambivalence over unclear item wording (p. 204).

Table 7

Instrument Reliability by Scale

Scale label	# of survey items	Scale N	Cronbach's alpha	Mean	Variance	SD
Expectancy	12	164	0.819	44.9695	39.539	6.28800
Value	11	165	0.886	45.6788	38.671	6.21857
Cost	7	167	0.748	23.9102	18.070	4.25091
Belief Items Together	30	154	0.808	114.2792	108.294	10.40644
Implementation	9	160	0.898	30.3875	49.044	7.00313
Total Instrument	39	145	0.886	144.9172	242.910	15.58556

Note. Total number of respondents was 173, but *N* varies reflecting items left blank in each section.

Limitations of the Research Design

There were several limitations to the research design developed by Foley (2011) which this study sought to partially replicate. There were also limitations specific to this current study of teacher general implementation of Project GLAD. Since the research design was quantitative using a survey with closed questions, it was not able to explore the process of teacher Project GLAD implementation with the depth or breadth that a qualitative research design with open-ended questions for respondents would have provided. This limitation may have led to important factors relating to implementation being left out from the data or not fully explained. In addition, due to the need to keep the survey brief enough so that more respondents would be willing complete it, this study did not explore the factors which affect teacher implementation of specific Project

GLAD strategies. Instead, the research sought to identify the factors which affected teacher general implementation of Project GLAD.

A limitation of the study conducted by Foley (2011) was that there were too few responses per survey item. Foley (2011) stated that "due to a low number of participants per survey item (about five per item), the findings are also limited. The required 10-15 participants-per-item for the confirmatory factor analysis was not met" (p. 212). In order to address this limitation, Foley (2011) recommended future studies decrease the number of independent variables or increase the proportion of respondents per survey item.

This modified replication of the study by Foley (2011) to research teacher general implementation of Project GLAD attempted to heed the recommendations of Foley (2011) by reducing the number of survey items. This was primarily accomplished by having only one dependent variable, that of general implementation, and therefore eliminating the second dependent variable of specific implementation that was included in the study by Foley (2011).

Reducing the number of survey items on the survey also sought to address a limitation of a low response rate to the online survey. Foley (2011) calculated that out of the 400 surveys distributed, a 40% response rate was required to establish power. Foley (2011) achieved a 49% response rate. The response rate to this current study was predicted to be 20%, but a 6% rate was achieved. Because of the lower response rate, the number of teachers invited to participate in the survey was increased in order to reach the target number of responses. The lower response rate compared to the study by Foley (2011) is speculated to be due to the current survey having been online and

distributed by email rather than having been sent via postal mail as was the case in the study by Foley (2011). According to Fowler (2009), online surveys that are emailed to potential participants tend to have lower response rates than mailed surveys.

Ethical Considerations

The survey followed district and CUC IRB guidelines. Each participant completed an anonymous self-administered questionnaire online in order to ensure confidentiality. Participants were not asked to provide the names or locations of their schools or districts on the survey. While a $10 gift card and an entry in a $100 sweepstakes redeemable and conducted online were used as incentives to encourage the first 200 respondents to complete the survey, this was not felt to be significant enough of a financial incentive to pressure teachers of limited financial means to complete the survey that otherwise would not. In order to further protect confidentiality, the published results of the research and dissertation will not divulge the location of the study, except to state that it occurred in the United States.

Timeframe

The survey was distributed to targeted respondents between February 2014 and April 2014 in order to avoid conflicts with summer and winter vacations and the particularly busy period for teachers in September right after school begins. Data was analyzed between April 2014 and July 2014. The projected completion date of this dissertation is December of 2014.

Methodological Differences between this Study and Foley's (2011)

There were several major differences in methodology between this study and that conducted by Foley (2011). This study used primarily snowball sampling while

Foley (2011) used stratified random sampling. Foley (2011) studied both teacher implementation of specific strategies and teacher general implementation of CSI while this study only researched general implementation of Project GLAD. Foley (2011) sampled approximately 400 teachers in one state by mail and obtained a 49% response rate. This study sampled over 3,280 teachers nationwide using email with a 6% response rate. Foley (2011) studied K-3 grade teachers while this research studied K-12 teachers.

Conclusion

This study used a quantitative survey design to measure the effects of the independent variables of expectancy value theory, in conjunction with certain demographic and training variables, upon the dependent variable of general teacher implementation of Project GLAD. The inclusion of specific items in the survey instrument that measure each variable enabled the answering of the research questions and the testing of the hypotheses. The survey items were reviewed by experts in Project GLAD training and implementation for validity. The survey and cover letter were also pre-tested by seven Project GLAD trained teachers. In addition, the scales and general format of this survey instrument were field tested in two previous studies with satisfactory results to ensure validity and reliability. Furthermore, the required sample size for this research design was calculated using accepted practices in the quantitative research field including the use of a G*Power analysis. This survey research design therefore provided a significant likelihood for answering the research questions in this study.

CHAPTER IV: RESULTS

Approach of Study

The purpose of this research was to enable educational leaders and researchers to be able to make more informed decisions about how to support teacher implementation of Project GLAD.

Research Questions and Hypotheses

There were two research questions adapted and modified from the study by Foley (2011) which are:

- To what extent are K-12 teachers using Project GLAD in their classrooms?
- To what extent do teacher efficacies in expectancy, value, and cost surrounding Project GLAD predict their perceived implementation levels of Project GLAD?

The null hypotheses were:

- There is no relationship between teacher expectancy that they will be able to implement Project GLAD to achieve the desired outcome and their level of Project GLAD implementation.
- There is no relationship between the degree that a teacher values Project GLAD as an instructional approach and their level of Project GLAD implementation.
- There is no relationship between teacher perception of the degree of cost of implementation (i.e. in time and energy) and their level of Project GLAD implementation.

The research hypotheses were:

- There is a positive relationship between teacher expectancy that they will be able to implement Project GLAD to achieve the desired outcome and their level of Project GLAD implementation.
- There is positive relationship between the degree that a teacher values Project GLAD as an instructional approach and their level of Project GLAD implementation.
- There is a negative relationship between teacher perception of the degree of cost of implementation (i.e. in time and energy) and their level of Project GLAD implementation.

This study replicated a quantitative study conducted by Foley (2011) that examined teacher implementation of an instructional innovation in the Rocky Mountain West using expectancy-value theory as the theoretical framework. A literature review was initially conducted in relation to the factors that influence teacher implementation of instructional innovations. This study then used a survey design that measured categorical, ordinal, and interval variables. A 5 point Likert scale was used in the survey to measure teacher beliefs about Project GLAD and their level of implementation. There were 173 K-12 teachers included in the sample. Snowball sampling was the primary method used to elicit participants in the survey research.

Presentation and Summary of Data

This chapter provides a summary of the quantitative data generated in the survey research of the study. Specifically, this chapter: 1) describes the training information collected from the sample population surveyed including survey reliability, data collected from the survey, and the correlation discovered between certain demographic

variables and teacher reported levels of implementation of Project GLAD; 2) reports and describes findings related to the first research question including survey reliability and data collected from the survey of teachers; 3) reports and describes findings related to the second research question including survey reliability, data collected from the survey of teachers, and the correlation discovered between teacher beliefs surrounding Project GLAD and their level of implementation of the instructional model and an explanation of the multiple regression analysis completed on the data collected; and 4) present a summary of data findings.

Descriptive Statistics for Level of Project GLAD Training

The statistics for the levels and recency of Project GLAD training were collapsed into one variable measuring level of Project GLAD training. All participants were included in the sample for the multiple regression analysis.

Table 6 provides the descriptive statistics from the survey question which measured the number of respondents that had taken the two day introductory Project GLAD training and how recently they had taken the training. Of the 173 respondents in the sample, 58.4% (n = 101) indicated that they had taken this Tier One level training two or more years ago, while only 13.9% (n = 24) indicated that they had taken the training less than one year previously.

