Perceptions of School Superintendents and a Community Task Force Regarding the Health, Pedagogical, Social, and Economic Policy and Planning Decisions for Long Term School Closure Due to Pandemic Influenza-A Multi-Method Approach

David G. Duford
St. John Fisher College

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Document Type
Dissertation

Degree Name
Doctor of Education (EdD)

Department
Executive Leadership

First Supervisor
Michael Wischnowski

Second Supervisor
William Stroud

Subject Categories
Education

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By

David G. Duford

Submitted in partial fulfillment of

The requirements for the degree

Ed.D. in Executive Leadership

Supervised by

Michael Wischnowski, Ph.D.

Committee Member

William Stroud, Ed.D.

Ralph C. Wilson, Jr. School of Education

St. John Fisher College

November 2008
We recommend that the dissertation by

David Duford, Candidate


Be accepted in partial fulfillment of the requirements for the Education Doctorate degree.

Michael Wischnowski, Ph.D., Chair

William Stroud, Ed.D., Committee Member

August 18, 2008

Date
Dedication

I dedicate my dissertation work to my family. A special feeling of gratitude to my loving wife, Frances, who never left my side and supported me with love and patience throughout my doctoral journey. I also want to thank my parents, George and Patricia, whose words of encouragement and push for tenacity ring in my ears. I will always appreciate all they have done.
Biographical Sketch

David G. Duford is currently the Director of Educational Facilities and Environmental Health and Safety for the Monroe #1 Board of Cooperative Educational Services (BOCES). Mr. Duford attended the State University of New York at Brockport from 1981 to 1984 and graduated with a Bachelor of Sciences degree in Health Science in 1984. He attended the University of Rochester from 1992 to 1994 and graduated with a Master of Sciences degree in Industrial Hygiene in 1994. In 1997 he received the internationally recognized certification, “Certified Industrial Hygienist” (CIH), granted by the American Board of Industrial Hygiene (ABIH).

David attended St. John Fisher College from 2001 to 2003 and graduated with a Master of Sciences degree in Educational Administration in 2003. He returned to St. John Fisher College in the spring of 2006 and began doctoral studies in the Ed.D. Program in Executive Leadership. Mr. Duford pursued his research in school planning and policy implications associated with the long-term school closure due to pandemic influenza under the direction of Dr. Michael Wischnowski and received the Doctor of Education degree in the fall of 2008.
Abstract

The research focused on the impact pandemic influenza could have on K-12 school systems. The research looked at responses of school leaders regarding the pedagogical, community health, social, and economic impacts of a pandemic. During an influenza pandemic school districts may be asked to close for as long as 12 weeks to reduce contact among children and stop the spread of disease. School superintendents' perceptions and attitudes were sought regarding school policy implications associated with long-term closure of K-12 school districts. The research methods used for this study included: (a) electronic survey, (b) face-to-face interviews, and (c) focus group. Information and data were collected and examined from 19 school districts within two Board of Cooperative Educational Services (BOCES) supervisory districts. The research findings are being used to inform school and public health officials of the perceptions school district superintendents have regarding the potential for long-term school closure due to pandemic influenza. Key findings were (a) school superintendents do not have a clear understanding of who has the authority to close all county schools in the event of a pandemic, (b) school superintendents are essentially equally divided on whether or not a school board policy on extended school closure is needed, and (c) over 50% of the superintendents were not sure or did not believe BOCES should coordinate a task force to address the issue of pandemic influenza planning in schools.
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Chapter I: Introduction

This research looks at what one might call "good old fashioned public health". That is, if someone is infectious, do not let them give it to someone else. It is all about prevention. The dissertation describes a potential human biological disaster that appears likely to occur. The impact that a deadly disease could have on schools, the public, county, state, country and world could be devastating.

The United States Department of Education website [http://www.ed.gov/admins/lead/safety/emergencyplan/pandemic/index.html](http://www.ed.gov/admins/lead/safety/emergencyplan/pandemic/index.html), February 14, 2008, page 1, indicates that scientists predict that the world is due for an influenza pandemic, a global outbreak from a new strain of influenza. The threat of a human influenza pandemic has greatly increased over the past several years with the emergence of highly virulent avian influenza viruses, notably H5N1 viruses, which have infected humans in several Asian and European countries (Fauci, 2006). The symptoms of avian influenza in humans are typical flu-like symptoms of high fever, headache, muscle aches, and prostration (Fauci, 2006). In many of the cases, a rapidly advancing lung and pulmonary involvement occurs causing respiratory tract disease, difficulty breathing, and that is generally the cause of death, or a contributing cause of death among those people who have actually died from avian flu (Fauci, 2006). Therefore, avian influenza has some of the standard flu-like symptoms, but it rapidly assumes a very sudden, intense and severe course, leading to serious illness and sometimes death of individuals.
Previous influenza pandemics have arrived with little or no warning, but the current widespread circulation of H5N1 viruses among avian populations and their potential for increased transmission to humans and other mammalian species may afford us an unprecedented opportunity to prepare for the next pandemic threat (Fauci, 2006). Recent human deaths due to infection by highly pathogenic (H5N1) avian influenza A virus have raised the vision of a devastating pandemic like that of 1918, should this avian virus change to become readily transmissible among humans.

