

Examining the Practice of Lesson Progress Reporting

Used by Oregon Reading First Teachers

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STATEMENT OF THE PROBLEM

The No Child Left Behind Act of 2001, “established Reading First as a new, high-quality evidence-based program for the students of America” (U.S. Department of Education, 2004). As a result of this legislation, each state was awarded funds to “select, implement, and provide professional development for teachers using scientifically based reading programs, and to ensure accountability through ongoing, valid and reliable screening, diagnostic, and classroom-based assessment” (U.S. Department of Education, 2004). In response to this Act, the University of Oregon and the State of Oregon collaborated to form Oregon Reading First in 2002(Oregon Reading First, 2002).

As a part of Oregon Reading First’s design to screen, diagnose, and assess students, a technology-based system called Lesson Progress Reporting was created (Baker, Thomas-Beck & Hays, 2002). This website allows teachers to record a detailed accounting of how individual students are progressing within the planned curriculum. As a form of progress monitoring, Lesson Progress Reporting is designed to assist teachers in modifying their instruction to meet the needs of student by regularly gathering student performance data (Quenemoen, Thurlow, Moen, Thompson, & Morse, 2003). Although progress monitoring is an established and proven practice (Stecker, Fuchs & Fuchs, 2005; Stecker & Fuchs, 2000), this particular technology-based approach has yet to be investigated.

Research Questions

The purpose of this proposed study is to examine how Oregon Reading First teachers adopt the technology-based approach to progress monitoring called Lesson Progress Reporting. The following questions will guide this case study:

1. What are teachers' concerns about Lesson Progress Reporting?
2. How are teachers implementing Lesson Progress Reporting?
3. Does a teacher's experiences, especially with technology, affect how they adopt Lesson Progress Reporting?

Research Design

I propose to conduct a case study to explore how teachers from Oregon's Reading First initiative adopt the practice of Lesson Progress Reporting. My study will utilize a triangulated design combining a questionnaire, interviews, and focus groups. Elements of the Concerns-Based Adoption Model, a method for evaluating the adoption of educational innovations (Hall & Hord, 2001), will be used and described later in the Procedures section.

Propositions

As a case study, I will explore any emerging themes from the collected data. Based on previous research, I expect to find a relationship between teachers' previous use of technology and their willingness to adopt new technology-based innovations (Dooley, 1999; Hu, Clark & Ma, 2003).

Operational Definitions

Key terms pertaining to the proposed research are operationally defined as follows:

Progress Monitoring: Progress monitoring refers to a systematic, frequent (at least once per month) tracking of student performance to determine if adequate progress is being made or if changes in instruction are necessary based on a set of decision rules (Fuchs & Fuchs; 2002; Good, Simmons & Kame'enui, 2001; Quenemoen, Thurlow, Moen, Thompson, & Morse, 2003; Stecker, Fuchs & Fuchs, 2005; Stecker & Fuchs, 2000)..

Lesson Progress Reporting: Lesson Progress Reporting is a form of progress monitoring using a computer database (Baker, Thomas-Beck & Hays, 2002) to record a detailed accounting of how individual students are progressing within the planned curriculum. Data for individuals and groups are entered at least once per month include: all reading programs used, number of lessons completed, average time per day working in groups, in-program test results, and additional subjective observations the teacher believes should be factored into instructional decision-making.

Instructional Decision-Making: Teachers meeting in grade-level teams analyze Lesson Progress Reports and use a set of decision-making rules to modify instruction for individual students and groups of students. Modifications to instruction include: re-teaching lessons, re-grouping students, changing pace of instruction, and adding supplemental materials.

Statement of Ethical Considerations

Prior to the beginning of the study, I will fully disclose its purpose and the methods I plan to use for collecting data. The proposed subjects for this study are teachers participating in Oregon's Reading First initiative. Teachers will be identified by unique IDs to ensure anonymity. No deception or harm is expected or intended as a result

or consequence of this study. All data for this study will be collected and stored in a locked file cabinet to restrict unauthorized access.