Table 8

Frequency Table for 2 Day Introduction Training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I did not receive this training	7	4.0	4.2	4.2
	less than 1 year ago	24	13.9	14.4	18.6
	1 year to under 2 years ago	35	20.2	21.0	39.5
	2+ years ago	101	58.4	60.5	100.0
	Total	167	96.5	100.0	
Missing	System	6	3.5		
Total		173	100.0		

Table 9 provides the descriptive statistics from the survey question which measured the number of respondents that had taken the four to five day demonstration training in Project GLAD and how recently they had taken the training. Of the 173 respondents in the sample, 57.8% (n = 100) responded that they had taken this Tier One level of training two or more years ago, As expected because the four to five day demonstration training is the second part of the Tier One training, a greater percentage of respondents at 40.4% (n = 70) indicated that they had taken the four to five day demonstration training less than two years previously than the percentage at 34.1 % that had indicated they had taken the two day introduction training. A higher percentage at 4% (n = 7) of respondents indicated that they had not received the two day training as compared to 1.2% (n = 2) that indicated they had not taken the four to five day training. The two day introductory Project GLAD training is designed to be taken before the four

to five day demonstration training (Project GLAD, 2012). Also, more respondents at 3.5% (n = 6) skipped this question about whether they had taken the two day introductory training than the percentage of respondents at 0.6% (n = 1) that had skipped the four to five day demonstration training question. This researcher speculates that this result may be due to some respondents having taken both the two day introductory training and the four to five day demonstration training at, or close to, the same time period since per Project GLAD (2012) both trainings are required to obtain the initial Project GLAD training certificate. When taking the survey, the respondents may have not remembered or realized that the two day introductory training was separate from the four to five day demonstration training.

Table 9

Frequency Table for 4 to 5 Day Demonstration Training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I did not receive this training	2	1.2	1.2	1.2
	less than 1 year ago	31	17.9	18.0	19.2
	1 year to under 2 years ago	39	22.5	22.7	41.9
	2+ years ago	100	57.8	58.1	100.0
	Total	172	99.4	100.0	
Missing	System	1	.6		
Total		173	100.0		

Table 10 provides the descriptive statistics from the survey question which measured the number of respondents that indicated they received follow up coaching by a Project GLAD Lead Teacher or GLADiator and how recently they had taken this training which supports implementation (Project GLAD, 2012). Of the 173 respondents in the sample, 52% (n = 90) indicated that they had received this training, as compared to 98.2% (n = 170) that indicated they had taken the four to five day demonstration training.

Table 10

Frequency Table for Follow up Coaching by Project GLAD Lead Teacher or GLADiator

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I did not receive this training	74	42.8	45.1	45.1
	less than 1 year ago	27	15.6	16.5	61.6
	1 year to under 2 years ago	23	13.3	14.0	75.6
	2+ years ago	40	23.1	24.4	100.0
	Total	164	94.8	100.0	
Missing	System	9	5.2		
Total		173	100.0		

Table 11 provides the descriptive statistics from the survey question which measured the number of respondents that had received follow up coaching by a Project GLAD Trainer and how recently they had taken this training which supports

implementation and teacher proficiency in using the strategies. (Project GLAD, 2012). Of the 173 respondents in the sample, 47.9% (n = 83) indicated that they had received the training, which is only a slightly lower percentage compared to the 52% (n = 90) of respondents that indicated they had received follow up coaching from the Project GLAD Lead Teachers or GLADiators.

Table 11

Frequency Table for Follow up Coaching by Project GLAD Trainer

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I did not receive this training	77	44.5	48.1	48.1
	less than 1 year ago	36	20.8	22.5	70.6
	1 year to under 2 years ago	17	9.8	10.6	81.3
	2+ years ago	30	17.3	18.8	100.0
	Total	160	92.5	100.0	
Missing	System	13	7.5		
Total		173	100.0		

Table 12 provides the descriptive statistics from the survey question which measured the number of respondents that had received Project GLAD Trainer Certification and how recently they had taken the training. Of the 173 respondents in the sample, 20.6% (n = 36) indicated that they had received the training, as compared to 47.9% (n = 83) that indicated they had taken received follow up coaching by a Project

GLAD Lead Teacher or GLADiator. Of those respondents that indicated that they had taken the training, the highest percentage at 8.7% (n = 15) indicated that they had taken the training 2+ years ago. The combined percentage, however, that had taken the training less than one year ago and between one year and under two years ago was higher at 12.1% (n = 21). This conforms to a trend observed among the levels of Project GLAD training that higher levels of training were more recently received than the lower levels of training.

Table 12

Frequency Table for Project GLAD Trainer Certification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I did not receive this training	120	69.4	76.9	76.9
	less than 1 year ago	8	4.6	5.1	82.1
	1 year to under 2 years ago	13	7.5	8.3	90.4
	2+ years ago	15	8.7	9.6	100.0
	Total	156	90.2	100.0	
Missing	System	17	9.8		
Total		173	100.0		

Descriptive Statistics for Perceived Support for Project GLAD

Table 13 provides descriptive statistics from the three survey questions that measure perceptions of support regarding the use of Project GLAD strategies by respondents. The ratings for these survey questions were on a five point Likert Scale

with a rating of a one indicating the lowest level of perceived support and a five indicating the highest level of perceived support. The level of perceived value by respondents of colleague support for their use of Project GLAD was measured with two differently worded items. The combined mean score for these items was 3.0 which corresponded to a rating of 'neutral" on the scale. The mean score for the respondents' perceptions that their administrators support their use of Project GLAD strategies was 4.13 indicating agreement that their administrator supports their use of Project GLAD strategies. The mean score was 10.02 for the three combined support-related questions indicating that respondents perceived that support for their successful use of Project GLAD strategies is significant to a moderate degree.

Table 13

Frequency Table of Perceived Support for Project GLAD Implementation

	N	Minimum	Maximum	Mean	Std. Deviation
Dependent on Colleagues Support to Succeed Using Project GLAD	172	1.00	5.00	2.7209	1.1255
Colleagues Support with Project GLAD	172	1.00	5.00	3.2267	1.0656
Administrator Support with Project GLAD	172	1.00	5.00	4.1279	.8825
Support Total	173	3.00	14.00	10.0173	2.0839
Valid N (list wise)	170				

Descriptive Statistics for Expectancy, Value, Cost, and Implementation

Table 14 provides descriptive statistics from the survey questions that measure teacher beliefs surrounding their level of expectancy, value, cost, and implementation in the use of Project GLAD. The ratings for these survey questions were on a five point Likert Scale with a rating of a one indicating the lowest levels of perceived expectancy, value, or cost surrounding the use of Project GLAD and a five indicating the highest levels of perceived expectancy, value or cost surrounding the use of Project GLAD. Higher levels of expectancy and value are perceived as positive, while higher levels of perceived cost surrounding the use of Project GLAD is perceived as negative. The overall mean for the scale on the survey section measuring how much respondents perceive their level of expectancy for success in using Project GLAD was 44.71 (SD = 6.34) and the mean for the 12 items in this section was 3.73 rounded to 4.00 in accordance with Foley's (2011) methodology indicating a general moderate to high level of expectancy among respondents.

The overall mean for the scale on the survey section measuring how much respondents perceive their level of value of Project GLAD was 45.42 (SD = 6.33) and the mean for the 11 items in this section was 4.13 rounded to 4.00 in accordance with Foley's (2011) indicating a general moderate to high level of value among respondents.

The overall mean for the scale on the survey section measuring how much respondents perceive the level of cost in the use of Project GLAD was 23.79 (SD = 4.30) and the mean for the seven items included in the calculation for this section was 3.40 rounded to 3.00 in accordance with Foley's (2011) indicating that respondents perceived the level of cost surrounding the use of Project GLAD to be moderate.

The overall mean for the scale on the survey section measuring how much respondents perceive their level of implementation of Project GLAD was 29.92 (SD = 7.25) and the mean for the 9 items in this section was 3.32 rounded to 3.00 in accordance with Foley's (2011) indicating that respondents felt they implemented Project GLAD strategies "about half the time" or at a moderate level on the scale.

Table 14

Descriptive Statistics of Study Variables

	N	Minimum	Maximum	Mean	Std. Deviation
Teacher Expectancy	173	30.00	59.00	44.711	6.34
Teacher Value	172	23.00	55.00	45.4186	6.3337
Teacher Cost	171	13.00	33.00	23.7895	4.298
Teacher Level of Implementation	170	8.00	45.00	29.9235	7.2479

Analysis of Data

Nonparametric Testing Data

Table 15 provides the results of a Spearman's rho correlation test for non-parametric data. This test was conducted due to the non-normal distribution of the data for the scaled predictor variables of value and implementation. The scaled independent variable of expectancy was found to be positively correlated with the dependent variable of implementation at $r_s = .621$ ($p = .000$). The scaled independent variable of value also was found to be positively correlated with the dependent variable of implementation at $r_s = .680$ ($p = .000$). Expectancy was also correlated with the

independent covariable of value at .640 (p = .000). The scaled independent variable of cost was found to be negatively correlated with the dependent variable of implementation at r_s = -.385 (p = .000). Cost was also negatively correlated with the independent covariables of expectancy and value at -.385 (p = .000) and -.365 (p = .000), respectively.