School and community leaders today have trouble handling their day-to-day problems. Who has time to contend with, “what if’s?” What if a pandemic influenza like that of 1918 occurred today? Staying ahead of potential disasters is all about a type of emergency planning. This planning is similar to buying life insurance, helping to save lives when an unexpected yet predictable event occurs (e.g., pandemic influenza). Scientists predict that mother-nature will likely produce a pandemic that will impact all lives, therefore planning is critical. The question is when and how severe the pandemic might be?

Planning for an influenza pandemic in the 21st century is a public health issue that will require a federal, state and community-wide response. Responding to a pandemic will involve the activation of the emergency response system by federal, state and county public health officials. In a county containing a large city in upstate New York pandemic response will be organized using a national disaster preparedness Incident Management System (IMS) All-Hazards approach model as would be used for biopreparedness. The IMS All-Hazards approach model may also be used for planning and responding to many hazards (e.g., chemical or radiation threats).
Regardless of the response model, the dilemma faced by community leaders when it comes to planning for emergency preparedness is engaging people. It is difficult to engage people when there is no problem yet. Community leaders clearly cannot spend a tremendous amount of time dealing with potential problems when they have urgent and important day-to-day issues that become priorities. However, planning is needed, especially in schools, where extended school closures, (e.g. up to 12 weeks) to prevent the spread of disease, may be required. This could pose a host of policy, procedural and practical problems.

This research focused on the impact a pandemic influenza event could have on K-12 school systems. It examined school planning decisions, and policy issues related to extended school closure due to pandemic influenza. The need for school planning and policies has been examined to help establish a seamless response across the region between school districts and public health authorities. The research looked at responses school leaders may take to reduce the pedagogical, community health, social, and economic impacts of a pandemic. The goal of the study was to examine K-12 school planning and policy issues addressing the topic of extended school closures due to pandemic influenza.

Statement of the Problem

The research problem statement is put forward as a research question. The research question is: What are the perceptions of school superintendents and a community task force regarding the health, pedagogical, social, and economic planning and policy decisions for long-term school closure due to pandemic influenza?
The researcher gathered specific input to help formulate local and regional school community containment and preparedness policy. The research identified specific mechanisms to raise the awareness of the importance of school closing as a means to counter the spread of pandemic influenza across the community as a whole with the intent of minimizing the negative impacts that may result from school closure. The research describes the status of current plans to address school closings. It also identifies opportunities to improve the coordination between public health, education and emergency preparedness partners.

Holmberg, S.D., Layton, C.M., Ghneim, G.S. and Wagener, D.K (2006) are concerned that state pandemic plans in the United States represent a patchwork without central coordination or direction. Their concerns are especially pertinent for school closure decisions during an influenza pandemic. The US Department of Health and Human Services' (DHH) checklist (2006) regarding school closures is ambiguous and illustrates shortcomings in the literature by offering conflicting messages regarding school closure recommendations. For example, it recommends that schools stay open during a pandemic and develop school-based surveillance systems for absenteeism of students and sick-leave policies for staff and students. It also recommends developing alternate procedures to ensure the continuity of instruction in the event of district-wide school closures. These unclear recommendations may point toward the lack of data to advise school closure.

A great deal has been written on the topic of pandemic influenza preparedness. This paper focuses on a smaller number of conceptual pieces within that topic. The study will be limited to school planning decisions and policy issues related to long-term closure.
of schools due to a pandemic influenza event. It will focus on four decision making and policy areas related to long-term closure of schools including: (a) community health implications, (b) pedagogical implications, (c) social implications, and (d) economic implications. In support of this topic the literature suggests that an uncoordinated approach for community response measures, such as school closure decisions, could jeopardize efforts in containing a deadly pandemic (Kahn LH, 2007).

Significance of the Study

Public health revolves a great deal around prevention of disease. Most known influenza strains are currently preventable through vaccination. However, scientists are concerned that new strains are resisting currently recommended antibiotics. The last pandemic, named the Hong Kong flu, occurred almost 30 years ago in 1968. An influenza pandemic is a global outbreak of a new type of an influenza virus that is easily transmitted from human to human. In a severe pandemic like that of 1918, New York State could expect to see 153,000 deaths and 771,000 hospital admissions. The demands on health care systems will be huge. Continuity of operations will be challenging considering there will be 1/3 staff absenteeism. The impact on schools will be enormous. They will likely have to close for weeks or months to help prevent the spread of disease.

