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Perceptual Study about Internet Delivered Secondary Education in Iowa

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Abstract

This study investigates the perceptions of administrators, teachers, students, parents and school board members toward the possibility of Internet-delivered classes in a small, rural high school in eastern Iowa. The responses for this study came from more than 20 teachers and parents, and twenty-seven high school students, four administrators and three board members from a small rural school district. The survey consisted of a two part questionnaire. Part one asked for background information about the participants and factual information about their personal Internet use as well as attitude preference toward general and specific Internet-delivered classes. Part two was answered only by the administrators, teachers, parents and board members; it investigated specific attitudes toward Internet delivery for general education classes, specific specialty curriculum, technology availability and support and teacher adoption of new technologies in the district. Results showed positive attitudes toward Internet use in general and a high level of Internet availability, but little experience or interest in using the Internet for delivery of classes to students in this district. The study proposes the school library media specialist can be the change agent and human connection to support Internet-delivered education in Iowa.

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Chapter 1

Introduction

Fifty years ago, distance learning meant broadcasting classes to remote locations via closed-circuit television from an airplane circling above, (B. Safford, personal communication, February 11, 2002) or to correspondence classes with communication between student and teacher via mail services. Now, the concept typically refers to classwork completed via asynchronous communication over the Internet, or other sophisticated technological communication methods. Distance learning is commonly referred to as education that is accessible at a time, place, location and pace that is convenient to the user. Emerging technologies such as the Internet and videoconferencing have the potential to radically redefine delivery systems in the future. The potential of these technologies will shape delivery systems by providing virtually universal access to education. The way in which these new technologies are adapted and used by schools will determine future directions in education. This research reflects the attitudes of administrators, students, teachers, and parents toward Internet-delivered education in rural Iowa.

> As a result of improved educational technology, distance education has become a highly efficient form of provision. It has even been described as the beginning of a *Copernican revolution* in education. (Moore & Clark, 1989, p. 68)

Sophisticated technology delivery systems are available and provide educators with additional options for world-wide information access and personalized student learning connections. High school students in Iowa have technology access and could benefit from authentic learning experiences using the Internet.

> The next educational world no longer revolves around teachers, teaching programs, and educational materials, but around students, their study objectives, circumstances, prior knowledge, and the learning experiences that are designed accordingly. Development toward such a future began approximately 30 years ago. (de Wolf, 1999, p.1558)

In classrooms all over the developing world, information and communication technology is proving useful. In places across the United States, distance learning helps to compensate for teacher shortages. In third world countries the Internet is opening the educational communities to intellectual freedom. Authentic learning is a product of this technology rich environment (Survey: Wired Schools, 2001).

Higher Education

Distance education has become the accepted method of educational delivery for corporate training, medical training and updates, and for skilled technical workers all over the globe. Distance education has become a standard option for educational institutions from community colleges to Big 10 Universities to Ivy League institutions. Post-secondary education is blazing the

Internet trail with complex programs and delivery systems alternative to the traditional classroom.

> The University of Texas system is TeleCampus. Advanced degrees from UT are made up of courses designed at different UT campuses. For example, each of eight campuses must offer two courses to make up the 16 – course distance education MBA program. The virtual library resources that are pieced together from all participating campuses do not match those available at giant UT – Austin. The combined resources exceed real-world resources for students at the tiny UT-Permian Basin…E-learning promises to change the role of the library in the future. The assortment of approaches to what was once called distance education presents a dizzying future for academic librarians, who will ultimately have to support student research needs in these strange new worlds. (E-Learning, 2001, p. 2)

Secondary Education

Where does secondary education fit into the complex equation of distance education? Public and private school budgets are under great stress. Administrators are seeking ways to reduce costs. Class sizes in many rural districts are small and do not justify the current number of teaching staff. Class sizes in many urban schools are unmanageable with large numbers of students and low numbers of teachers. Emerging technologies have provided new options for secondary educators.

One of the first online instruction programs for high schools in the United States was initially called Webschool. It began with three teachers and a technical coordinator developing and delivering four computer programming courses and one SAT course in the summer of 1996 to students in Orange and Alachua counties in Florida. These efforts have grown into a Cyberschool structure, now called the Florida High School, that provides a complete high school curriculum online (Johnston, Stark, & Young, 1998).

Our neighbors in Illinois and Minnesota have programs in place for high school general education and advanced placement classes. The State of Minnesota has developed ISEEK **I**nternet **S**ystem for **E**ducation and **E**mployment. This program provides a pathway to earn a high school diploma online. Fifty-four percent of the participants are under age 25. ISEEK provides the program in English, Spanish, Hmoob and Soomaali. ISEEK links students to nearly 100,000 courses from public and private education providers in Minnesota (Minnesota Internet System for Education and Employment Knowledge, 2002).

On January 8, 2001, Governor George H. Ryan, launched the Illinois Virtual High School. The program is designed to provide expanded educational opportunities for high school students in public and private schools, both inside and outside the classroom walls with Internet delivery to students throughout the state. All Illinois Virtual High School courses put emphasis on curriculum needed to ensure that students can meet the Illinois Learning Standards, including courses in foreign languages, high-level mathematics and sciences,

Advanced Placement review courses and other courses that might not otherwise be available to all students. The Illinois Virtual High School was designed with the help of the State Board of Education, the Board of Higher Education, Illinois Math & Science Academy, Illinois Community College Board, Lakeland College and Western Illinois University (Ryan, 2001).

Iowa

Where does secondary education in Iowa stand in the complex field of distance education? School budgets in the state of Iowa are under great stress. Administrators are seeking ways to reduce costs. Class sizes in many rural districts in Iowa are small and do not justify the current number of teaching positions. Class sizes in many urban schools are large, exceeding the ideal Iowa standard for teacher to student ratio (M. A. Meyerhoff, personal communication, April 23, 2002).

Iowa leads the nation in education excellence. Iowa high school students produce some of the highest standardized test scores in the United States. The outstanding community colleges, private colleges and public universities in Iowa are generating large quantities of electronic course work (Gmelch, 2001). The State of Iowa had the foresight to fund, develop, and install the ICN system for interactive educational delivery to all 99 counties (Iowa Communications Network, 2001). Iowa has extended this rich technology resource to secondary education. What decisions will shape the future delivery systems for secondary education in Iowa? Emerging technologies have provided new options for secondary educators in the state of Iowa.

One rural school district in eastern Iowa.