Justification

“Accountability for student achievement is one of the two or three- if not the most – prominent issues in policy at the state and local levels right now,” according to Harvard Graduate School of Education Professor, Richard F. Elmore (Lockwood, 2006). This drive for accountability in addition to recent advances in computer technology has resulted in the development of data warehousing and data reporting systems designed to meet the rapidly growing demand for data management in schools (Breiter & Light, 2004; Thorn, 2001; Wayman, 2004 & 2005). However, current evaluations of these systems indicate that the data is rarely used to improve educational practices (Wayman, 2004) and teachers are not prepared to use data effectively to modify their instruction (Symonds, 2003).

In contrast, progress monitoring has been developed and studied for over twenty years (Deno, 1985; Fuchs & Fuchs; 2002; Good, Simmons & Kame’enui, 2001; Quenemoen, Thurlow, Moen, Thompson, & Morse, 2003; Stecker, Fuchs & Fuchs, 2005; Stecker & Fuchs, 2000). Although proven to be effective at improving student outcomes in a variety of educational settings (Stecker, Fuchs & Fuchs, 2005; Stecker & Fuchs, 2000), progress monitoring continues to be a time and resource intensive endeavor when applied to whole classrooms (Stecker & Fuchs, 2000).

Lesson Progress Reporting attempts to bridge the gap between the established practices of progress monitoring and the context of today’s data rich and technology driven schools. Little is known about the practice of Lesson Progress Reporting, its

effectiveness, or ease of adoption. By better understanding how teachers in Oregon Reading First are adopting and implementing Lesson Progress Reporting, we will be able to start answer these questions.

ANNOTATED BIBLIOGRAPHY

Lesson Progress Reporting is based on principles found in progress monitoring and data-based decision-making literature (Feldman & Tung, 2001; Fuchs & Fuchs, 2002; Good, Simmons & Kame'enui, 2001; Quenemoen, Thurlow, Moen, Thompson, & Morse, 2003; Stecker, Fuchs & Fuchs, 2005; Stecker & Fuchs, 2000). As a form of progress monitoring, Lesson Progress Reporting is used to frequently assess if students are making progress or if they need intervention to reach the goal of reading at grade level. Lesson Progress Reporting uses technology to facilitate the instructional decision making process. The technology innovation literature in my review identifies a variety of themes and considerations when attempting to innovate in schools. To evaluate the technology innovation of Lesson Progress Reporting, I have chosen elements of the Concerns-Based Adoption Model (CBAM). I have identified two recent studies using the principles of CBAM to evaluate innovations in schools. These studies will provide insight into the study's implementation.

The studies are organized into three related topic areas: progress monitoring and data-based decision making, technology innovations in schools, and the Concerns-Based Adoption Model.

Progress Monitoring and Data-Based Decision Making

Good, R. H., III, Simmons, D. C., & Kame'enui, E. J. (2001). The importance and decision-making utility of a continuum of fluency-based indicators of foundational reading skills for third-grade high-stakes outcomes. *Scientific Studies of Reading, 5*(3), 257-288.

The Dynamic Indicators of Basic Literacy Skills (DIBELS) are measures designed to assess the development of early reading skills. Good, Simmons, & Kame'enui (2001) investigated how well DIBELS measures and Oral Reading Fluency predict student performance on the Oregon Statewide Assessment (OSA). The study found once students became benchmark performers, they were likely to stay benchmark performers. Good and colleagues argue a prevention-oriented approach to instruction from kindergarten until grade 3 is necessary to avoid failure on high stakes tests like the OSA. This approach would include periodic assessment of student performance so necessary instructional changes could be made to improve student outcomes. The population of this study is a nonrandom convenience sample minimizing any generalization of findings, but the results suggest strong predictive value for four of the five performance periods.

The ability of teachers to periodically assess students on dimensions of reading performance is an important part of the progress monitoring innovation examined in the proposed study. A significant part of this article is dedicated to how teachers make instructional decisions based on the monitoring of these progress indicators. Because all schools the proposed study use DIBELS as part of the progress monitoring and decision making process, it is important to include current supporting research.

Stecker, P. M., & Fuchs, L. S. (2000). Effecting superior achievement using curriculum-based measurement: The importance of individual progress monitoring. *Learning Disabilities: Research & Practice, 15*(3), 128-134.