Purpose of the Study

The purpose of the study is to examine school leaders’ decision making issues that relate to pandemic preparedness and to gather information on what is going on. School and community leaders will need to understand during a pandemic who does what, who has the authority, and who is in charge. Often, leaders and people in general, are reactive to day-to-day difficulties. They rarely set aside time to plan for potential future
problems. Planning is needed when predicting the impact a future pandemic could have on public schools. The information collected will be used to help determine school planning and policy issues. It will identify how communications will take place within local school districts and between schools, health, and emergency management authorities.

Research Question

The research question is: What are the perceptions of school superintendents and a community task force regarding the health, pedagogical, social, and economic planning and policy decisions for long-term school closure due to pandemic influenza?

The literature and research studies cited in this paper build a rationale for why the research topic is important. The dissertation topic relates to planning and policy development for pandemic influenza mitigation in elementary and secondary schools. Local educational agencies (LEAs) play an integral role in protecting the health and safety of their district’s staff, students and their families. The Department of Health and Human Services (HHS) and the Centers for Disease Control and Prevention (CDC) have developed a checklist (2006) to assist LEAs in developing and improving plans to prepare for and respond to an influenza pandemic. The efficacy of recommended policies and procedures associated with: (a) planning and coordination, (b) continuity of student learning, pedagogy and core operations, (c) infection control policies and procedures, and (d) communications planning, are addressed. The research is needed to validate proposed interventions, assess their effectiveness, and identify adverse consequences.

School districts within a northeastern county in New York State will be used to examine a local school community’s process for developing rational, coherent, and
coordinated school closure plans to protect children and the school community during an influenza pandemic.

Limitations of the Study

The research has been limited to perceptions and attitudes of school superintendents and a community task force in a northeastern county in upstate New York. It focused on school planning and policy issues related to long-term closure of schools due to pandemic influenza. The implications that have been examined include community health, pedagogical, social and economic.

Definitions of Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Antiviral</th>
<th>H5N1</th>
<th>Pandemic Influenza</th>
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<tr>
<td>Avian Influenza</td>
<td></td>
<td>Influenza</td>
<td>Quarantine</td>
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<tr>
<td>Bird Flu</td>
<td></td>
<td>Influenza Pandemic</td>
<td>Seasonal Influenza</td>
</tr>
<tr>
<td>Epidemic</td>
<td></td>
<td>Isolation</td>
<td>Social Distancing</td>
</tr>
<tr>
<td>Flu</td>
<td></td>
<td>Pandemic</td>
<td>Vaccine</td>
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Antiviral: A medication that may be used to treat people who have been infected by a virus to help limit the impact of some symptoms and reduce the potential for serious complications. People who are in high-risk groups are often given antiviral drugs because of their increased potential to develop additional health issues (American Red Cross, 2007).

Avian Influenza (bird flu): Commonly known as bird flu, this strain of influenza virus is naturally occurring in birds. Wild birds can carry the virus.
<table>
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<th>Term</th>
<th>Definition</th>
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<tr>
<td>Epidemic</td>
<td>The rapid spread of a disease that infects some or many people in a community or region at the same time (American Red Cross, 2007).</td>
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<td>H5N1</td>
<td>The scientific name for a subtype of the avian influenza (bird flu) virus that has spread from birds to humans. Different proteins on the virus classify the scientific names for these subtypes. New subtypes naturally occur when the proteins change (American Red Cross, 2007).</td>
</tr>
<tr>
<td>Influenza (flu)</td>
<td>A contagious respiratory illness caused by particular strains of viruses (American Red Cross, 2007).</td>
</tr>
<tr>
<td>Influenza Pandemic</td>
<td>A global outbreak of the influenza disease that occurs when a new influenza virus appears in the human population. Because people have little or no immunity to the new strain, serious illness can occur, and the virus can spread easily and rapidly from person to person with no vaccine immediately available (American Red Cross, 2007).</td>
</tr>
<tr>
<td>Isolation</td>
<td>The physical separation of a person suffering from an infectious or contagious disease from others in a community.</td>
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### Pandemic
An outbreak of a disease that affects large numbers of people throughout the world (American Red Cross, 2007).

### Pandemic Influenza
A virulent influenza (flu) caused by a new flu virus strain to which humans have not been exposed. It is more serious than a typical seasonal flu because there is no natural resistance or immunity to it and infects large numbers of people of different ages all over the world, causing serious illness and possibly death (American Red Cross, 2007).

### Quarantine
The physical separation of healthy people who have been exposed to an infectious disease, for a period of time, from those who have not been exposed (American Red Cross, 2007).

### Seasonal Flu
A contagious respiratory illness caused by influenza (flu) viruses occurring every year. It affects an average of 5 to 20 percent of the U.S. population by causing mild to severe illness, and in some instances can lead to death. Most people have some immunity, and a vaccine is available (American Red Cross, 2007).

### Social Distancing
A disease prevention strategy in which a community imposes limits on social (face-to-face) interaction to reduce exposure
to and transmission of a disease. These limitations could include, but are not limited to, school and work closures, cancellation of public gatherings and closure or limited mass transportation (American Red Cross, 2007).