Table 15

Correlation Test Results between Independent and Dependent Variables

			Expectancy	Value	Cost	Implementation
Spearman's rho	Expectancy (n=173)	Correlation Coefficient	1.000	.640**	-.493**	.621**
		Sig. (2-tailed)		.000	.000	.000
	Value (n=172)	Correlation Coefficient	.640**	1.000	-.365**	.680**
		Sig. (2-tailed)	.000		.000	.000
	Cost (n=171)	Correlation Coefficient	-.493**	-.365**	1.000	-.385**
		Sig. (2-tailed)	.000	.000		.000
	Implementation (n=170)	Correlation Coefficient	.621**	.680**	-.385**	1.000
		Sig. (2-tailed)	.000	.000	.000	

Parametric Testing Data

Modeled on the analysis procedures used by Foley (2011), a multiple regression analysis was conducted using the data from the survey items that measured the variables of teacher beliefs in expectancy, value, cost, and implementation. In addition, as with Foley's (2011) analysis, included in the multiple regression analysis were "demographic and training variables…in order to adjust for differences in teacher characteristics" (p. 206). These demographic and training variables included in the multiple regression were support for teachers in using Project GLAD, current grade level taught, years taught in current grade level, level of Project GLAD training, recency of Project GLAD training, and old degree vs. new degree.

Similar to the multiple regression conducted by Foley (2011), a backward elimination process was conducted starting with a simultaneous regression that included all nine independent variables and teacher implementation as the dependent variable. Table 16 presents the result of this analysis. Items from non-significant variables were removed in seven stages whereby in each succeeding stage the variable with the highest *p*-value from the previous stage was removed until only the significant variables with *p*-values less than 0.05 remained which thus identified the regression model of best fit. In an additional eighth stage mirroring Foley's (2011) procedure, cost was reinserted into the multiple regression analysis, but it was still found not to be significant. The regression equation therefore for the best fitting model was significant at $R^2 = 0.58$, adjusted $R^2 = 0.573$, $F(3, 166) = 76.562$, $p < .0005$.

Table 16

Steps in Multiple Linear Regression Backward Elimination (n=170)

Stages in multiple regression (Filtered)	Effect size R^2
1. Full model	0.587
2. Removed Old vs. Recent Degree	0.587
3. Removed Current Grade Level Taught	0.587
4. Removed Number of Years Taught at Current Grade Level	0.586
5. Removed Cost	0.585
6. Removed Project GLAD Support Total	0.583
7. Removed Recency of Project GLAD Training	0.58
8. Reinserted Cost, but still not significant	0.582

The scaled independent variables of expectancy and value were found to significantly positively predict implementation of Project GLAD. The data as presented in Tables 17-19, therefore showed that the higher the level of teacher value and/or expectancy surrounding Project GLAD, the higher the level of teacher implementation of Project GLAD. In addition, the training variable of level of teacher training was also found to be significant in predicting implementation. This indicated that the higher the level of training a teacher had received in Project GLAD, the higher the level of teacher implementation of Project GLAD.

Table 17

Model Summary Table Analysis Stage 7

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.762	.580	.573	4.73678

Table 18

ANOVA Table Analysis Stage 7

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5153.455	3	1717.818	76.562	.000
	Residual	3724.551	166	22.437		
	Total	8878.006	169			

Table 19

Coefficients Table Analysis Stage 7

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-11.802	2.892		-4.081	.000
	Expectancy	.261	.079	.226	3.285	.001
	Value	.566	.076	.494	7.496	.000
	Train Type	1.296	.321	.219	4.033	.000

As with the procedure by Foley (2011), an additional eighth stage was conducted per Table 20 in which cost was reinserted into the final regression model to see if cost would change to significant. Cost was still found, however, at (p = 0.471) to not be a significant predictor of implementation.

Table 20

Coefficients Table Analysis Stage 8

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-9.042	4.794		-1.886	.061
	Expectancy	.236	.086	.205	2.740	.007
	Value	.565	.076	.493	7.463	.000
	Train Type	1.317	.323	.222	4.076	.000
	Cost	-.070	.098	-.042	-.722	.471

CHAPTER V: DISCUSSION

This final chapter will discuss the study findings and conclusions related to the research purpose and reviewed literature, discuss recommendations for supporting teacher implementation of Project GLAD based on findings and conclusions from the study, discuss limitations of the study, and provide recommendations for further research.

Findings and Conclusions Related to the Research Purpose

The purpose of this research was to enable educational leaders and researchers to be able to make more informed decisions about how to support teacher implementation of Project GLAD and how to design professional development around this instructional model that supports implementation. There were two research questions adapted and modified from the study by Foley (2011) which were:

- To what extent are K-12 teachers using Project GLAD in their classrooms?
- To what extent do teacher efficacies in expectancy, value, and cost surrounding Project GLAD predict their perceived implementation levels of Project GLAD?

The null hypotheses were:

- There is no relationship between teacher expectancy that they will be able to implement Project GLAD to achieve the desired outcome and their level of Project GLAD implementation.
- There is no relationship between the degree that a teacher values Project GLAD as an instructional approach and their level of Project GLAD implementation.

- There is no relationship between teacher perception of the degree of cost of implementation (i.e. in time and energy) and their level of Project GLAD implementation.

The research hypotheses were:

- There is a positive relationship between teacher expectancy that they will be able to implement Project GLAD to achieve the desired outcome and their level of Project GLAD implementation.
- There is positive relationship between the degree that a teacher values Project GLAD as an instructional approach and their level of Project GLAD implementation.
- There is a negative relationship between teacher perception of the degree of cost of implementation (i.e. in time and energy) and their level of Project GLAD implementation.

Respective to each research question in the study, this chapter will include a summary of the findings compared to related research, as well as conclusions based on findings and relevant research. Additionally, this chapter will describe recommendations for practice and articulate suggestions for further research.

Conclusions Compared to Literature about Question One

The first question in this study asked "To what extent are K-12 teachers using Project GLAD in their classrooms?" A sample of 173 K-12 teachers in the United States participated in a self-report survey which included measurement of their levels of implementation of Project GLAD in their student instruction. Descriptive statistics were calculated based on teacher reported levels of implementation on a five point Likert

Scale with higher levels of implementation indicated by higher scores. All of the teachers had received some Project GLAD training, with almost all having received at least the six to seven day Tier I training. The overall mean for the scale on the survey section measuring how much respondents perceive their level of implementation of Project GLAD was 29.92 (SD = 7.25) and the mean for the 9 items in this section was 3.32 rounded to 3.00 in accordance with Foley's (2011) indicating that respondents felt they implemented Project GLAD "about half the time" or at a moderate level on the scale.

This finding confirms and expands previous research about teacher self-reported levels of Project GLAD implementation. Hahn (2003) also found that teachers trained in Project GLAD implemented strategies related to the model at a moderate level with teachers reporting using all of the seven most common strategies but only two of those strategies frequently.

This finding also confirms and expands previous research about teacher self-reported levels of implementation of other instructional innovations. Foley (2011) found that teachers self-reported levels of implementation of Comprehension Strategy Instruction (CSI) was slightly higher at 3.73 (closer to the number 4 rating on the scale of "most of the time") versus 3.32 for this survey. Klingner et al. (2003) found that median for teacher implementation of the instructional innovation in their study was moderate although very high use of the strategies by some of the high implementers in their study appeared to skew the overall mean to being just inside the high implementation level.

An additional finding of this research study which related to the extent that teachers are implementing Project GLAD was that teacher implementation of Project GLAD decreased as the grade level taught increased. This is in contrast to the study by Foley (2011) had the opposite finding in that implementation was found to increase as the grade increased. Foley (2011) concluded that this higher implementation in the higher grades was due to the nature of comprehension strategy instruction being better suited to students in 3rd grade, the highest grade from which teachers were surveyed. Teachers in the higher grades, particularly those in middle school and high school, however, may feel that the curriculum and time constraints impede their use and implementation of Project GLAD. One teacher who took the survey for this study sent an email to this researcher asking "how am I supposed to use Project GLAD strategies in a 50 minute class period?" which indicated their concern that the time constraints in their teaching schedule hindered their implementation of Project GLAD in their classroom. Teacher perceptions, such as this at the secondary level, may therefore be indicative of why the results of this study showed that Project GLAD implementation tended to decrease at the higher grade levels.

Another finding on a separate linear regression test was related to the level of support that teachers believed they received. This test found that teachers who reported higher levels of support to implement Project GLAD from colleagues and administrators also reported higher levels of implementation. This finding is supported by other studies. For example, Foley (2011) found that greater levels of perceived support to use an instructional innovation translate into higher levels of implementation of specific strategies. It should be cautioned that the results of the primary test for this

study, the multiple regression test using backwards elimination methodology, found that support was not a significant predictor of teacher general implementation of Project GLAD.