Stecker and Fuchs (2000) investigate the use of curriculum-based measurement (CBM) as an effective progress monitoring strategy where teachers frequently assess student performance in order to individualize instruction. A unique aspect of this study was it compared student pairs who were given instruction based on one student's CBM data. Stecker and Fuchs found students performed significantly better when teachers

designed the instruction based on their CBM data instead of the data from the student they were paired with.

Of particular relevance, Stecker and Fuchs advocate collecting individual performance data for adapting instruction especially for students with serious learning problems. Stecker and Fuchs acknowledge the difficulty of implementing CBM strategies across general education classrooms, but recommend using computerized reports to group students and monitor skills.

Feldman, J., & Tung, R. (2001, April). *Whole school reform: How schools use the data-based inquiry and decision making process*. Paper presented at the 2001 Annual Meeting of the American Educational Research Association, Seattle, WA.

This case study explores six different schools using data-based inquiry and decision making (DBDM) processes. Feldman and Tung define DBDM as school-wide efforts to collect and analyze multiple sources of data for the purpose of planning for and implementing changes. Impacts on school culture, necessary support, and barriers to implementation were the primary themes explored. Teachers reported increased reflective practice, a more professional atmosphere, and increased collaboration as outcomes. Feldman and Tung suggest successful implementation will require administrators to allocate time and teachers will need to assume leadership.

Very little has been published investigating the requirements for and impacts of implementing systematic data-based decision making innovations in schools. My project will identify themes I expect to align with some of Feldman and Tung's findings.

Technology Innovation in Schools

Abbott, M., Greenwood, C. R., Buzhardt, J., & Tapia, Y. (2006). Using technology-based teacher support tools to scale up the classwide peer tutoring program. *Reading & Writing Quarterly*, 22(1), 47-64.

Abbott, Greenwood, Buzhardt, and Tapia (2006) investigate the use of technology to support teachers' implementation of a research-based instructional innovation called Classwide Peer Tutoring (CWPT). The researchers developed a Learning Management System (LMS) to support teachers in the use of CWPT including an interactive

multimedia CD, email communication, and an electronic record-keeping system. Level of implementation and measures of student progress were collected to determine whether the LMS impacted student performance. Three key factors were identified with successful implementation: administrative support, pre-training, and good technical support. Results showed student performance did not change when compared to previous studies.

Although no improvement was found in student performance, the use of technology to support innovative instructional practice in this study is significant to my project. I expect the identified themes related to successful implementation to be mirrored in my findings.

Zhao, Y., & Frank, K. A. (2003). Factors affecting technology uses in schools: An ecological perspective. *American Educational Research Journal*, 40, 807-840.

Using a triangulation design including surveys, interviews, and observations, Zhao and Frank (2003) used a qualitative design to identify key factors affecting the use of technology in schools on a systems level. Three phases are used to illustrate an interaction model of technology adoption. At the center of Zhao and Frank's model is an interaction between teacher and technology innovation causing one to influence another. At one end of the continuum, the teacher is forced to adapt to the technology and at the other end the teacher adapts the technology to meet instructional needs of students. A significant implication of this study is the calculation of the perceived costs and benefits of adopting technology. Factors identified by the study as impacting a system include: adaptability of teachers, training, social context, and opportunities to explore.

Zhao and Frank's use of an ecosystem as a metaphor for understanding technology innovation in schools is a good reminder to consider the interdependence of individuals and context as they impact innovation. As I examine the practice of Lesson Progress Reporting, it will be important to put individuals into the context of their school environment.

Concerns-Based Adoption Model

Baker, S., Gersten, R., Dimino, J. A., & Griffiths, R. (2004). The sustained use of research-based instructional practice: A case study of peer-assisted learning strategies in mathematics. *Remedial and Special Education, 25*(1), 5-24.

Baker, Gersten, Dimino, and Griffiths (2004) utilize the Concerns-Based Adoption Model (CBAM) to evaluate the factors related to sustained use of research-based teaching innovations by schools and teachers. The study examines the implementation of Peer Assisted Learning Strategies (PALS) intervention for math instruction at a large, metropolitan elementary school. Their analysis suggests good professional development and support and the relevance of the innovation to district and state requirements were central themes encouraging continued use of PALS. Having the aid of a computer-based system for progress monitoring and availability of Title 1 teachers further supported effective implementation of the innovation.