Vaccine

An injection, usually of an innocuous (weak or killed) form of the virus, which stimulates the production of antibodies by the immune system to help prevent or create resistance to an infection. Vaccines are usually given as a preventive measure (American Red Cross, 2007).
Chapter II: Review of the Literature

Introduction and Purpose

The literature builds a rationale for why this research is important. The dissertation topic attempts to answer the question: What are the perceptions of school superintendents and a community task force regarding the health, pedagogical, social, and economic planning and policy decisions for long-term school closure due to pandemic influenza? The topic examines the efficacy of recommended policies associated with long-term public school closures. While a great deal has been written on the topic of pandemic influenza, this paper focuses on the literature associated with a smaller number of conceptual pieces within that topic. The research is limited to school planning and policy issues related to long-term closure of schools due to pandemic influenza. It has focused on four school planning areas related to long-term closure of schools including: (a) planning and coordination, (b) continuity of student learning, pedagogy and core operations, (c) infection control policies and procedures, and (d) communications planning. In support of this topic, the literature suggests, “an uncoordinated approach for community response measures such as school closure decisions could jeopardize efforts in containing a deadly pandemic” (Kahn, 2007, p 8).

Historical Context of Research

To understand policy issues associated with an impending pandemic, one must understand what a pandemic is. A pandemic is closely related to an epidemic. Both
involves the occurrence of cases of disease in excess of what is usually expected for a
given period of time. Confusion sometimes arises because of overlap between the terms.
"pandemic", "epidemic" as well as other terms like "outbreak" and "cluster". Although
closely related terms, an epidemic suggests problems that are geographically widespread,
such as an entire state or region whereas a pandemic is a problem that has spread over a
considerably larger geographic area; influenza pandemics are often global, (Goodman,
2006). The terms "outbreak" and "cluster" are reserved for problems spread over smaller
areas (e.g., nursing homes, schools or daycare centers). An outbreak is a sudden rise in
the incidence of a disease in a short period of time, whereas a cluster is a larger than
expected number of cases of disease (as leukemia) occurring in a particular locality,
group of people, or period of time.

An influenza pandemic occurs when a new influenza virus emerges for which
there is little or no immunity in the human population causing serious illness and then
spreading easily person-to-person worldwide (Centers for Disease Control (CDC) 2006).
Pandemics, epidemics, outbreaks and clusters originate as a result of the interaction of
three factors: (a) agent, (b) host, and (c) environment. Agents cause the disease (e.g.,
viruses). Hosts are susceptible to it (e.g., people). Environmental conditions permit host
exposure to the agent (e.g., crowded classrooms). Understanding the interaction among
agent, host and environment is important when selecting the best practice to prevent or
control the continued spread of the disease (Goodman, 2002).

Spread of infectious disease depends primarily on: (a) a source of the agent, (b)
route of exit from the host, (c) a suitable mode of transmission between a susceptible host
and the source, and (d) a route of entry into another susceptible host. Modes of disease spread are illustrated in Table 1 below.

Table 1

Modes of Disease Spread Between Infected Host and New Host

<table>
<thead>
<tr>
<th>Direct</th>
<th>Indirect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct physical contact, such as:</td>
<td>Takes place through vehicles, such as:</td>
</tr>
<tr>
<td>Touching</td>
<td>Contaminated water</td>
</tr>
<tr>
<td>Sexual intercourse</td>
<td>Food</td>
</tr>
<tr>
<td>Airborne spread</td>
<td>Inanimate objects</td>
</tr>
<tr>
<td>Coughing</td>
<td>Bedding</td>
</tr>
<tr>
<td>Sneezing</td>
<td>Classroom surfaces and objects</td>
</tr>
</tbody>
</table>

Seasonal influenza and pandemic influenza are different. Seasonal influenza epidemics are caused by viruses that mutate in small but important ways from year to year through a process known as antigenic drift (World Health Organization (WHO), 2005). Pandemic influenza is caused by a virus that is dramatically different from those that have circulated previously, which can occur through a phenomenon referred to as antigenic shift (WHO, 2005). Such viruses can cause pandemics because few people or none at all, have had prior immunologic exposure to surface proteins of these viruses. In a typical interpandemic influenza season, people may have some residual immunity from exposure to previously circulating influenza strains or from vaccinations (Couch, 2003).