Conclusions Compared to Literature about Question Two

The second question in this study asked "To what extent do teacher efficacies in expectancy, value, and cost surrounding Project GLAD predict their perceived implementation levels of Project GLAD?" A sample of 173 K-12 teachers in the United States participated in a self-report survey which included measurement of their perceived levels of expectancy, value, and cost surrounding Project GLAD. The survey also measured certain teacher demographic and training variables surrounding Project GLAD including perceived levels of support by teachers for the use of Project GLAD, level of teacher training in Project GLAD, the recency of Project GLAD training, the current grade level taught by teachers, the years taught in current grade level, and recent degree vs. older degree. As with the study by Foley (2011), no hypotheses were tested regarding teacher beliefs surrounding these demographic and training variables. Descriptive statistics were calculated based on teacher self-reported levels of belief on a five point Likert Scale with higher levels of belief indicated by higher scores. In accordance with the study procedures by Foley (2011), a single multiple regression was conducted with the data to determine if there was a correlation between the independent variables and teacher levels of implementation.

The data from the regression analysis indicated that there was a significant positive correlation between teacher self-reported levels of expectancy surrounding the use of Project GLAD and their level of implementation of Project GLAD strategies in

their instruction. This confirms the research hypothesis of this study that there is a positive relationship between teacher expectancy that they will be able to implement Project GLAD to achieve the desired outcome and their level of Project GLAD implementation.

The data from the regression analysis also indicated that there was a significant positive correlation between teacher self-reported levels of value surrounding the use of Project GLAD and their level of implementation of Project GLAD strategies in their instruction. This confirms the research hypothesis of this study that there is a positive relationship between the degree that a teacher values Project GLAD as an instructional approach and their level of Project GLAD implementation.

The data from the regression analysis did not find that there was a significant correlation between teacher beliefs surrounding the cost of implementing Project GLAD and their actual reported level of Project GLAD implementation. This confirms the null hypothesis of this study that there is no relationship between teacher perception of the degree of cost of implementation (i.e. in time and energy) and their level of Project GLAD implementation.

The one demographic and training variable in the multiple regression analysis that showed a significant correlation with teacher implementation was level of training in Project GLAD. This finding confirms and extends previous research. Project GLAD training and professional development are provided by Project GLAD trainers and coaches who use a coaching model. Teacher coaching was identified by Klingner et al. (2003), Dove and Freeley (2011), Carter and Van Norman (2010), Gilbertson et al.

(2004), Pedersen and Liu (2003), and Foley (2011) as being a significant facilitator to teacher implementation of instructional innovations.

These findings related to the significant effects of expectancy and value on implementation confirm and expand previous research about expectancy-value theory. Foley (2011) found that there was a positive correlation between teacher expectancy and value surrounding CSI and their level of implementation of the strategies. Foley also found that there was not a significant positive correlation between teacher beliefs surrounding the cost to implement CSI and teacher implementation. Abrami et al. (2004) also found a significant positive correlation between implementation and teachers' reported levels of expectancy and value. In addition, Abrami et al. (2004) found a small but significant negative correlation between cost and implementation at the .01 level. The Spearman's rho nonparametric test conducted in this study also found a negative correlation between teacher perceived levels of cost and their level of implementation of Project GLAD. In addition, Abrami et al. (2004), Foley (2011), Klingner et al. (2003), Brahier and Schaffner (2004), Sy and Glanz (2008), and Obara and Sloan (2009) also identified teacher self-efficacy (related to expectancy) as a facilitator of implementation.

The finding that cost was not a significant factor in this research study was also surprising. The use of Project GLAD strategies can require considerable teacher planning time. Also, the cost of the training, which can be approximately $2000 per teacher, is a significant expense for many school districts. As Foley (2011) suggested, it is possible that the finding that cost was not significant, or had very low significance in the case of Abrami et al. (2004), was more related to the wording of the survey

questions related to cost in all three of the studies. Cost may actually be a significant indirect factor that affects teacher implementation. For example, lack of time for teachers to plan or lack of money to pay for follow up coaching could be lowering the level of efficacy and expectancy that teachers have for their use of Project GLAD. This relationship between cost and implementation warrants further study.

While the other variables studied in this research were not found in the multiple regression analysis to significantly predict teacher implementation of Project GLAD, some of the variables in particular were found to have a potential relationship and warrant further research on their effect on Project GLAD implementation. The variables of current grade level taught and the reported level of support in using Project GLAD were not found to have a significant effect on implementation in the multiple regression analysis; however, these variables were found to have a significant effect on implementation in separate linear regression tests.

Table 21 below provides the results of a linear regression analysis that found the effect of teacher support was significant at B = 1.190 ($p < 0.05$). The total support variable was the mean of three survey items, two measuring teacher perceptions of colleague support and one measuring perceived administrator support. Support, however, was not found significant on a multiple regression analysis, as previously noted.

Table 21

Coefficients Table Analysis for Project GLAD Support

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	18.002	2.581		6.974	.000	12.906	23.099
	Support Total	1.190	.252	.342	4.716	.000	.692	1.688

While the level of perceived support for Project GLAD was not found to have a significant effect on implementation in the multiple regression analysis, the potentially related variable of level of Project GLAD training was found to have a significant effect on implementation in this study. The variable of support was measured by Foley (2011) and in this study as a construct in terms of collegial and administrative support. The results of this study demonstrate that a variable based on a different construct of support that includes coaching does have a significant effect on implementation of Project GLAD. The level of training in Project GLAD was a variable added to this study which was not measured in the study by Foley (2011). This variable of level of Project GLAD training included items measuring the level of coaching respondents had received. Dove and Freeley (2011), Foley (2011), Foorman and Moats (2004), Gilbertson et al. (2007), Klingner et al. (2003), and Obara and Sloan (2009) associated forms of coaching as at least part the services to teachers that they included under the construct of support. For example, in the study by Klingner et al. (2003) teachers received support during the

year from a resource consultant that visited their classrooms once per week and provided modeling and helped teachers problem solve. Gilbert et al. (2007) researched the effect of phased support to teachers for implementation provided in the form of specific performance feedback from a coach. Foley (2011) also recommended specific ongoing support to teachers from coaches.

The level of support was not only found to have a significant effect on teacher implementation in Foley's (2011) study, but it also was found to have significance in other research. Klingner et al. (2003) found in their study that administrator support was a facilitator to implementation by teachers at all three implementation levels studied.

Unlike this study of Project GLAD, the study by Foley (2011) did find in the multiple regression analysis conducted for that study that there was a correlation between the teacher grade level taught and implementation. In this study of Project GLAD, the relatively small number of participants in the sample from the higher grades (only 27 of the 173 participants reported that the current grade level they taught was in grades six to 12) could explain why the separate linear regression test did show that grade level significantly predicts implementation while the multiple regression analysis did not show significance for this variable. The study by Foley (2011), in contrast, weighted responses for different grade levels to make the data from the sample more representative and proportionate to the number of teachers by grade level in the population. Foley's (2011) study also found that the correlation for grade level was positive while the correlation found in the linear regression for this study was negative. If more research shows that the factor of grade does indeed have a significant negative effect, then the difference in direction of the correlations between studies may be due to

specific differences between CSI and Project GLAD. Foley (2011) stated that greater implementation in the highest grade tested was logical partly due to the "greater demands put on emergent (lower grade) readers' mental capacities" by CSI (p. 209). In contrast, greater implementation of Project GLAD in the lower grades for this study on the separate linear regression analysis may be due to lower grade teachers having more familiarity with instructional strategies similar to those in Project GLAD due to their teaching context, making it easier for them to transition to using Project GLAD strategies. Whether there actually is a correlation between grade level taught and implementation and, if so, the reason for it requires further study.

Table 22 provides the results of a linear regression analysis which indicates that the variable of current teacher grade level has a significant negative effect on implementation at B = -0.435 (p = 0.001). The R coefficient, however, is very low at 0.255 indicating that the relationship between current grade level taught and implementation is weak (Salkind, 2011). A multiple regression analysis of the study variables found that current teacher grade level was not a significant predictor of implementation.

Table 22

Coefficients Table Analysis for Current Grade Level Taught

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	33.673	1.388		24.256	.000	30.930	36.415
	Grade Level	-.435	.133	-.255	-3.258	.001	-.698	-.171

There were no other similar correlations found between demographic and training variables tested by Foley (2011) and those tested for this study, including the variables of years taught at current grade level and old bachelors vs. new master's degree (redefined as old degree vs. new degree for this study of Project GLAD). While further research is needed to explore the effects of these variables in common with both studies, the lack of effect with these variables in the study of Project GLAD could be because of inherent differences between Project GLAD and CSI or could be because of differences in sampling techniques between the studies.