A rural district in eastern Iowa participated in this survey to assess attitudes toward Internet-delivered instruction. The K-12 facility has 636 students, it has recently consolidated with another school district as a result of low enrollments. Approximately 200 students in grades nine to twelve comprise the high school. Internet access to the school is provided by the Iowa Area Education Agency.

Problem Statement

Student populations in rural Iowa school districts are decreasing. Internet delivered classes in general education are increasing and are available in Iowa's adjoining states, Illinois and Minnesota. This study examines the perception of Internet delivered high school classes by administrators, students, parents, teachers, and school boards in a rural school district in Iowa.

Research Hypothesis

1. The majority of responding administrators in a small rural, eastern Iowa school district will perceive that Internet course delivery is a viable alternative to traditional secondary classes.
2. The majority of responding teachers in a small rural, eastern Iowa school district will perceive that Internet course delivery is not a viable alternative to traditional secondary classes.
3. The majority of responding students in a small rural, eastern Iowa school district will perceive that Internet course delivery is a viable alternative to traditional secondary classes.

4. The majority of responding parents in a small rural, eastern Iowa school district will perceive that Internet course delivery is a viable alternative to traditional secondary classes.
5. The majority of responding school board members in a small rural, eastern Iowa school district will perceive that Internet course delivery is a viable alternative to traditional secondary classes.

Purpose Statement

The purpose of this survey is to provide attitudinal information from administrators, teachers, students, parents and school boards toward Internet-delivered classes in a small, rural high school in eastern Iowa.

Definitions

Asynchronous communication: A method of data communication in which the transmission of bits of data is not synchronized by a clock signal but is accomplished by sending the bits one after another. Asynchronous communication is meant to be read at the receiver's convenience (Webster's New World Dictionary of Computer Terms 7th edition, 1999, p. 40).

Distance education: A lesson, course, or program of study in which the dominant characteristic of the relationship between instructor and student(s) is their geographic separation. Communication between teachers and learners is through print or electronic media (Moore, 1999).

Distance learning: The use of telecommunications (and increasingly the Internet) to provide educational outreach programs for students at remote

locations (Webster's New World Dictionary of Computer Terms 7th edition, 1999, p. 61).

e-mail: The use of a network to send and receive messages. Also called electronic mail. Some e-mail systems are strictly local, providing communication services for users of a local area network (LAN). But the emerging lingua franca of electronic communication is Internet e-mail, which creates billions of potential connections that cross national boundaries (Webster's New World Dictionary of Computer Terms 7th edition, 1999, p. 179).

Assumptions

This project assumes that the administrators, students, teachers, parents and school board members will know enough about Internet delivered distance education to respond accurately, knowledgeably and honestly to the inquiry.

Limitations

This study includes respondents from one high school in rural eastern Iowa. Because this study is limited to one school district the results cannot be generalized to other school districts.

Significance

This is the first time this school district has been asked to consider the ramifications and applications of distance learning for the high school. They will encounter new information and develop new opinions. The individuals in this school district provide opinion that could indicate acceptable alternatives to the traditional classroom. This study may provide a foundation for future

discussions that impact the decisions and direction taken in secondary education in this rural school district and other rural districts in Iowa.

Chapter 2

Literature Review

Rural Iowa student populations are decreasing and rural Iowa school districts are experiencing changes. At times they are forced to combine with neighboring districts to provide adequate academic options. Internet-delivered curricula are available in Iowa's adjoining states, Illinois and Minnesota, and these provide a full range of academic programs. This kind of course delivery might provide options for school districts in Iowa. The purpose of the study is to gather and assess attitudinal information from administrators, teachers, students, parents and school board members toward Internet-delivered education in a one rural Iowa School District.

The literature review provides insights regarding the problem. Three related and emerging topics in this review include attitudes toward change in the educational system; attitudes toward technology by administrators, teachers, parents and students; and the effectiveness of web-based instruction.

Educational Change

The organizational culture of education allows for many models of educational change. This review examines some of the theories and attitudes behind the current educational change debate and considers the efficacy of change attitudes toward educational innovation for a rural school district in Iowa.

Theories of change.

Gold, (1999) proposes a theory of educational change based on 23 years of qualitative data that document the history of a public elementary school (p. 3). The posit of his theory is that over an extended time, innovation failure creates punctuations that produce alternations between short periods of rapid change that reconfigure and transform the organizational deep structure and long-term incremental change that refines the transformation. Innovations in schools frequently encounter problems after adoption and terminate a short time later, often within the first 2 years, without achieving full implementation (p.10). Explanations of innovation failure include: incorrect assumptions about the behavior of students and teachers by policy makers; planning deficiencies; implementation difficulties; the culture of the school resisting reform; ideological contradictions that create destructive conflict; and a variety of social, financial, and political obstacles. When educational innovation is studied over a long time, however, short-term implementation failure emerges as central to the process of change and as a critical element in a comprehensive explanation of educational change.

Incremental Theory is one of two theories presented in the research. An incremental theory of organizational change underlies most studies that document rapid educational reform failure and includes three stages of change; adoption, implementation, and institutionalization (p. 3). A central concern is resistance or barriers to change, which can emerge at any stage of the change process from internal or external sources. Depending on its management,

resistance ends the innovation process, distorts it, or creates usually negative unanticipated consequences. The primary explanation for change failure is an individual or group resistance to new ideas and practices, which results in implementation failure and the creation of barriers to further innovation. A criticism of the incremental theory is that it accounts only for innovations that occur in a relatively short time. Most research on educational change ends after initial failure usually within three years, the failure hypothesis finds that implementation failure equals innovation termination (p. 3).

An alternative to the incremental theory is punctuated equilibrium theory, which provides a framework for studying organizational change over an extended time (Gold, 1999). Punctuated equilibrium theory proposes that organizations experience long periods of stability (equilibrium), punctuated by compact periods of qualitative change. The concept of organizational deep structure explains the relationship between periods of equilibrium and revolution. During equilibrium periods organizational activity remains relatively stable and incremental adjustments leave the deep structure intact. Revolutionary periods are characterized by the dismantling of the deep structure that leaves the system temporarily disorganized (p. 3).

To examine the incremental and punctuated equilibrium theories and the failure and crisis hypotheses, this study focused on long-term organizational change that includes post-innovation failure periods. The research questions were: What patterns of change emerge over a long time? What explains the change patterns? Answering these questions requires: (1) identification of

change triggers; (2) determination of punctuations; (3) measurement of the stability or change in organizational deep structure, that is, incremental versus revolutionary change; and (4) assessment of innovation failure or success.