"Many experts believe the question is not whether there will be another pandemic, but when, and which strain will it be" (Harvard, 2006, p 8). Many people think of "bird
Bird flu (also called avian flu) is a term used by different people to mean different things. Generally, bird flu refers to an illness in humans caused by an unusual type of influenza virus that normally just infects birds (Harvard, 2006, p. 7). Most strains of bird influenza cannot infect humans, although a few strains have been able to do so. They have not been able to spread readily from person to person, which is how a pandemic would begin. Several flu viruses infecting birds have caused illness in a few humans in recent years. One of those viruses, called H5N1, is the focus of greatest concern. Evidence that the H5N1 virus may become a threat began to appear in 1997 (Harvard, 2006, p. 8). A local outbreak on domestic poultry infected a few humans who handled sick birds. The infection was fatal in some of the birds and about half of the humans. Millions of poultry were slaughtered to prevent the virus from spreading. In 2003 the H5N1 virus spread to wild migratory birds that carried the virus to poultry in several Asian countries. Currently, the H5N1 virus is spreading easily from bird to bird, but not human to human. In May 2006, those cases that appeared to have spread from one person to another were reported in Indonesia (Harvard, 2006).

While pandemics are rare they do occur. According to the CDC during the 20\textsuperscript{th} century there were three pandemics of influenza. The first influenza pandemic occurred in 1918 and caused over 500,000 U.S. deaths and close to 50 million deaths worldwide. This pandemic had a 2% mortality rate. The second pandemic occurred in 1957 and caused over 70,000 U.S. deaths and 1-2 million deaths worldwide. The third influenza pandemic occurred in 1968 and caused nearly 34,000 U.S. deaths and 700,000 deaths worldwide.
During a pandemic an effective vaccine will not be available for several weeks or months. Decisions about how to protect the public before an effective vaccine is available need to be based on scientific data, ethical considerations, consideration of the public's perspective of the protective measures and their impact on society, and common sense. Researchers have used retrospective data to answer the question: If pandemic flu were to emerge in the United States, what interventions might slow its spread and minimize its impact?

Retrospective studies are the primary methodologies and research techniques used in the field to address the next influenza pandemic threat. Evidence to determine the best strategies for protecting people during a pandemic is very limited (CDC. 2006). Retrospective data from past influenza pandemics and the conclusions drawn from those data are being examined and analyzed within the context of current society. An advantage of the retrospective studies is that researchers may use the data to form theories regarding planning assumptions. However, few of those assumptions may be entirely generalizable. When these theories are integrated into the current mathematical models, the limitations need to be recognized, as they were in a recent Institute of Medicine report (Institute of Medicine. 2006). With support from the National Institutes of Health (NIH), researchers from the Fred Hutchinson Cancer Research Center in Seattle, Washington, and the Los Alamos National Laboratory have used computer models to suggest possible answers regarding what interventions might slow the spread of an influenza pandemic and minimize the impact of it on the U.S. population. The findings were published in the April 11, 2006, issue of the Proceedings of the National Academy of Sciences.
The findings suggest that early, targeted social distancing measures such as long-term school closures may slow the spread of disease, but only when used in conjunction with other social distancing interventions, such as restricting travel and quarantining households. The results showed that with no intervention a pandemic flu with low contagiousness could peak after 117 days and infect about 33 percent of the U.S. population. A highly contagious virus could peak after 64 days and infect about 54 percent of people.

The researchers compared what might happen in scenarios involving the use of different interventions. When the simulated virus was less contagious, the three most effective single measures included: (a) distributing several million courses of antiviral treatment to targeted groups seven days after a pandemic alert, (b) school closures, and (c) vaccinating 10 million people per week with one dose of a poorly matched vaccine. The results also showed that vaccinating school children first is more effective than random vaccination when the vaccine supply is limited. Regardless of contagiousness, social distancing measures alone had little effect. But when the virus was highly contagious, all single intervention strategies left nearly half the population infected. In this instance, the only measures that reduced the number of cases to below the annual flu rate involved a combination of at least three different interventions, including a minimum of 182 million courses of antiviral treatment.

In preparing for an influenza pandemic researchers have learned lessons from Severe Acute Respiratory Syndrome (SARS). Recent experience with an outbreak of SARS serves as an instructive example in preparing for a potential influenza pandemic (Muller, 2004, Finlay, 2004). In 2002 SARS, a deadly respiratory disease emerged and
rapidly spread to Canada, Vietnam, Hong Kong, and other sites in China, resulting in over 8,000 cases and 750 deaths. The outbreak, which elicited a classic study in epidemiologic investigation with regard to identifying the point source, tracking the spread, and instituting containment measures, taught researchers many important lessons (Fauci, 2006).

The etiologic agent of SARS, a previously unrecognized coronavirus, was identified in March 2003 sequenced within 2 weeks, and a vaccine candidate was developed by the following March. In December 2004, a clinical trial of a candidate SARS vaccine began at the National Institute of Health (NIH) Vaccine Research Center (Fauci, 2006). Because the SARS coronavirus is not as easily transmitted as influenza viruses, researchers do not know whether the actions that led to the containment of SARS would be as successful if an avian influenza virus acquired the ability to spread efficiently from person to person. However, scientists have an added advantage in preparing for pandemic influenza that they did not have with SARS. As noted, SARS is caused by a coronavirus that was unknown before the 2003 outbreak. In the current situation, scientists have identified the H5N1 virus as a likely contender for starting a pandemic. Health officials cannot be certain when the next influenza pandemic will emerge, or even whether it will be caused by H5N1 or an unrelated virus. They are certain, however, that an influenza pandemic eventually will occur.