Baker, Gersten, Dimino, and Griffiths provide a good prototype for using the Concerns-Based Adoption Model to understand the adoption of teaching innovations. Understanding the training and support needs of Lesson Progress Reporting will be an important element of my evaluation.

Mills, S. C., & Ragan, T. J. (2000). A tool for analyzing implementation fidelity of an integrated learning system. *Educational Technology Research and Development, 48*(4), 21-41.

Mills and Ragan (2000) use the Concerns-Based Adoption Model (CBAM) to develop a method for evaluating the quality of implementation of integrated learning systems (ILSs). They argue evaluation of innovative uses of computer technology in the classroom first requires an understanding of how the innovation is implemented and whether it is implemented in a consistent way. Mills and Ragan identified five components to indicate fidelity of implementation and based on these components they identified patterns of teacher implementation. The significant implication of this study is based on this formative evaluation model, Mills and Ragan hope to identify relationships between levels of implementation and student performance to provide a better picture of the effectiveness of the instruction.

The model of formative evaluation developed as a result of this study provides interesting possibilities for investigating the fidelity of implementation for Lesson Progress Reporting. This information will be helpful in adapting the technology to better meet the needs of the instructional environment. The possibility also exists for future study of how different implementations of Lesson Progress Reporting might relate to student performance measures.

PROCEDURES

Overview

This case study will use multiple methods to examine Lesson Progress Reporting practices of Reading First teachers in the state of Oregon. At the beginning of the spring semester in January of 2007, the Survey of Concerns questionnaire and additional questions will be administered to all Reading First teachers and reading coaches. The purpose of the questionnaire is to better understand the concerns teachers have about the use and implementation of Lesson Progress Reporting.

Using descriptive statistics based on teachers' levels of concern, Schools will be categorized into three groups: high concern, moderate concern, and low concern. One school from both the high concern and low concern groups will be solicited for participation in semi-structured interviews. Teachers from selected schools will be interviewed based on the Levels of Use interview protocol devised by Hall and Hord (2001) for the purpose of understanding how schools implement Lesson Progress Reporting. Interviews will be semi-structured and additional questions about experience and comfort with technology will also be asked.

Reading coaches from each participating school will be invited to participate in semi-structured focus groups. Questions for the focus groups will be modeled after the

Levels of Use interviews of teachers. The purpose of these focus groups will be to understand the implementation of Lesson Progress Reporting from the perspective of reading coaches.

Population and Sample

The target population for this study is classroom teachers and reading coaches who currently participate in Oregon's Reading First initiative. This population includes approximately 550 teachers from kindergarten through third grade who teach at 52 schools across the state of Oregon. The sample for the questionnaire portion of this study will be all teachers and coaches from the population who are willing to participate. From this sample, teachers from two schools will also be asked to participate in interviews based on the findings of the questionnaire. Reading Coaches from all schools will be invited to participate in semi-structured focus groups.

This sample is both purposive and convenient. I expect the subjects to range from 25 to 62 years of age. They will likely be mostly women and of European descent. Other important characteristics I will be investigating as a part of this study include: years of teaching, years of participation in Reading First, and experience with computers.

I expect a reasonable number of teachers will choose not to participate in this study. In order to best understand the adoption of practice within schools, I will conduct interviews with teachers at two schools who have a high percentage of teachers willing to participate. I am hopeful that teachers will appreciate the evaluative nature of this study and choose to participate in order to improve the experience of Lesson Progress Reporting.

Instrumentation

The questionnaire used in this study will be based on Hall & Hord's (2001) Concerns-Based Adoption Model for evaluating the adoption of innovations in schools. All subject teachers will be asked to complete the Stages of Concern questionnaire (Hall & Hord, 2001). The Stages of Concern questionnaire uses a Likert scale to measure seven stages of concern related to adopting changes in instructional practice. Respondents rate five statements for each stage on a scale of 0 to 6 with 0 meaning very low concern and 6 meaning a very high concern. The test/retest reliabilities range from .65 to .86. The internal consistency ranges from .64 to .83 (Hall & Hord, 2001). Additional questions will be asked to describe teachers' demographics, educational background, years of teaching experience, years of Reading First experience, and level of experience and comfort with technology.