The complex issues that impact educational change and the process necessary for change implementation influences the ability of educational institutions to respond to technology innovation. Gold (1999) reports events in the Lincoln Acres School, a K-6 public elementary school in Washington Township, located an hour outside a major urban center, beginning with its planning in December 1974 through June 1997 – almost 23 years (p. 3). The primary data collection method was ethnographic fieldwork.

The long-term change processes of Lincoln Acres revealed dynamic and complex interactions among its members, the organization, and its environment. Innovation and organizational failure which was the result of rational administrative change set the stage for punctuations, followed by periods of equilibrium that produced exchanges between period types to create continuous change that accumulated to significantly modify the organization (p. 14). After punctuations, the requirements for constructing organizational legitimacy explained the complexity and dynamics of change that indicates that community and national institutional orders did not bestow unconditional and permanent legitimacy on the school (p. 14).

Educational reforms such as voucher plans, charter schools, for-profit schools, and state takeover of underperforming urban districts have the potential to create punctuations that will change the deep structure of schools and

American education. But how these reforms will interact with the culture, politics, and structure of schools and the communities they serve is not clear. Gold's study predicted that their success will be determined by how key stakeholders conceptualize the nature of change, respond to implementation and organizational failures, the extent to which change requires or creates the reconfiguration of the deep structure, and most importantly, how internal and external stakeholders construct and reconstruct the legitimacy of particular innovations (p. 14).

If despite competent leadership, rational planning, and effective implementation strategies, the primary triggers for change in educational organizations are loss of legitimacy and organizational strategies to reestablish legitimacy, then over an extended time the environment influences schools to select innovations with high survival opportunities. This evolutionary mechanism suggests that cultural trends, social movements, economic policies, and political agendas that legitimate or delegitimate specific educational innovations at particular times determine the course of academic change in the United States more than scientific advances in theories of learning, the development of new curricula, and other rational attempts to reform schools (Gold, 1999, p. 15).

Gold's findings are significant and provide a foundation for understanding the complex issues that surround technology innovation, and change in the education system.

Impact of educational change.

Recent reforms in the Ontario [Canada] Educational System has resulted in demands for greater standardization of curriculum. The Ontario Ministry of Education and Training (1995) visited 27 Ontario cities, consulted with approximately 1400 groups and individuals, and reviewed an additional 3600 written submissions (p. 1). The investigation resulted in a call for greater standardization of curriculum to ensure that the achievement of Ontario's students is comparable to that of their counterparts. Having central government control by the Ministry of Education of school curriculum constituted a major change in the province and affected everyone involved in education (Ontario Ministry of Education, 1995). The resulting report summarized the impact on teachers and students of the recent reforms in Ontario's educational system. The key components identified by the commission, as the *engines of change* were, community involvement, teacher education, information technology, and accountability. They recommended a more active role for parents and students in the whole process of education (p. 2).

Winter & Mceachern (2001) reports that a *Common Curriculum* introduced in 1995 identified six key features: a focus on learning outcomes, a focus on all students, a focus on integrated learning, a focus on excellence and equity, a focus on accountability and standards and a focus on collaboration. Later in 1995, a new government was elected in Ontario (p. 3). They made more radical changes to the educational system and replaced the *Common Curriculum* with the *Ontario Curriculum*. Public support was available for the

new curriculum but the speed at which the changes were implemented and the lack of resources resulted in unprepared teachers (p. 3).

The sweeping curriculum changes, along with other system changes resulted in alienation of teachers by the government (Winter & Mceachern, 2001, p. 4). The alienation of the teachers was not specific to the curriculum issues but rather a reaction to a broader package of educational reforms mandated by the government (p. 4). The government was placing controls on class size, amount of teacher preparation time, the power of the teacher federation and the role of administrators, as well as cutting funding and changing the funding process. The changes left the teachers and the school boards feeling considerable pressure without the necessary support. The extent of teacher alienation in Ontario culminated in the fall of 1997 when 126,000 teachers took strike action against the government's proposed reforms to the system (Winter & Mceachern, 2001, p. 4).

Implementation of change without teacher discontent and disruption would be more likely if changes are well understood, changes are described in simple and concrete terms, changes represent a convincing improvement over existing practice, and changes are maintained in ways that are believed to be appropriate (Winter & Mceachern, 2001, p. 5).

Teacher attitudes affect the community response to and acceptance of change. The way in which teachers learn creates a pattern for change in education. Technology innovation, technology adaptation and technology infusion are the result of teachers learning the technology first.

Teacher learning and change.

Based on a study of nine school districts Spillane (2002) examined district officials' theories about teacher learning and change. He identified three perspectives – behaviorist, situated and cognitive (p. 377). The School District official's premise was based on the assumption that the school district is a major provider of teachers' opportunities to learn; the analysis moves beyond the structural features of district professional development to explore district officials' thinking about teacher learning. District officials' theories of teacher learning and change differed on three dimensions: ideas about teaching teachers and teacher learning, the curriculum for teacher learning, and motivating teachers to learn and change their practice.

District change agents in the behaviorist category believed that teaching teachers centered on the transmission of knowledge from expert to novice and understood the teacher as learner chiefly in terms of their preferences for professional development, rarely acknowledging that teacher learning might depend on teachers' prior knowledge and experiences (p. 387).

District officials who supported a situated perspective saw classroom curricula, teachers' day to day practice, and students' work as central components of the curriculum for professional learning and change. The curriculum for teacher learning supported grounding teacher learning both in the reform proposals and, simultaneously, in teachers' efforts to enact these proposals in their practice (p. 391).

Only one district change agent in the study expressed a cognitive perspective on teacher learning and change. The district findings in the cognitive category found that the curriculum for teacher learning should be integrated around the classroom curriculum and include workshops, curricular materials with teacher manuals, and videotapes with the content covering both subject-matter knowledge and pedagogical knowledge (p. 396).

In the behaviorist category teacher learning was dependent on external motivation, identifying a variety of motivational levers, including monitoring instruction, state assessment instruments, and resource allocation. The situated category observed the motivation for teachers to learn and change is determined by the educators developing and sustaining identities as learners in their school communities, while sustaining their identities as experts in their curricular area (p. 400). The cognitive category indicated that extrinsic motivators were a way of activating teachers' intrinsic motivation to learn and change. Availability of high-interest activities and materials as well as ongoing technical support was an inducement for teachers to change their pedagogy. They believed that extrinsic motivators would give way to intrinsic motivation because changes in classroom practice would provide a key stimulus for teachers to change.