Current Context of Research

Holmberg et al. (2006) are concerned that state pandemic plans in the United States represent a “patchwork” without central coordination or direction. These concerns are especially pertinent for school closure decisions during an influenza pandemic. Kahn
(2007) reports that there are only a few States and localities with pandemic influenza school closure policies. Table 2 below illustrates the number of States and localities currently with such policies.

Table 2

*Pandemic Influenza School Closure Policies - Number of states reporting influenza pandemic school closure policies at various levels, USA*

<table>
<thead>
<tr>
<th>Region</th>
<th>Local only</th>
<th>State and local</th>
<th>State only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast</td>
<td>4</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>South</td>
<td>7</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Midwest</td>
<td>7</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>West</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Total†</td>
<td>22</td>
<td>16</td>
<td>6</td>
</tr>
</tbody>
</table>

Northeast: CT, DC, MA, ME, NH, NJ, NY, PA, RI, VT; South: AL, AR, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV; Midwest: IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI; West: AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY. *Six states did not respond

Since December 2003, H5N1 avian influenza viruses have killed millions of domestic fowl in Southeast Asia and tens of millions more have been killed to prevent the spread of this disease. Avian virus has infected over 130 people and killed more than 70 in Vietnam, Thailand, Cambodia, Indonesia, and China (WHO, 2005). These data indicate that the virus has produced more than a 50% mortality rate. The H5N1 virus is not as contagious as the virus that caused the 1918 pandemic, but much more deadly. If
the H5N1 virus obtains the ability to transmit readily among humans, an influenza pandemic could ensue, with the potential to kill millions of people (WHO, 2005). Reports in both the mainstream press (Spector, 2005) and scientific literature (Webby, 2003, Monto, 2005, Stohr, 2005) have raised fear in the United States and throughout the world. These fears have prompted federal, state and local governments to act and examine ways to reduce the impact of an influenza pandemic on the American public. In August, 2006, the New York State (NYS) Commissioners of Education and Health coauthored a letter to NYS School District Superintendents and School Board members asking them to work closely with their local health departments to prepare schools for an influenza pandemic.

In 2005 researchers from the National Institute of General Medical Sciences evaluated the effectiveness of different intervention strategies such as long-term school closure, by developing a model that represents the U.S. population and tests different properties of a potential pandemic flu virus. They found that, depending on the contagiousness of the virus, a variety of approaches may be taken to reduce the impact of an influenza pandemic such as: (a) isolate and treat all persons with confirmed or probable pandemic influenza, (b) voluntary home quarantine of members of households with confirmed or probable influenza cases, (c) dismissal of students from school for up to twelve weeks, and 4) use of social distancing measures to reduce contact between people in the community and workplace. Researchers believe these nonpharmaceutical interventions used together could significantly reduce the number of cases.

On January 24, 2007, the New York State Department of Health, New York State Education Department, and New York State Emergency Management office sponsored a school closure discussion-based exercise workshop. Over 110 people from various
agencies and organizations participated. The workshop was designed to be a building block to serve as a catalyst for the Federal, State and Local planning processes. The specific objectives of the workshop were to: (a) gather specific input to formulate State and National community containment preparedness policy and (b) to identify specific mechanisms to raise awareness of the importance of school closing as a means to counter the spread of pandemic influenza across the community as a whole, with the intent of minimizing the negative impacts that may result from school closure. Additional objectives of the workshop were to: (a) identify and discuss the responsibilities of all participating agencies, (b) describe the status of current plans to address school closings, and (c) identify opportunities to improve the coordination between education and preparedness partners.

Information regarding the school closure discussion-based exercise workshop was obtained from the Initial Evaluation Summary completed to satisfy the Centers for Disease Control (CDC) exercise assessment requirement. A formal After Action Report (AAR), not available at the time of this writing, will also be compiled in accordance with the Homeland Security Exercise and Evaluation Program guidelines. Some of the key points mentioned in the January 24, 2007 workshop’s Initial Evaluation Summary are directly related to this dissertation topic.

During the workshop it was reported that New York State’s “trigger” to close schools in a severe pandemic influenza event is one laboratory confirmed community case in the county and schools would remain closed for 12 weeks. A trigger may also take into account the severity or the epidemiology of the disease, as information becomes available. A need was identified that the trigger discussion needs to be held with local
health departments and communities, so that decisions can be made proactively rather than reactively. The legal authority to close school district schools remains with the superintendent of that district. It was suggested that participants for future exercises should include local school district representatives and school superintendents.