The Levels of Use (LoU) interviews will be conducted with teachers from two schools. The LoU interviews will be semi-structured and questions will fall into five categories: Status Reporting, Performing, Knowledge of the Innovation, Assessing, and Planning (Hall & Hord, 2001). Focus groups will follow the same semi-structured format. I will conduct, record and transcribe the interviews and focus groups. From these transcriptions, a second researcher from Pacific Institutes for Research and I will independently code emerging themes based on the research questions and any other themes as they present themselves.

Validity

As indicated in the instrumentation section, this proposed study will utilize a proven method for understanding the adoption of innovations, the Concerns-Based Adoption Model (Baker, Gersten & Griffiths, 2004; Hall & Hord, 2001; Mills & Ragan,

2000). Because the test/retest reliability and internal measures of consistency of the Stages of Concern questionnaire are relatively high, I have confidence the questionnaire will measure what it is intended to measure. Member checking of transcripts and the use of an additional researcher to code interview and focus group transcripts will ensure that reliable conclusions are drawn from the data.

External Validity

The case study design of my proposed study focuses on the adoption of Lesson Progress Reporting for Oregon Reading First teachers. As an evaluation of this adoption of practice, the focus of the study is restricted to Oregon Reading First. The use of interview data from low and high concern schools will be further limited to the understanding of those particular schools. Teachers from other school categorized as low and high concern are likely to have different experiences, backgrounds, and perspectives that will not allow generalizations to be made. This study is an initial exploration of an innovative practice that is specifically unique to Oregon Reading First. Further interviews within schools might reveal patterns of commonality or dissimilarity among and across schools.

Threats to the Validity of this Proposed Study

Several threats to validity exist in this case study. The primary threats to validity of my study will be the differences in subjects and the bias and characteristics of the researcher. I expect the subjects of this study to vary widely in general demographics, professional experience, experience with Reading First, attitudes toward technology, and ability to use technology. I also expect that subjects will vary in their attitudes toward their practice and attitudes towards the research being done. As a researcher characteristic

threat, my role as a developer of the Lesson Progress Reporting website might inhibit individuals from being candid in their interviews. My experiences with teachers and coaches during the development process of the website suggest that this is not likely to be the case.

I will attempt to control for the differences in the subjects and for researcher bias by using a triangulated design that focuses on a proven method of evaluating the adoption of innovations. Additional demographic and teacher experience questions will be asked to further differentiate individuals to prevent overgeneralization. Using a second researcher for coding of qualitative, transcript data will further reduce the bias introduced by the researcher.

Projected Data Analysis Procedures

Quantitative Analysis Procedures: Descriptive statistics will be tabulated for demographic and teacher experience data collected as part of the questionnaires. Stages of Concern questionnaires will be scored according to procedures outlined by Hall & Hord (2001). Descriptive statistics of teachers within each school will provide the basis for categorizing schools into three groups: low concern, moderate concern, and high concern.

Qualitative Analysis Procedures: Another research and I will independently code the transcripts from the interviews and focus groups. From those coded transcripts, I will identify common themes based on my research questions and other themes that may emerge.

EXPECTED FINDINGS, CONCLUSIONS, RECOMMENDATIONS

As a formative evaluation, this case study will provide a wealth of information for teachers, researchers, and designers working to develop the Lesson Progress Reporting System. I expect themes will emerge from this study that will reflect how technology impacts teachers in Oregon Reading First. I also expect to see themes that reflect teachers concerns about progress monitoring, specifically with Lesson Progress Reporting. Otherwise, I am open to other themes that might emerge that I have otherwise not considered.

Future research on Lesson Progress Reporting should expand on this study to include follow-up investigations and look for changes in teachers' willingness to adopt progress monitoring practices. Additional study should also include more in-depth investigation of other Oregon Reading First schools using Level of Use interviews. This type of investigation would provide a clearer picture of any patterns of adoption that might be derived from comparing similar schools. Additionally, using the Concerns-Based Adoption Model to determine the fidelity of implementation of Progress Monitoring within and across schools would be an important step (Mills & Ragan, 2000) in the path to the final question of whether Lesson Progress Reporting can be directly linked to improvements in student performance.

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