Summary of Study Findings, Literature, and Conclusions

The results of this study answered research question one in finding that the teachers in this sample implemented Project GLAD on average "about half the time" or to a moderate degree. The results of this study also confirm the research hypotheses and answer research question two in finding that there is a significant correlation between

the dependent variable of implementation and the two scaled independent variables of expectancy and value. In addition, the results indicate a significant correlation between implementation and the training independent variable of level of Project GLAD training. The r coefficient for the multiple regression model is .573 indicating a moderate to strong relationship between the independent variables found significant and implementation (Salkind, 2011).

The findings of this study support and expand the findings by Foley (2011) and Abrami et al. (2004) in regards to the validity of expectancy value theory as a heuristic model to explain the factors that affect teacher implementation. As in this study of Project GLAD, Foley (2011) found that expectancy and value were significant predictors of implementation. Abrami et al. (2004) found that not only were expectancy and value significant in predicting implementation, but that cost was also significant, although the significance of cost as a predictor was very low at the .01 level compared to .44 for expectancy and .04 for value. Abrami et al. (2004) provided the following conclusion from the results of their study:

> Expectancy of success appeared to be most important in differentiating CL users from non-users. It is apparent that teachers need to believe that they have both the skill to implement CL successfully and a context that is amenable to effective CL use. Results also suggest that teachers who personally value CL will be active users, but its import is significantly less than expectancy beliefs. Surprisingly, even though teachers sometimes claim that the costs of implementing CL are prohibitive (for example, CL takes too much class time),

the cost items did not figure prominently as a category distinguishing users from non-users. (p. 211)

The results of this study also support the validity and reliability of the CSIQ survey instrument developed by Foley (2011). The instrument was further shown to be capable of modification to effectively measure teacher beliefs surrounding the implementation of an instructional innovation other than that of CSI.

The results of this study also support and expand other research in the barriers and facilitators of teacher implementation of instructional innovations. Research by Klingner et al. (2003), Brahier and Schaffner (2004), Sy and Glanz (2008), and Obara and Sloan (2009) also found elements of expectancy to be significant factors to predict teacher implementation of instructional innovation. In addition, research by Klingner et al. (2003), Dove and Freeley (2011), Carter and Van Norman (2010), Gilbertson et al. (2004), Pedersen and Liu (2003), and Foley (2011) found that coaching and other forms of professional development which are also included in the levels of GLAD training were significant predictors of implementation of instructional innovations. Project GLAD training in this study was also found a significant predictor of implementation, as well.

Differences with the Study by Foley (2011) in Implications and Purposes

There are some key differences between this study and that of Foley (2011) in both implications and purposes. The study by Foley (2011) studied teacher implementation of Comprehension Strategy Instruction (CSI) which is a group of strategies for improving reading comprehension. This study, in contrast, researched teacher implementation of Project GLAD (Guided Language Acquisition Design) which

is a model of strategies that is targeted primarily at the needs of student English Language Learners to master grade level academic content taught in English (Brechtel, 2005).

Also, an important different implication of the study by Foley (2011) was that there was a positive correlation found between implementation and the number of years teachers have taught in the same grade level. This finding led Foley (2011) to conclude that "decision makers might encourage teacher longevity in a grade level for 8 years or more" (p. 210). This study of teacher implementation of Project GLAD, however, did not identify a correlation between the number of years a teacher had taught in their current grade level and implementation; moreover, a linear regression test in this study of teacher implementation of Project GLAD found the opposite in that teacher implementation decreased in higher grade levels. Unlike the study by Foley (2011), a potential conclusion and implication of this study is that teachers using Project GLAD at higher grade levels may need more or differentiated support for implementing Project GLAD.

Another key difference in purposes between the studies was that Foley (2011) researched teacher implementation of specific strategies of CSI as well as general teacher implementation of CSI. Foley (2011) asserted that an implication from the results of their research was that their study "argued for the use of the CSIQ for better selection of teachers as candidates for professional development" (p. 210) in the areas of specific CSI strategies and in general implementation. While, unlike the CSIQ, the GLADQ only measures general teacher implementation of Project GLAD strategies, it could be used for more general screening purposes as a relatively quick to administer

assessment for the identification of teachers for professional development in Project GLAD.

Recommendations for Practice

Based on the results of these studies and the themes and patterns which emerged, a research supported set of strategies that an instructional leader can draw from in order to support implementation of Project GLAD within the framework of expectancy-value theory will include the following five characteristics, which were researched in this study: 1) provide ongoing professional development and training for teachers in implementing Project GLAD, 2) provide greater differentiation in Project GLAD professional development for teachers at higher grade levels, 3) build teacher expectancy surrounding Project GLAD, 4) provide more support to teachers from colleagues and administrators in using Project GLAD, and 5) build teacher value surrounding Project GLAD (Brahier & Schaffner, 2004; Carter & Van Norman, 2010; Dove & Freeley, 2011; Foley, 2011; Foorman & Moats, 2004; Klingner et al., 2003; Obara & Sloan, 2009; Pedersen & Liu, 2003; Sy & Glanz, 2008).

Provide Ongoing Professional Development for Teachers in Implementation

The results of this study indicated that the level of teacher implementation of Project GLAD increased as the level of training by teachers in the model increased. Based on this finding, administrators should provide increased opportunities for teachers trained in Project GLAD to receive additional professional development and advanced Project GLAD certifications. Professional development should include coaching by teachers with advanced training and experience in Project GLAD strategies. Coaching should be differentiated for teachers based on their specific needs,

such as different support to moderately implementing teachers and high implementing teachers (Klingner et al., 2003).

Differentiate Professional Development by Level of Instruction

The results of a linear regression test indicated that there was a negative correlation between grade level and implementation in that lower grade levels had higher implementation. While the results of the multiple regression test did not confirm that this correlation was significant and this finding requires further research for confirmation, it is a sensible proposition that implementing Project GLAD strategies at the secondary level could have more challenges given the emphasis on maximizing the teaching of content in relatively short periods of time common in the instruction at the secondary level. Teachers may find that some of the Project GLAD strategies are too time consuming at the secondary levels. Teacher training in how to fit the use of Project GLAD strategies into shorter class periods would be of particular benefit to secondary teachers. The implementation of the new Common Core State Standards with the emphasis on fewer standards and greater depth of knowledge may facilitate the use of Project GLAD strategies more at the secondary level.

Build Teacher Expectancy Surrounding Project GLAD

The results of this study indicated that the greater the level of teacher expectancy for using Project GLAD, the greater their level of implementation. This was the finding from the study deemed most reliable as this variable was found normally distributed in the sample and was confirmed significant on both parametric and nonparametric tests. Foley (2011) and Abrami et al. (2004) found that expectancy had a significant effect on the rate of teacher general implementation. Foley (2011) further

suggested that "raising teacher expectancy levels may serve to increase the supportive constructs that surround successful" implementation of the CSI (p. 209). If teachers have greater expectancy surrounding their ability to implement Project GLAD successfully, they may also be more motivated in the way Foley (2011) asserts to set aside adequate Project GLAD planning time and to reorganize their schedules for thematic instruction using Project GLAD.

Foley (2011) notes that teacher expectancy that they will be able to implement an instructional innovation successfully is related to their sense of self-efficacy in their skills and knowledge surrounding their use of the innovation. Building teacher self-efficacy in their use of Project GLAD can be accomplished through increasing teacher coaching in ways that allow for guided practice in the strategies and opportunities for peer observations (Project GLAD, 2012). Another important way to increase teacher self-efficacy is to increase certain types of support to teachers from colleagues and administrators (Foley, 2011).

Provide Support to Teachers from Colleagues and Administrators

The results of a linear regression test indicated that there was a significant positive correlation between the levels of support teachers believed they received from colleagues and administrators and their level of implementation. While the results of the multiple regression analysis for this study found that support was not a significant factor, this is an area that warrants further study based on the findings by Foley (2011) and other literature regarding the importance of support for teacher implementation of instructional innovations.

Foster Support to Teachers from Colleagues

There are multiple ways that teachers can provide collegial support to each other for implementing Project GLAD. Important collegial support includes regular time for teachers to conduct structured collaboration in planning and problem solving around implementation. Collegial support also includes providing time for teachers to observe their peers teach lessons using Project GLAD strategies. This collegial support should be conducted in a way that emphasizes that it is acceptable for teachers to observe each other making mistakes as part of the learning process (Danielson & McGreal, 2000).