The workshop identified unresolved issues regarding the worker's right to refuse to work during a pandemic emergency, and the subsequent impact on compensation, as well as job security. During large-scale emergencies school closure decisions will be made at the State level through a multi-agency coordinated effort, since affected school districts will need regulatory relief to deal with the impact of longer-term closures. School superintendents will make the decision to re-open schools with consultation and advice from the appropriate authorities. Re-opening schools and returning to a "normal" school day will require regulatory and procedural flexibility. There is a need to ensure that clear, scientific information regarding the decision to close is communicated to families, as well as what has been done to ensure that schools are "safe" for children and staff to return. The effect of transmission rate on reopening of schools, once closed, is not clearly addressed in the scientific literature.

During the workshop there was no clear response on the issue of long-term closure on student progress for graduation. The Commissioner of Education can waive the 180-day requirement and year-end exams would depend on the timing of the 12-week closure. There was agreement that parents would need educational materials to address concerns about long-term disruption of instruction. Information to be provided should include how students lost time would be made up. There was limited discussion on the
effect of long-term closure would have on school funding, with it noted that regulatory relief would be needed.

Major issues identified during the workshop were provision of continuity of instruction and what is permissible under collective bargaining agreements. Alternative learning scenarios including web-based instruction, public television, and written educational resources for parents were discussed. However, the issues were raised that: (a) not every household has internet access or even television, (b) children who are sick or caring for sick family members will not likely take advantage of in-home instruction, even if it is available, and (c) the goal to provide home-bound children with formal instruction may not be realistic. It was mentioned that this might be an opportunity to educate children about civic responsibility.

School-based feeding programs in New York State, which provide 1.7 million lunches and 500,000 breakfasts of which more than 50% are free or reduced cost, would need to be curtailed. This was seen as a significant burden on families who depended on these meals for their children, and who otherwise do not have the financial resources to provide meals to their children.

The interaction between local emergency planners and education authorities was not addressed in any detail. It was suggested strongly that law enforcement be invited to participate with schools in their planning efforts, as they will be impacted by school closure orders. There was agreement that community discussion and public education efforts about school closure needed to start early, and be consistent. All participants felt that the “face of the message” needed to be the public health community, with a concise and clear explanation of what school closure would mean, and why it might be employed
as a community containment measure. Finally, guidance on the economic and emotional impacts of school closure is needed.

The prospect of pandemic influenza provides good reason to be concerned. Rather than react in panic, however, school district leaders need to determine what can be done now with the knowledge and resources currently available to prevent or minimize the impact of a potential pandemic. At the same time they must ask how they can help improve the school community’s infrastructure and technology to prepare for future outbreaks.

*School Policy Implications – Planning and Coordination*

In their article, *Influenza Preparedness Planning*, Cox, Tamblyn and Tam (2003) report that a future influenza pandemic is highly likely, if not inevitable. They note that over the last 5 years, considerable progress toward pandemic preparedness has been made. Several countries have produced valuable frameworks, models, guidelines, and action plans that can be used by other countries that are just beginning their planning efforts. In spite of this progress, however, the world remains ill prepared for the next pandemic. Fewer than 30 countries have developed pandemic plans and only a handful has begun to translate their plans into policy decisions and concrete actions (Cox, et al. 2003). Many obstacles to influenza pandemic planning remain, including a lack of appreciation of the pandemic threat, lack of resources and difficulties in gaining political and financial commitment. The best defense against the next pandemic will be to strengthen the local communities’ capacity to respond to yearly epidemics of influenza. By building this capacity local communities will not only be better prepared for the next pandemic, but may also save thousands of lives before it arrives.
Key messages from the Cox, et al. (2003) study are relevant to school district planners who can learn from the findings. The researchers provided five messages generated from their study. These messages were: (a) influenza pandemic preparedness planning is based on the 1999 WHO guidelines, and most national plans have adopted WHO's phased approach to responding to a pandemic threat. (b) pandemic preparedness planning can be usefully linked to response planning for other public health emergencies, including bioterrorism threats. (c) regional and international coordination of responses to an influenza pandemic will be essential but planning how to do this will be very difficult. (d) fewer than 30 countries have developed pandemic preparedness plans and only a handful have begun to translate them into policy decisions and concrete actions, and (e) the best defense against the next pandemic is to strengthen global vaccination programs in response to seasonal epidemics of influenza.

*Continuity of Student Learning, Pedagogy and Core Operations*

Holmberg et al., 2006 are concerned that state pandemic plans in the United States are pieced together without central coordination or direction. These concerns are particularly relevant for school closure decisions during an influenza pandemic. The US Department of Health and Human Services' checklist regarding school closures gives conflicting messages (DHHS, Dec. 9, 2006). It recommends that schools stay open during a pandemic and develop school-based surveillance systems for absenteeism of students and sick-leave policies for staff and students. It also recommends developing alternate procedures to ensure the continuity of instruction in the event of district-wide school closures. These vague recommendations may reflect the lack of data to recommend school closure.
Infection Control Policies and Procedures

Approximately 1/5 of the U.S. population attends or works in schools (CDC 2004). Some viruses and bacteria can live from 20 minutes up to 2 hours or more on surfaces like cafeteria tables, doorknobs, and desks (CDC 2004). Nearly 22 million school days are lost annually due to the common cold alone. (CDC, 2004). Addressing the spread of germs in schools is essential to the health of our youth, our schools, and our nation. School leaders will need to consider these facts when developing policies and procedures for long-term school closing in the event of an influenza pandemic.