The study determined that changing the training paradigm that dominates school districts' approach to professional development necessitates challenging district officials' theories about teacher learning (Spillane, 2002). Unless reformers create opportunities for district change agents to develop alternative conceptions of teacher learning and change, the training paradigm is likely to

persist. Alternative models of professional development may help, but district change agents are likely to adapt these alternative models to fit with their existing theory about teacher learning. Unless these three models challenge the district change agents' underlying theories of teacher learning, they are unlikely to transform district professional development practices (p. 396).

Characteristics of teacher change.

Burger (1989) identified characteristics of elementary teachers who were perceived and identified as being influential in curricular change by peers, principals, and district administrators in a Midwestern school district. One of the implications of the study was that placing teachers, such as media specialists who are in the center of the school communication network, in strategic positions should effect change more rapidly and effectively in the school (p. 116). The unexpected findings show that one-quarter of the identified change agents were media specialists recognized as the technology leaders with the ability to seek and create change (p. 118).

Attitudes toward technology

Technology advances and innovations have placed an additional stress upon administrators, teachers, students and parents. Understanding the various technologies and incorporating them into the educational system is approached in a different way by each constituency. The rate at which these various groups adopt new technologies and individual attitudes toward change influence the infusion of new technologies into school systems.

Student attitudes toward technology.

Hurley & Vosburg (1997) examined the attitudes of students toward modern technology, their attitudes toward learning using modern technology in an academic setting, and whether there is a correlation between the two attitude variables. The investigation looked at the effects of gender and grade level on students' attitudes toward technology and toward learning using technology. Data for the study were obtained from a survey of 7th and 8th grade students in an elementary school in Ontario, Canada, that introduced modern technology into the regular school program beginning in September 1991 (p. 3). The school's technological program includes the use of computers in an ongoing manner by all students in the school for classroom work, assignments, and recreational pursuits; and by teachers for teaching from a computer assisted learning perspective.

The relationship between student attitudes and increased use of technology on an every day basis was investigated (p. 13). The students had daily access to technology either in the classroom or in a technology workroom open to all students during the school day on a scheduled or unscheduled basis. These questions formed the basis of the study: Do students have a positive attitude toward the modern technology introduced to the school? Do students have a positive attitude toward learning using modern technology? Is there a correlation between students' attitudes toward modern technology and their attitudes toward learning using modern technology? Do gender or grade level have any effect on students' attitudes toward modern technology or their

attitudes toward learning using modern technology? In this research technology refers to the modern technology introduced to the school, which includes micro-computers, robotics, CD Roms, computer software, laser discs, video equipment, and hands-on materials such as Lego, Techno, and Temsi (p. 5). The use of technology was incorporated into all aspects of the curriculum and administration of school activities.

A questionnaire consisting of 61 questions was administered to students in the classroom (p. 8). Four independent variables were used in the study. One was the modern technology available for use to the students. The second consisted of students from Grades 7 and 8. Gender and grade level were also used to study the effect of each, on the two output variables. Two dependent variables were retained: one was the attitudes of students toward the technology, and the second was the attitudes of students toward their learning using technology in an everyday school setting (p. 8).

To determine if there was a positive relationship of students toward modern technology and a positive relationship of students toward learning using modern technology, mean scores were calculated for each part of the survey as well as for the overall survey (p. 8). To determine if there was a correlation between the attitudes of students toward modern technology and their attitudes toward learning using modern technology, the Person product-moment correlation was used.

The study found that students had a highly positive attitude toward modern technology (Hurley & Vosburg, 1997, p. 15). Technology allowed

students to work at a faster pace that allowed them to learn more in a given period of time. A correlation between students' attitudes toward technology and their attitudes toward learning was supported by the findings. The study found that gender or grade level had no effect on students' attitudes toward technology and their attitudes toward learning using these technologies (p. 15).

Teacher attitudes toward technology.

Technology implementation by teachers and adoption of new technologies are important factors in a study by Sherry (1998). Twenty-eight separate factors were identified that impact Internet diffusion (p. 33). Using both quantitative and qualitative methods, Sherry explored how these factors affect the use of the Internet for information access and dissemination, communication, teaching, and learning. These factors clustered into six major themes, user characteristics and perceptions, cultural and organizational issues including norms of use and legitimate activities, tools, design, and impersonal supports, social issues including scaffolding, mentoring, and communication, individual learning, adoption, and conceptual change, and group learning, adoption, and conceptual change (p. 28).

The purpose of this study was to explore a range of factors that influence the use of the Internet to support teaching and learning within an institution of higher learning (Sherry, 1998, p. 1). The context is the University of Colorado's School of Education. These factors include individual user characteristics and perceptions, design and support features of the university's network services; social and communication issues; cultural/organizational characteristics of

members of the School of Education; and issues of learning, adoption, and conceptual change.

Five factors emerged that seemed to affect people's choices to engage in the use of e-mail and the Internet: clear benefit and value, developing self-efficacy, cultural/personal compatibility, proper scaffolding, finding a voice and having something to say (p. 3). The theoretical framework for adoption and diffusion of the Internet throughout the School of Education is based on diffusion theory, human performance technology, transformational learning, collaborative learning, situated cognition, computer-mediated communication and organizational learning and change (p. 16).

The principle findings from the study included: users valued personal scaffolding but had individual preferences concerning specific types of scaffolding; self-efficacy as a perceived value across time and across programs; early adopters tended to be intrinsically motivated, whereas later adopters often felt extrinsic coercion; personal/cultural compatibility, rather than time, separated earlier from later adopters; early adopters often expressed a good fit between Internet tools and their personal and cultural values; late adopters voiced concerns about the impact of the Internet on their core pedagogical strategies, indicating that it may not support their vision of learning (Sherry, 1998 p. 42).

Iowa educators attitude toward technology.

Monke (1989) investigated the willingness of teachers and administrators in rural Iowa school districts to participate in computer teleconferencing. A survey to rural Iowa educators provided current interest level in computer teleconferencing among rural Iowa schools and provided information on the extent to which rural Iowa educators are willing to use computer teleconferencing technology. The research provided that rural Iowa educators had access to technology, but little working knowledge of computer teleconferencing or its educational applications (p. 53).