Provide Support to Teachers from Administrators

Administrators can provide support to teachers for implementing Project GLAD in several ways. Administrators should provide less experienced teachers with support in behavior management, curriculum, and other areas which could otherwise distract from the teachers ability to focus on implementing the innovation (Foley, 2011). Administrators and/or coaches should develop individual implementation plans with teachers that address potential obstacles to implementation and which the administrator can utilize to help hold teachers accountable for implementation. Administrators can provide support by avoiding sending mixed messages to teachers by providing other instructional goals which conflict with implementation goals, such as by not emphasizing strategies for short term test prep for standardized testing while emphasizing implementing Project GLAD strategies (Obara & Sloan, 2009). In addition, administrators should provide opportunities for teachers to practice using the strategies without fear that they will be evaluated negatively for making mistakes as part of their process of learning the model (Danielson & McGreal, 2000).

Administrators can further support implementation by securing funding for teacher training and follow up coaching in Project GLAD from consistent sources rather than relying on grants or other less reliable funding streams which may lead to inconsistent support for teacher implementation from year to year.

Build Teacher Value Surrounding Project GLAD

The results of this study indicated that the greater the level of teacher value for using Project GLAD, the greater their level of implementation. While the data for this variable was not found normally distributed in the sample, the finding was confirmed significant on both parametric and nonparametric tests. Value was also found to significantly influence implementation rates in the studies by Foley (2011) and Abrami et al. (2004). "The value that teacher's place on a given pedagogy may predict their motivation to implement it. Getting teacher 'buy-in' is a common way to express this concept" (Foley, 2011, p. 209). Foley (2011) recommends "beginning with teacher buy-in when introducing new instructional methods" (p. 209). This recommendation lends support to the importance of the initial two day Project GLAD introductory training which presents research-based evidence to teachers to build their buy-in for the effectiveness of Project GLAD in improving student achievement at similar schools. Trainers in Project GLAD may also consider increasing the emphasis on building teacher buy-in for the model both in the initial certification training and in higher tier Project GLAD certification trainings and follow up coaching. Administrators can increase the sense of teacher buy-in and value for Project GLAD by articulating to teachers how the use of the model aligns with school goals and, in particular, the goals to which teachers are held accountable (Obara & Sloan, 2009). In addition, respected

teacher colleagues who are early or high implementers of Project GLAD can be encouraged and supported to demonstrate the effectiveness of the model to their peers in the achievement of the goals that are highly valued by teachers (Klingner, et al., 2003).

Limitations of the Study

There are several limitations to this current study. Since the research design is quantitative using a survey with closed questions, it will not be able to explore the process of teacher Project GLAD implementation with the depth or breadth that a qualitative research design with open-ended questions for respondents would provide. This limitation may have led to important factors relating to implementation being left out from the data or not fully explained. In addition, due the need to keep the survey brief enough so that respondents will complete it, this study did not explore the factors which effect teacher implementation of specific Project GLAD strategies. Instead, the research sought only to identify the factors which affect teacher general implementation of Project GLAD.

Another limitation that this current study shared with the study by Foley (2011) was that there were too few responses per survey item. Foley (2011)) states that "due to a low number of participants per survey item (about five per item), the findings are also limited. The required 10-15 participants-per-item for the confirmatory factor analysis was not met" (p. 212). In order to address this limitation, Foley (2011) recommends that "future investigations should attempt to either reduce the number of independent variables or include sufficient numbers of teachers per survey item by increasing the sample or limiting the questions" (p. 212). This study of teacher implementation of

Project GLAD did reduce the number of survey items from that of the CSIQ survey by Foley (2011) and it reduced the number of variables from 12 in the study by Foley (2011) to nine. Despite this reduction in variables and survey items, however, the number of participants per survey item was still lower than the "10-15 participants-per-item for the confirmatory factor analysis" that was recommended by Foley (2011, p. 212).

Reducing the number of survey items on the survey was also used in attempt to address a potential limitation of a low response rate to the online survey by making the relatively short 7-10 minute time to complete the survey more attractive to potential respondents. Foley (2011) calculated that out of the 400 surveys distributed a 40% response rate was required to establish power. Foley (2011) achieved a 49% response rate. The response rate to this current study is estimated to have been 6%. This lower response rate compared to the study is due to the current survey being online and distributed via email rather than having been sent by postal mail to respondents as was the case in the study by Foley (2011). According to Fowler (2009), online surveys that are emailed to potential participants tend to have lower response rates than mailed surveys. The response rate did meet the minimum requirement of 166 responses to achieve sample size power as calculated using GPower sample analysis software.

Another limitation of the study was the use of snowball sampling techniques with some elements of convenience sampling. Foley (2011) used random quota sampling technique, the random nature of which has greater validity and reliability than snowball and convenience sampling (Cresswell, 2012). They results of both this study and that of Foley (2011), however, are similar in that expectancy and value were found

significant and cost was not. Abrami et al. also had similar results in their study to that of both this study and that by Foley (2011) and they did not indicate that they had used a random sampling method in their research, although their sample size was significantly larger than the other two studies.

The survey results were found to be nonparametric in that of the scaled variables of expectancy, value, cost, and implementation, only expectancy and cost were found to be normally distributed. This may have been because some of the respondents self-selected to participate in the sample and the sample frame also had elements of convenience sampling.

The results of a Spearman's rho correlation test for non-parametric data showed that there was a positive correlation between each of the scaled independent variables of expectancy and cost and the dependent variable of implementation. The results of the Spearman's rho test also showed a negative correlation between cost and implementation. These results thus confirmed all the research hypothesis of the study.

Due to the survey having been distributed primarily through opt-in list serves and through Project GLAD trainers, there may be a greater likelihood of response bias (Salkind, 2011). Respondents who were invited to participate may have been more interested in Project GLAD and have had greater value for it than Project GLAD-trained teachers in the general population (Salkind, 2011).

Unique Contributions of this Study

There are several unique contributions of this research to the study of teacher implementation of both Project GLAD and of instructional innovations in general. In contrast to other studies of Project GLAD identified by this researcher, this study

researched teacher implementation through the framework of expectancy-value theory and found that this theoretical construct was applicable to the study of Project GLAD implementation. Also, while the study by Abrami et al. (2004) sampled teachers in one major metropolitan area and the study by Foley (2011) sampled teachers in one state, the sample of teachers for this study was drawn from states in all major regions of the United States. The research by Hahn (2009) and Deussen et al. (2012) which studied teacher implementation of Project GLAD also did not sample teachers from multiple states or in grades K-12 as was done in this study. In addition, this study added the variables of level of training and recency of training to the methodology of Foley (2011) and Abrami et al. (2004) and found that level of Project GLAD training had a positive effect on teacher implementation. Furthermore, this study used multiple types of quantitative analytical tests of the hypotheses including separate linear regressions, a multiple regression, and a Spearman's rho in order to provide triangulation to cross-verify the validity of the data (Salkind, 2011).

Recommendations for Additional Research

This study investigated teacher implementation of Project GLAD through the framework of expectancy value theory as a modified replication of an earlier study of teacher implementation of Comprehension Strategy Instruction (CSI) conducted by Foley (2011). Further studies would be of benefit to confirm and expand study findings.

There are six key areas that are recommended for further research. First, since this study only sought to replicate the part of the study by Foley (2011) researching general teacher implementation of Project GLAD, another research study is warranted that would replicate the part of Foley's (2011) study that investigated teacher

implementation of specific Project GLAD strategies similar to how Foley (2011) investigated teacher implementation of specific comprehension strategies. Second, the variable of teacher support, particularly in the areas of colleague and administrator support, should be investigated more thoroughly for its effect on teacher implementation of Project GLAD since a separate linear regression analysis showed that support did have a significant effect on implementation although the multiple regression analysis did not show a significant effect of this variable. Third, the variable of current grade level taught should be investigated more thoroughly for its effect on teacher implementation of Project GLAD since a separate linear regression analysis showed that current grade level taught did have a significant effect on implementation although the multiple regression analysis did not show a significant effect of this variable. Fourth, a qualitative survey using open-ended questions is recommended to be conducted in order to gain deeper insight into teachers' beliefs surrounding their expectancy and value for Project GLAD. This qualitative approach could also potentially explain why cost was not found a significant factor in this study, the study by Foley (2011) and only a factor of low significance in the study by Abrami et al. (2004). Fifth, a study using observations of teachers implementing Project GLAD should be conducted in order to confirm that teachers' actual implementation of Project GLAD matches their self-reported levels of implementation as measured in this survey. Sixth, a more accurate replication of the research methodology by Foley (2011) using a larger sample size proportionate to the number of teachers at grade levels in the general population which would include teachers at the secondary level is warranted in order to confirm the relevance of expectancy value theory for middle and high school teachers.