Effectiveness of Internet-delivered Instruction

Web-based, Internet-delivered instruction and distance education delivery systems for education are reoccurring themes in educational research. The effectiveness of secondary educators using web-based instructional formats and teacher attitudes toward new technologies will impact the perception and adoption of new technologies in the learning community.

Moeller (2001) identifies key features of the design and implementation of distance learning programs that have contributed to the creation of meaningful learning experiences and their sustainability. *Virtual High School* (p. 2), *Mathematics Learning Forum* (p. 4), and *iLEARN* (p. 6) are sample projects that illustrate the range of distance education projects that have been developed for elementary and secondary education, teacher education, and community-based education.

Several key reasons for the creation of distance learning programs are:

- distance learning makes it possible to reach learners who are difficult to reach through traditional educational programs;
- distance learning can support and facilitate new forms of learning;
- distance learning can provide more flexibility for participants to learn at their own pace;
- with distance learning, education is no longer tied to a specific place;
- distance learning can broaden the availability of educational programs that are available in resource-poor communities;
- asynchronous distance learning programs allow learners to participate in educational programs at their own time;
- by using distance learning technology as the delivery medium, participants experience and learn about the use of new technology (p. 2).

Four key features were common in the programs studied:

- the distance learning program is sustained over time;
- participants are actively engaged in the online learning experience;
- participants achieve the desired learning outcomes;
- the online learning experience serves all learners (p. 7).

The programs that have exhibited these key elements have included the following design features:

- the distance learning program addresses an important need for the participants;

- participants in different locations share responsibilities and commitment for the implementation of the program;
- communication and collaboration are used as tools to address a perceived need, rather than as an end in itself;
- online programs are tightly focused and expectations are clearly established at the outset;
- the online learning community is facilitated by a skilled moderator;
- online learning is enhanced by an opportunity for face-to-face meetings as one component of an educational program;
- the online program has a clear timeframe that is compatible with the lives of the participants;
- the online learning community is not too small and not too large, optimal size is 12-25 participants;
- a variety of tools are used to facilitate communication (e-mail, chat, conferencing);
- the technology is easy to use and technical support is available on-line and off-line;
- an emphasis on equal learning outcomes for diverse learners is an integral part of the distance learning culture. (p. 7 - 9)

Distance learning via the Internet is widely available for secondary education. Rural schools with diminishing populations could benefit from the vast array of curriculum currently available. Virtual high schools offer students

around the world an alternative way to learn and interact with each other and with teachers. A study of South Vermillion High School in Clinton, Indiana, (p. 1) examined whether a school in the rural Midwest could benefit from online instruction.

Chaney examined the effectiveness of Internet-delivered education in a rural community of 5,000 people in western-central Indiana. Its student body comprised 525 students in grades nine to twelve (p. 4). Prior to this study, no online courses had been taught at the school. The administrators, the counseling center personnel, and the teachers wanted the school to make a better effort to meet student needs, and online learning offered one possible solution. Web-based instruction could allow students to take courses otherwise not available due to decreased enrollment and lack of funding. The school needed to test Web-based instruction to learn whether it would be effective and desirable for the learning audience. A performance-based accreditation self-analysis survey revealed that: The school had one computer for every 44 students; approximately 60% of students reported that they had a computer at home; twenty-five percent of students lived below the poverty line; the students that claimed to have computers at home said they were used for word processing only (p. 5).

In the study two sophomore English classes with a total of 43 students completed an online unit on *To Kill A Mockingbird.* Thirty-six students participated. Of the 14 students that returned the survey, 57% said they had never used distance learning (p. 5). Only seven students reported they had

moderate or strong computer skills and felt comfortable using the Internet (p. 5). Of the respondents, 57% believed the unit had clear goals and objectives, and 43% felt the materials were easily accessible online. More than 60% considered the website helpful to them while studying this unit; 50% either agreed or strongly agreed that they would like to have another unit taught with online material, and 79% said they did not have any problems using the technology (p. 5). About 22 students did not return the survey. Six of the 14 students who returned the survey volunteered to be interviewed. When asked to discuss the online portion of the class, five of the six students said they took more interest in the subject matter and generally liked the idea of using a website to support classroom instruction (p. 5).

Chaney included informal interviews with the mothers of three of the participants. One mother was thrilled that her son's English class was using online instructional methods. She commented that she wished more of his classes had online support so she could be more involved in his learning (p. 5). Another mother was excited that her daughter had the chance to work with online-learning tools because she wanted her to start taking college courses while in high school. She believed that distance education would provide her daughter a way to do this. A third mother interviewed noted that her son had better be prepared to do more online work in college (p. 6).

The Chaney (2001) study did not involve enough students to generalize about a student population's interest in and ability to take courses from a VHS (Virtual High School.) The 14 students who completed the survey were above-

average, self-motivated, and responsible students who often turned in assignments before due dates and kept abreast of up coming assignments on the syllabus. Chaney (2001) indicated that students of this caliber would benefit from online courses offered at the high school; however, the benefits for those who did not participate or complete the survey remain uncertain (p. 7). This study demonstrates that Web-based instruction in the traditional classroom can provide students with valuable support tools and creative new ways to learn (p. 7).

Summary

Gold (1999) found that educational reforms have the potential to create punctuations that will change the deep structure of schools and American education. How these reforms interact with the culture, politics, and structure of schools and the communities they serve is not clear. Key stakeholders conceptualize the nature of change, respond to implementation and organizational failures. Burger (1988) found that media specialists were in a strategic position to effect change more rapidly and effectively in schools than other teachers. The study also identified the media specialist as the technology leader in the school.

Sherry (1998) found that teachers represent a wide variety of individuals who reflect varying degrees of personal and cultural compatibility with technology. Early adopters of Internet technology expressed a good fit between Internet tools and their personal and cultural values, late adopters voiced concerns about the impact of the Internet on their core pedagogical strategies.

Monke (1989) found that Iowa educators are willing to use technology, have access to technology but little working knowledge of computer teleconferencing.

Chaney (2001) found that five of six students took more interest in the subject matter and generally liked the idea of using a website to support classroom instruction. Chaney found that parents believed that distance education would better prepare students for college.

Significant findings in this chapter contribute to the complexity of Internet- delivered education for a small, rural school district in eastern Iowa.

Chapter 3

Methodology

Student populations in rural Iowa school districts are decreasing. Internet-delivered classes are increasing and are available in Iowa's adjoining states, Illinois and Minnesota. This study examines the perception of Internet delivered education by administrators, students, teachers, parents, and school boards in a rural school district in Iowa.