APPENDIX A

COMPREHENSION STRATEGY INSTRUCTION QUESTIONAIRRE

(UNMODIFIED TO THE PROJECT GLAD DISSERTATION TOPIC)

Comprehension Strategy Instruction Questionnaire (CSIQ)

Martha Dever & Laura S Foley (435) 789-3744; laura.foley@uintah.net

CONFIDENTIALITY AND VOLUNTARY PARTICIPATION: All information provided will be confidential. Pseudonyms will used for all participants who agree to interviews. Interview recordings and transcripts will be kept in a locked file. Only the researchers will have access to the data. Participation in this study is entirely voluntary; there is no foreseeable risk for participating in this study.

RESEARCH PURPOSE: Through this survey, we seek to gather data on teacher perceptions in order to better understand the extent to which research-based comprehension strategies for reading have transferred into practice in primary classrooms. Our intent is to explore teachers' perceptions of what impedes or supports their sustained implementation of research-based comprehension instructional strategies. The research questions in this study are: According to self-reports: (a) to what extent are k-3 teachers using comprehension strategy instruction (CSI) in their classrooms; and (b) to what extent do k-3 teacher efficacies in expectancy, value, and cost surrounding CSI predict their implementation levels of CSI?

GENERAL DIRECTIONS: This survey has four sections and takes approximately 30 minutes to complete. Section I asks you to fill in responses to your demographic information. Section II asks you to check your specific teacher training ***and*** frequency of implementation for each strategy. Section III accesses your beliefs using the 5-point Likert scale regarding values, conditions, delivery, and supports for strategies designed to help students get meaning out of text. Finally, section IV uses a different 5-point scale to measure your perceptions of levels of classroom implementation, participation, and interaction.

I	*CSIQ Demographic Information*
1	My highest education degree is _____ earned in (yr) _____. I am working on my _____ degree.
2	My age is _____ years.
3	My class size this year is _____.
4	I have taught **early literacy for _____ years.**
5	The grade level(s) I am *currently* teaching is (are) _____ in Reg Ed ____ or Spec Ed ____.
6	I have taught this (these) grade level(s) for _____ years.
7	The grade level I have taught most is _____.
8	My favorite subject(s) to teach are _____.
9	I took _____ credits during my undergraduate program in reading methods. I have a level I ____, level II ____, or no ____ reading endorsement.
10	My school district is _____.
11	My contract time is (i.e. Full-time, Half-time, etc.) _____ .
12	This subject interests me and I have more to say. _____ I would be willing to speak directly with the researcher in an interview. _____ (If so, your confidentiality will still be protected. Accept by signing your name and giving your phone # next)
13	Signature: Phone Number:

Indicate source of the specific training you have had in CSI by placing a mark in the appropriate box under "Source" on the right. **Check all that apply. Also rate how often you implement each strategy by checking the appropriate box under "frequency" from Never to Almost Daily to the right of that. (Check only one under "Frequency")**

II *CSIQ Training Background and Implementation Frequency*		SOURCE					FREQUENCY				
The working definition of comprehension strategy instruction (CSI): *Comprehension strategy instruction in reading is intentionally and explicitly teaching strategies that readers use to get meaning out of text. It begins with teacher modeling, then teacher scaffolding as responsibility is gradually released to the student. It can be accomplished in various teacher-guided settings, including small groups, or whole class instruction. It is taught using text on the instructional level of the student. Strategies include but are not limited to (a) using predictions to activate prior knowledge, (b) think-alouds, (c) text structures, (d) mental imagery, (e) summarization, and (f) questionings/clarifying.*		NO TRAINING	UNIVERSITY	STATE INSERVICE	LOCAL INSERVICE	SELF or PEER TAUGHT	NEVER	MONTHLY	BI-WEEKLY	WEEKLY	ALMOST DAILY
I have been trained in and/or use the following strategies (a check all that apply):											
1	Activating prior knowledge (title, picture or subtopic walks; making connections to what one knows)										
2	Predicting/Checking predictions (guesses as to what the author will tell us next, then checking)										
3	Questioning/Clarifying (forming mental questions as one reads to monitor understanding)										
4	Reorganizing text/graphic organizers (using charts, models, etc. to help identify key text features)										
5	Summarizing (retelling the gist of the story in one's own words in written and/or verbal language)										
6	Stating a purpose (reader identifies explicit reason for reading the text or text section)										
7	Using Fix-up Strategies to monitor understanding (such as rereading, reading on for clues)										
8	Teaching text structures for narrative and/or expository texts (such as story components or headings)										
9	Mental imagery (visualizing as one reads)										
I have been trained in and/or use the following delivery methods: (check all that apply)											
11	I model the mental processes of these strategies by verbalizing my thoughts for the children as we read.										
12	I scaffold comprehension strategies until each student is ready to assume responsibility for performing them independently.										
13	I choose to teach these strategies because they are supported by the National Reading Panel.										
14	I choose strategies that are in the basal.										
15	I can expect support for learning and implementing comprehension strategy instruction in my school.										

III		*CSIQ Belief Items*	LIKERT SCALE				
Rate your beliefs by checking one response on the 5-point Likert Scale to the right of the statement. SA=Strongly agree, A=Agree, N=Neutral, D=Disagree, SD=Strongly Disagree			SA	A	N	D	SD
1.		I understand CSI well enough to implement it successfully.					
2.		I find that CSI is too difficult to implement successfully.					
3.		I believe I am a very effective teacher.					
4.		Currently there are too many students in my class to implement CSI effectively.					
5.		I'm able to arrange my room to effectively teach CSI.					
6.		For me to succeed in using CSI depends on receiving support from my colleagues.					
7.		I receive sufficient support from my colleagues to succeed in CSI.					
8.		My administrator supports my teaching of CSI.					
9.		Too often my other students are off task while I work with CSI in small groups.					
10.		Too often students are off task during whole class CSI.					
11.		My students work well independently or in centers while I'm doing small group instruction teaching CSI.					
12.		I have difficulty engaging my students in CSI.					
13.		My students are resistant to working in leveled groups for CSI.					
14.		Engaging in CSI enhances students' understanding of text.					
15.		CSI is appropriate for the grade level I teach.					
16.		CSI isn't appropriate for my students.					
17.		CSI is beyond the capabilities of my students.					
18.		Comprehension strategies are best practiced in small groups.					
19.		Comprehension strategies are best introduced in whole class instruction.					
20.		I feel a personal commitment to using CSI.					
21		CSI is inconsistent with my teaching philosophy.					
22.		CSI is a valuable instructional approach.					
23.		I feel pressured by the administration to use CSI.					

III		*CSIQ Belief Items (continued)*	LIKERT SCALE				
Rate your beliefs using the 5-point Likert Scale to the right of the statement. SA=Strongly agree, A=Agree, N=Neutral, D=Disagree, SD=Strongly Disagree			SA	A	N	D	SD
24.		Using CSI enhances my administrative evaluations.					
25.		Using CSI promotes interaction among students.					
26.		Using CSI fosters positive student attitudes towards reading.					
27.		I have priorities other than CSI for my efforts in teaching literacy.					
28.		The cost of leveled reading materials for CSI makes it an unrealistic to implement.					
29.		CSI is relatively inexpensive to implement.					
30.		There is too little time available to work effectively with students in small groups using leveled text.					
31.		Implementing CSI requires a great deal of effort.					
32.		Implementing CSI takes too much preparation time.					
33.		It is important to have access to leveled reading materials in order to implement CSI effectively.					
34.		CSI should take only a small portion of reading instruction time.					

IMPLEMENTATION ITEMS		LEVEL				
For the following items rate the extent to which each occurs in your classroom using the 5-point scale of frequency below. **Not at all=NaA, Occasionally=O, About Half of the time=HT, Most of the time=MT, Almost all of the time=AT**		**NaA**	**O**	**HT**	**MT**	**AT**
35	Rate the extent to which you dedicate 20 minutes or more per day explicitly teaching comprehension strategies in small or large groups in your classroom.					
36	Rate the extent to which you think CSI should be integrated into your reading instruction.					
37	Rate the extent to which you structure your CSI activities to ensure that all students receive instruction.					
38	In a typical CSI learning activity in your class, rate the extent to which students actively participate.					
39	Rate the extent to which you implement CSI in order to motivate students.					
40	Rate the extent to which students interact with other students during CSI.					
41	Rate the extent to which students interact with you during CSI.					
42	Rate the extent to which you continually monitor the students' independent use of a strategy.					