The survey method is used to find out specific characteristics of a designated population. The survey design provides a quantitative or numeric description of the sample through data obtained by asking questions of people. The survey method protects the privacy of the respondents and provides a direct line of communication with responders. One advantage of the survey method is it provides direct access to the party being surveyed. It is a cost efficient method for research. The only cost associated with a survey is the cost of paper, printing, and postage.

A survey (questionnaires) are widely used by educators to obtain facts about past, present, and anticipated events, conditions, and practices and to make inquires concerning attitudes and opinions. For some studies or certain phases of them, presenting respondents with carefully selected and ordered questions is the only practical way to elicit the data required to confirm or disconfirm a hypothesis (Van Dalen, 1973, p. 324).

Population Studied

The survey was conducted in a rural Iowa school district during the last week of school in the spring semester of 2002. The school was selected from a number of rural schools because of proximity to the researcher and because the district would allow the researcher access to administrators, teachers, school board members, parents and students. The responders who voluntarily returned the survey were four administrators, 27 students (9^{th} – 12^{th} graders), three board members, 14 teachers and five parents. The high school has four administrators and all four returned the survey. Twenty-seven students volunteered to complete the survey while in the media center on free time. Surveys were distributed to all 20 teachers in the high school; 14 returned the survey to the researcher. Twenty-three surveys were mailed to parents listed in the high school database. A random pull of every fifth mailing label from the database determined which parents would receive the survey. Five parents returned the survey. The school board has five members; all five school board members were mailed a survey and three returned the survey to the researcher.

Design of Research Instrument

A survey form was developed (Appendix A) to obtain attitudinal information. Students were asked to complete Answers A through L; administrators, teachers, parents, and board members were asked to answer five additional questions. An introductory letter (Appendix B) accompanied the mailed surveys. The survey questions were tested in a pilot instrument by an

administrator, teacher, parent, and student not a part of the sample district and adjustments and clarifications were made.

Procedures

The purpose of this survey was to determine what factors contribute to attitudes and perceptions toward Internet delivered education in a rural Iowa school district. The superintendent of the school was contacted for written permission to survey students. The superintendent deferred responsibility to the high school principal to facilitate all of the surveys in the district. A variety of methods were used to distribute and collect the surveys. The student survey was administered directly by the researcher in a school library setting. Student surveys were administered directly to the students in the school library media center when students were using the library for free reading outside regular class time. This method provided for efficient collection of data and a higher completion rate. Administrators and teachers received the survey in the staff mailbox system; a postage-paid return envelope was distributed along with the survey. School board members' and parents' surveys were mailed to homes and postage-paid return envelopes were enclosed with the survey.

All survey responses were completely voluntary and anonymous. The survey required three to five minutes to complete by each individual. The researcher collected surveys and placed them in separate folders marked by respondent designation: administrator, teacher, student, board member, or parent.

Description of Data Set

The researcher assembled the data by school designation for the analysis process. The data set was analyzed by audience and reported in narrative form with accompanying tables and charts to help illustrate the findings.

Chapter 4

Data Analysis

The purpose of this study was to investigate the perceptions of administrators, teachers, students, parents and school board members toward the possibility of Internet-delivered classes in a small, rural high school in eastern Iowa. Approximately 200 students are enrolled in the high school; 20 full time teachers and one high school principal are supported by three additional administrators in the district. The school board has five members. The survey was conducted in the school district in May and June, 2002.

The responses for this study came from over 20 teachers and parents and 27 high school students, four administrators and three board members from a small rural school district. From these data, interpretations were made regarding differences in perceptions and attitudes of students, teachers, parents, administrators, and board members toward Internet-delivered classes.

Hypothesis one stated that the majority of administrators in a small rural, eastern Iowa school district would perceive that Internet course delivery is a viable alternative to traditional secondary classes. The questions on the survey relevant to the hypothesis are:

- Question I, which stated - Do you think the high school required government class should be offered over the Internet?
- Question O, which stated - If a specific curriculum were available over the Internet and the school did not have a certified staff member in the

curriculum area, would you accept that class as a viable option for students in your school district?

- Question P, which stated - If a general education curriculum were available over the Internet and the school had a small number of students who needed the requirement, would you accept that class as a viable option for students in your school district?

Table 1: Administrator Responses

Administrator	Question I	Question O	Question P
#1	No	No	No
#2	No	Yes	Yes
#3	No	Yes	Yes
#4	No	Yes	Yes
Total Yes Responses	0	3	3

The district has four administrators and all four completed and returned the survey. Administrators in this district are well connected to technology and the Internet specifically. All administrators use the Internet over 10 times each week primarily for e-mail. The administrator respondents included two males (one was 35-45 years old and one was 45-55 years old) and two females (one was 35-45 years old and one was 45-55 years old.) All four administrators selected traditional classroom as the preferred delivery system for high school classes. Two of the administrators felt that the district had an adequate number of computers and technical support, two of the administrators did not feel that

the district had an adequate number of computers and technical support to provide Internet-delivered classes. The administrators revealed a positive general attitude toward the Internet but when pressed for a specific attitude toward an Internet delivered class the response was negative. Table 1 indicates that all administrators rejected Internet delivery of a specific government class. Three of the administrators would accept a specific curriculum of a specialty class such as Japanese as a viable option for students. The same administrators would also accept a general education requirement to accommodate a small number of students as viable. Because there was no positive consensus on the three relevant questions, hypothesis one is rejected.

Hypothesis two stated that the majority of teachers in a small rural, eastern Iowa school district would perceive that Internet course delivery is not a viable alternative to traditional secondary classes. The questions on the survey relevant to the hypothesis are:

- Question I, which stated - Do you think the high school required government class should be offered over the Internet?
- Question O, which stated - If a specific curriculum were available over the Internet and the school did not have a certified staff member in the curriculum area, would you accept that class as a viable option for students in your school district?
- Question P, which stated - If a general education curriculum were available over the Internet and the school had a small number of

student's who needed the requirement, would you accept that class as a viable option for students in your school district?