APPENDIX B

PROJECT GUIDED LANGUAGE ACQUISITION DESIGN QUESTIONAIRE

(GLADQ)

Project GLAD Questionnaire (GLADQ)
Eric Peterson (510) 779-2776; crf_peterseb@cuchicago.com

CONFIDENTIALITY AND VOLUNTARY PARTICIPATION: All information provided will be confidential and anonymous.

RESEARCH PURPOSE: Through this survey, we seek to gather data on teacher perceptions in order to better understand the extent to which Project GLAD (Guided Language Acquisition Design) strategies have transferred into practice in k-12 classrooms. My intent is to explore teachers' perceptions of what impedes or supports their sustained implementation of Project GLAD strategies. The research questions in this study are: According to self-reports: (a) to what extent are k-12 teachers using Project GLAD strategies in their classrooms; and (b) to what extent do k-12 teacher efficacies in expectancy, value, and cost surrounding Project GLAD predict their implementation levels of Project GLAD?

GENERAL DIRECTIONS: This survey has four sections and takes approximately 8 minutes to complete. Section I asks you to fill in responses to your demographic information. Section II asks you to identify your specific level of teacher training ***and*** how long ago you had that training. Section III accesses your beliefs using the 5-point Likert scale regarding values, conditions, delivery, and supports for Project GLAD strategies. Finally, section IV uses a different 5-point scale to measure your perceptions of levels of classroom implementation, participation, and interaction.

I	*GLADQ Demographic Information*
1	My highest education degree is _____ earned in (yr) _____. I am working on my _____ degree.
2	I have been a teacher at the k-12 level for _____ **years.**
3	The grade level(s) I am *currently* teaching is (are) _____ in Reg Ed ____ or Spec Ed ____.
4	I have taught this (these) grade level(s) for _____ years.

Indicate the specific training you have had in Project GLAD and how long ago you had the training under "Date of Training" on the right.
Check all that apply.

II	*GLADQ Training Background*	Date of Training				
		I did not receive this training	6 months ago or less	Over 6 months and less than 1yr	More than 1yr and less than 2yrs	More than 2 yrs
I have received the following levels of Project GLAD training (a check all that apply):						
1	2 Day introductory training					
2	4 to 5 day demonstration training					
3	Follow up coaching by a Project GLAD lead teacher or GLADiator					
4	Follow up coaching by a Project GLAD trainer					
5	Project GLAD trainer certification					

III		*GLADQ Belief Items*	LIKERT SCALE				
Rate your beliefs by checking one response on the 5-point Likert Scale to the right of the statement. SA=Strongly agree, A=Agree, N=Neutral, D=Disagree, SD=Strongly Disagree			SA	A	N	D	SD
1.		I understand Project GLAD well enough to implement it successfully.					
2.		I find that Project GLAD is too difficult to implement successfully.					
3.		I believe I am a very effective teacher.					
4.		Currently there are too many students in my class to implement Project GLAD effectively.					
5.		I'm able to arrange my room to effectively use Project GLAD strategies.					
6.		For me to succeed in using Project GLAD depends on receiving support from my colleagues.					
7.		I receive sufficient support from my colleagues to succeed in using Project GLAD.					
8.		My administrator supports my use of Project GLAD strategies.					
9.		Too often my students are off task while I use Project GLAD strategies.					
10.		I am satisfied with the level of engagement of my students during instruction with Project GLAD strategies.					
11.		I have difficulty engaging my students with Project GLAD strategies.					
12.		My students are resistant to using Project GLAD strategies.					
13.		Engaging in Project GLAD enhances students' understanding of academic content.					
14.		Project GLAD is appropriate for the grade level I teach.					
15.		Project GLAD isn't appropriate for my students.					
16.		Project GLAD is beyond the capabilities of my students.					
17.		I feel a personal commitment to using Project GLAD.					
18.		Project GLAD is inconsistent with my teaching philosophy.					
19.		Project GLAD is a valuable instructional model.					
20.		I feel pressured by the administration to use Project GLAD.					

III		*GLADQ Belief Items (continued)*	LIKERT SCALE				
Rate your beliefs using the 5-point Likert Scale to the right of the statement. SA=Strongly agree, A=Agree, N=Neutral, D=Disagree, SD=Strongly Disagree			SA	A	N	D	SD
21.		Using Project GLAD enhances my administrative evaluations.					
22.		Using Project GLAD promotes interaction among students.					
23.		Using Project GLAD fosters positive student attitudes towards learning.					
24.		I have priorities other than Project GLAD for my efforts in teaching students academic content.					
25.		The time required to develop materials for Project GLAD makes it unrealistic to implement.					
26.		Project GLAD is relatively inexpensive to implement.					
27.		There is too little time available to work effectively with students using Project GLAD strategies.					
28.		Implementing Project GLAD requires a great deal of effort.					
29.		Implementing Project GLAD takes too much preparation time.					
30.		It is important to have access to Project GLAD materials (chart paper, markers, etc.) in order to implement Project GLAD effectively.					
31.		Using Project GLAD strategies with my students should take only a small portion of instructional time.					

IV	*IMPLEMENTATION ITEMS*	LEVEL				
For the following items rate the extent to which each occurs in your classroom using the 5-point scale of frequency below. **Not at all=NaA, Occasionally=O, About Half of the time=HT, Most of the time=MT, Almost all of the time=AT**		**NaA**	**O**	**HT**	**MT**	**AT**
32	Rate the extent to which you dedicate 20 minutes or more per day explicitly using Project GLAD strategies in small or large groups in your classroom.					
33	Rate the extent to which you think Project GLAD should be integrated into your instruction.					
34	Rate the extent to which you structure your use of Project GLAD strategies to ensure that all students are engaged in using the strategies.					
35	In a typical Project GLAD learning activity in your class, rate the extent to which students actively participate.					
36	Rate the extent to which you implement Project GLAD in order to motivate students.					
37	Rate the extent to which students interact with other students during Project GLAD.					
38	Rate the extent to which students interact with you during Project GLAD.					
39	Rate the extent to which you monitor students' use of a Project GLAD strategy.					

APPENDIX C

DEFINITIONS OF TERMS RELATED TO PROJECT GLAD

Brain Research—Metacognition:

> • A time to activate and focus prior knowledge; inquiry charts, brainstorming, and clustering (Costa, Rico, and Kovalik).
>
> • An opportunity to insure a common base of understanding and scaffolding, direct experiences, films, visuals, teacher read alouds (Krashen, Collier, Swain, Long, and Vygotsky).
>
> • Students taught how and encouraged to organize thoughts and texts utilizing multiple intelligences: graphic organizers, summaries, visuals, or contextual and semantic clues (Costa, Rico, Krashen, Long, Marzano, Gardner, and Lazear).
>
> • Metacognitive aspect of teacher and students modeling of how an answer was arrived at, not merely what the correct answer was (Costa, Farr, and Sagor). (Project GLAD, 2012, Para. 5)

Brain Research and Second Language Acquisition:

> • A student set purpose for learning; motivating, stated result or goal; student choices; connections made between personal background knowledge and new learning, inquiry charts (High Scope, Hunter, Cummins, and Wolfe).
>
> • Chances to negotiate meaning from language and text; cooperative activities for problem-solving and social skills; heterogeneous homogeneous flexible groupings (Long, Kagan, Vygotsky, Cummins, and Shefelbine). (Project GLAD, 2012, Para. 5)

Reading and Writing To, With, and By Students:

> • Reading that stresses the purpose and joy before the skills; beginning with writing and reading one's own language; immense amounts of being read to; time for silent sustained reading and silent sustained writing with oral book sharing and quickshares (Goodman, Krashen, Flores, Traill, and Shefelbine).
>
> • Direct teaching of concepts, vocabulary, and necessary skills; text patterns, academic language, writing patterns; decoding skills (UCI Writing Project, Bettances, Chall, Reading Task Force, Marzano, Beck, Shefelbine, and Adams).
>
> • Writing that stresses the metacognitive use of reading and writing as a process; use of clustering/brainstorming to initiate writing; acceptance of developmental level of writer; editing and revising done in appropriate places in the process. No over-editing in early drafts; not all writing brought to editing stage; use of conferencing methods to guide student through the process; use of logs for personal responses to texts or issues; use of interactive journals (Goodman, Graves, Calkins, Rico, UCI Writing Project).

• Language functional environment; language charts, poetry kept on walls - read and used by students; reading and writing the walls daily. Big Books on walls, shared reading/writing experiences (Traill, Cummins, Flor, and Ada). (Project GLAD, 2012, Para. 5)

Teach to the Highest

• A classroom environment that values the student and provides authentic opportunities for use of academic language and maintains the highest standards and expectations for all students (Goodman, Shefelbine, Cummins, Smith, and Collier) (Project GLAD, 2012, Para. 5)

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