Table 2: Teacher Responses

Teacher	Question I	Question O	Question P
#1	No	Yes	Yes
#2	No	No	Yes
#3	No	Yes	No
#4	No	Yes	Yes
#5	No	Yes	No
#6	No	No	Yes
#7	No	No	No
#8	No	Yes	Yes
#9	Yes	Yes	Yes
#10	No	Yes	Yes
#11	No	No	No
#12	No	Yes	Yes
#13	No	Yes	Yes
#14	No	Yes	No
Total No Responses	13	4	5

The district has 20 full time high school teachers; 14 completed and returned the survey. Teachers in this district all use the Internet at school and the majority of the teachers responding to the survey use the Internet at home as well. The teacher respondents included nine females (45-55 years old), three

males (45-55 years old), one male and one female (55 years and older) and one male and one female (35-45 years old). Eleven teachers selected traditional classroom as the preferred delivery system for high school classes; three selected Internet class at school as the preferred delivery system. Nine of the teachers responding to the survey felt that the district did not have an adequate number of computers and technical support; four teachers felt that the district had an adequate number of computers and technical support; and one teacher felt the district had an adequate number of computers but inadequate technical support. The teachers revealed a positive personal use of the Internet and a negative attitude toward the use of the Internet for high school delivered classes. Table 2 indicates that teachers rejected Internet delivery of a specific government class. Many teachers would accept a specific curriculum and some would accept general education classes however, the majority response was negative to Internet-delivered classes for high school students. Hypothesis two is accepted.

Hypothesis 3 stated that the majority of students in a small rural, eastern Iowa school district would perceive that Internet course delivery is a viable alternative to traditional secondary classes. The questions on the survey relevant to the hypothesis are:

- Question I, which stated – Do you think the high school required government class should be offered over the Internet?
- Question J, which stated – What other kinds of classes should be offered over the Internet?

  English, Math, Social Studies, Science, Foreign Language,

Advanced Placement, Other (Please Specify)

- Question L, which stated – If you could decide how a class was presented which would you choose?

  Internet class at home, Internet class at school, traditional classroom

Table 3: Student Responses

Student	Question I	Question J	Question L
#1	No	Science	Internet at home
#2	Yes	A. P.	Internet at home
#3	Yes	Three or more	Internet at home
#4	Yes	Three or more	Internet at home
#5	No	Other/Agriculture	Traditional
#6	Yes	Science	Traditional
#7	Yes	Social studies/ Foreign lang.	Traditional
#8	No	None	Traditional
#9	No	A.P./Foreign lang.	Traditional
#10	No	None	Traditional
#11	No	A.P.	Internet at school
#12	Yes	Three or more	Internet at school
#13	Yes	Three or more	Internet at school

Table continues on next page.

#14	Yes	Foreign lang./ history	Internet at school
#15	No	None	Internet at school
#16	Yes	A.P.	Traditional
#17	No	None	Traditional
#18	No	Foreign language	Traditional
#19	No	Foreign language	Traditional
#20	No	None	Traditional
#21	No	Three or more	Internet at home
#22	No	Three or more	Internet at home
#23	No	A.P.	Internet at home
#24	Yes	Three or more	Internet at home
#25	No	English	Internet at home
#26	No	None	Internet at home
#27	Yes	Three or more	Internet at home
Majority responses	16 – No	8 –Three or more 5 -Foreign language 5 –Advance Placement	11 – Internet at home 11- traditional 5 – Internet at school

Twenty- seven students (16 male; 11 female) from a high school population of 200 completed the survey. The respondents were comprised of 13 freshman, nine sophomores and five upper classman. Students in this district are well connected to the Internet. All of the student respondents use the Internet each week and 22 of the student respondents use the Internet for e-mail and at least three other uses including search engines, music source, and chat rooms. The students revealed a positive general attitude toward the Internet but when

pressed for an opinion toward a specific Internet-delivered class the response was negative. Table 3 indicates that the majority of students rejected Internet delivery of a specific government class. Table 3 also indicates an even split response for a preferred delivery system with 11 students selecting a traditional classroom and 11 students selecting an Internet class at home. Only five students selected the option, Internet at school. A majority of positive opinion was not present in Question I. Hypothesis 3 is rejected.

Hypothesis 4 stated that the majority of parents in a small rural, eastern Iowa school district would perceive that Internet course delivery is a viable alternative to traditional secondary classes. The questions on the survey relevant to the hypothesis are:

- Question I, which stated - Do you think the high school required government class should be offered over the Internet?
- Question O, which stated - If a specific curriculum were available over the Internet and the school did not have a certified staff member in the curriculum area, would you accept that class as a viable option for students in your school district?
- Question P, which stated - If a general education curriculum were available over the Internet and the school had a small number of student's who needed the requirement, would you accept that class as a viable option for students in your school district

Table 4: Parent Responses

Parent	Question I	Question O	Question P
#1	Yes	Yes	Yes
#2	Yes	Yes	Yes
#3	No response	No	Yes
#4	No response	Yes	Yes
#5	No response	Yes	No
Total Yes Responses	2	4	4

Only five parents responded to the survey out of 23 that were mailed. Parents responding to the survey in this district are regular Internet users. Most parents responded that they used the Internet ten times per week. The parent respondents included two males, (45-55 years old) and three females (two were 45-55 and one was 35-45 years old.) The parents response to the preferred delivery system question was varied, two selected traditional classroom, one selected Internet class at home, one selected Internet class at school and traditional classroom and one selected Internet class at home and Internet class at school. The majority of parents felt that the school did not have an adequate number of computers or adequate technical support to provide Internet-delivered classes. The parents revealed a positive attitude toward Internet-delivered classes. Table 4 indicates majority acceptance of the questions. Hypothesis 4 is accepted.

Hypothesis 5 stated that the majority of school board members in a small rural, eastern Iowa school district will perceive that Internet course delivery is a viable alternative to traditional secondary classes. The questions on the survey relevant to the hypothesis are:

- Question I, which stated - Do you think the high school required government class should be offered over the Internet?
- Question O, which stated - If a specific curriculum were available over the Internet and the school did not have a certified staff member in the curriculum area, would you accept that class as a viable option for students in your school district?
- Question P, which stated - If a general education curriculum were available over the Internet and the school had a small number of student's who needed the requirement, would you accept that class as a viable option for students in your school district?

Table 5: School Board Responses

Board Member	Question I	Question O	Question P
#1	Yes	Yes	Yes
#2	No	Yes	Yes
#3	Yes	Yes	Yes
Total Yes Responses	2	3	3

The district has five school board members and three completed and returned the survey. These school board members use the Internet over 10 times each week. The school board respondents included two males (45-55 years old)

and one female (45-55 years old). All three board members selected traditional classroom as the preferred delivery system for high school classes.

Two board members felt that the district had an adequate number of computers and inadequate technical support to provide Internet-delivered classes. One board member felt that the district did not have an adequate number of computers nor technical support to provide Internet-delivered classes. The responding school board members revealed a positive attitude toward Internet delivered classes for high school students. Hypothesis 5 is accepted.

Chapter 5

Summary, Conclusions, Recommendations for Further Study

Summary

The purpose of this study was to provide attitudinal information from administrators, teachers, students, parents, and school board members in one small rural eastern Iowa school district toward Internet-delivered classes for high school students.

In this study several key questions were considered and the hypothesis reflect conclusions that are varied and unexpected. Administrators, teachers, and students all rejected a specific application of Internet-delivered education. A high school required government class offered over the Internet would not be acceptable to these three significant groups. Parents and school board members would accept Internet delivery of a high school required government class. The traditional classroom is the most comfortable place for administrators, teachers, and students in this survey. A significant majority selected the traditional classroom as the preferred delivery system for high school classes. Parents and school board members were the innovators in the possibility of new delivery systems for the high school in this study.

Conclusions

As the world of technology advances, educators scramble to outpace students. Student respondents in this study use the Internet to play games, listen to music and chat with friends. They are sophisticated, recreational Internet users and have little experience using the Internet as an educational resource.

Teachers, students, and administrators all have the opportunity to accept or reject educational change, technology innovations and Internet-delivered education. The role of Internet-delivered classes for rural Iowa high schools will evolve and impact schools over the next 5 years, 10 years and 20 years. The average age of Iowa educators and the acceptance of technology in the classroom by Iowa educators may affect the attitudes of students toward technology adoption in the schools.

Reflection on the information discovered in the process of writing this paper reveals the enormity of and potential impact of technology innovation on schools. Educators are charged with the responsibility of preparing children for the future. Internet delivery of education in the 21st century will define and shape high school courses and alter the traditional pathway that one rural Iowa school finds to be comfortable. Technology innovation and methods of instruction will continue to advance and change in our schools.

Educators in this study demonstrated reluctance to change traditional methods of instruction. Educators are embracing personal Internet technology innovation but they are not transferring that technology use into Internet-delivered education.

The school library media specialist, as Burger (1988) found, can be the change agent in Iowa's public schools. The school library provides access to technology, instruction in the use of new technologies and a human connection to address the social isolation that results in student learning from a computer screen. The school library media specialist can provide vital interaction with the

student and support student learning by providing accurate and thoughtful resources and learning connections.

Attitudes toward change in the educational system, attitudes toward technology by administrators, board members, teachers, parents and students and the effectiveness of Internet-delivered instruction were the themes explored in earlier research. These themes coupled with the results of the research presented in this study provide a foundation for further study.

Recommendations for Further Research

- This study is limited to one rural Iowa school district. The study could be repeated at multiple rural school districts for a comparative study.
- This study is limited to one rural Iowa school district. The study could be repeated with emphasis on an urban setting.
- A study could examine the effects of teacher and parent attitudes on student attitudes toward Internet-delivered education.
- A study could determine how Internet-delivered education might be structured, accepted and used by educators.
- A study could determine the average age of Iowa educators and if teacher age indicates the rate of technology adoption by teachers in Iowa?
- A study could show if a correlation exists between personal technology competence of individual educators and attitudes about Internet-delivered coursework.

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Appendice A – Survey

This is an anonymous, voluntary survey – Do not put your name or other identifying information on the Survey – Thank you!

Please circle the answer that most closely answers the question.

A. What is your age group?

Male		Female
14 – 18		14-18
18-24	18-24	
25-35	25-35	
35-45	35-45	
45-55	45-55	
55 and over	55 and over	

B. What is your school designation?

Freshman Sophomore Junior Senior

Teacher Administrator School Board Member Parent

C. Do you use the Internet at School?

Never 1-3 times each week 5-10 times each week over 10 times each week

D. Do you use the Internet at Home?

Never 1-3 times each week 5-10 times each week over 10 times each week

E. What have you used the Internet for? (circle as many as apply)

Email Database Research Search Engines Instant Message Distance Education

Chat Rooms Music Source Electronic Game Source
Library Catalog

Other (Please Specify)_____

_____

E. Have you taken a class over the Internet?

Yes No
If **Yes** please indicate what type of class_____

E. If you could take a class over the Internet would you be more interested in learning the information?

Yes No

F. If you could take a class over the Internet would you be less interested in learning the information?

Yes No

G. Do you think that a high school required Government class should be offered over the Internet?

Yes No

H. What other kinds of classes should be offered over the Internet?

English Math Social Studies Science Foreign Language Advanced Placement

Other (Please Specify)_____

L. If you could decide how a class was presented which would you choose?

Internet class at home Internet class at school traditional classroom

Thank you students please stop here!

Please continue administrators, teachers, parents and board members

*Specific Curriculum refers to a specialty class like Biotechnology, Virtual Basic, Japanese, etc.
*General Education refers to high school required English, U.S. History, Science, etc.

M. Do you feel that your school district has an adequate number of computers necessary in the high school to offer Internet delivered classes?

Yes No

N. Do you feel that your school district has the adequate technical support necessary in the high school to offer Internet delivered classes?

Yes No

O. If a *specific curriculum were available over the Internet and the school did not have a certified staff member in the curriculum area, would you accept that class as a viable option for students in your school district?

Yes No

P. If a *general education curriculum were available over the Internet and the school had a small number of student's who needed the requirement, would you accept that class as a viable option for students in your school district?

Yes No

Q. Do teachers adopt new technologies easily in your district?

Yes No

Appendice B – Survey Letter

June 12, 2002

Dear Alburnett Parent,

As a graduate student at the University of Northern Iowa I have studied delivery systems for high school education. This has given me perspective into research that is needed, as we look at the future educational options available for high school students. Internet-delivered education for high school is part of the research included in my graduate paper.

Would you please complete the enclosed survey? It will take about three minutes and I would truly appreciate your participation. The survey enclosed was also distributed to high school students, teachers and administrators at Alburnett high school. This survey has been randomly distributed and your participation is voluntary and anonymous. The research study is designed to gather perceptions, attitudes and opinions toward Internet-delivered high school education. Please respond to the questions and return the survey in the postage paid envelope today.

Thank you for your participation, I appreciate including your opinion in the study.

Sincerely,

Joy Oldfield