Communications Planning

In January 2007 the New York State Department of Health released a publication titled: Pandemic FLU Action Kit for Schools in New York State. The kit was distributed to school Superintendents and others throughout New York State. The framework for the kit came from materials by the Contra Costa, C.A. Health Services and the Contra Costa County Department of Education. Staff from the New York State Department of Health, the New York State Education Department, and a working group representing local Health Departments in New York State developed the NYS action kit.

According to the New York State Health Department the Pandemic FLU Action Kit for Schools in New York State reflects circumstances and planning assumptions specific to New York State. An example is that they expect school closures could last up to twelve weeks in an influenza pandemic. The kit includes many sample documents and templates. These may be adapted as necessary to meet local needs. School districts throughout New York State are expected to use the kit.

Summary and Conclusion
According to the World Health Organization (2005) since late 2003, the world has moved closer to a pandemic than at any time since 1968, when the last of the previous century's three pandemics occurred. All prerequisites for the start of a pandemic have now been met except for one: the establishment of efficient human-to-human transmission. During 2005, threatening changes have been observed in the epidemiology of the disease in animals. Human cases are continuing to occur, and the virus has expanded its geographical range to include new countries, thus increasing the size of the population at risk. Each new human case gives the virus an opportunity to evolve towards a fully transmissible pandemic strain.

Planning and preparedness for implementing mitigation strategies during a pandemic are complex tasks and will require participation by all levels of government and all segments of society (CDC, 2007). The candidate's dissertation topic involved action research related to school policy implications for long-term closure of elementary and secondary schools in the event of an influenza pandemic. The research is limited to school policy issues related to long-term closure of schools due to pandemic influenza. It focused on four school policy areas related to long-term closure of schools including: (a) planning and coordination, (b) continuity of student learning, pedagogy and core operations, (c) infection control policies and procedures, and (d) communications planning. The study examined the effectiveness of a local task force made up of school district representatives throughout the county while they develop rational, coherent, and coordinated school closure plans to protect children and communities during an influenza pandemic.
The dissertation focused on elementary and secondary school preparedness and closure recommendations. In the event of an influenza pandemic health officials will require school districts to dismiss students from school for as much as 12 weeks. The impact on the school community could be enormous. For example, dismissal of students from school classrooms may lead to a cascading effect of workplace absenteeism for child minding. Workplace absenteeism could also lead to disruption of the delivery of goods and services essential to the viability of the community (CDC, 2007).

This research is needed to validate proposed interventions, assess their effectiveness, and identify adverse consequences. The literature suggests that an uncoordinated approach for community response measures such as school closure decisions could jeopardize efforts in containing a deadly pandemic (Kahn, 2007).

The best defense against the next pandemic will be to strengthen the local communities’ capacity to respond to yearly epidemics of influenza. By building this capacity local communities will not only be better prepared for the next pandemic, but may also save thousands of lives before it arrives.
Chapter III: Research Design Methodology

Overall Research Design

The research involved a multi-method study including three research methods. The methods used for this study included: (a) survey, (b) interviews and (c) focus group. Creswell, (2003) describes research design methods as quantitative, qualitative, or mixed methods. Cottrell & McKenzie, (2005) state that: “Either method allows the researcher to discover meaning in the absence of easily measurable or, even, fully definable variables.” The research embodied both quantitative and qualitative perspectives. Cottrell & McKenzie (2005) note that the qualitative method will answer complex questions about the nature of phenomena allowing the researcher to describe, explain and understand.

Three research methods have triangulated the research. A clear description of the methodologies used and a rationale for selecting the methodologies is provided. The chapter includes descriptions of the setting and populations as well as the number of subjects and participants used. The chapter includes a description of the data collection and analysis instruments and procedures used as well as a final summary of the methodologies.

Research Context

This section describes the place and situational factors that the study was embedded in. It describes the research framework or perspective. The study takes place within two contiguous Board of Cooperative Educational Services (BOCES) supervisory
districts surrounding a large northeastern city. There are currently 37 supervisory districts in the State of New York with a BOCES located in each. School districts residing within a supervisory district are considered component districts tied to the BOCES in that jurisdiction. A district superintendent leads each supervisory district and serves as chief executive officer of the supervisory district’s BOCES. The BOCES District Superintendent reports to the State Commissioner of Education and a BOCES Board of Education. The BOCES Board is comprised of one school board member from each component school district.

Information and data has been collected and examined from 19 school districts and two BOCES located within each of the two BOCES supervisory districts. The data has been pulled together the following three ways: (a) survey, (b) interviews, and (c) focus group. The purpose of the study was to examine school district policy implications for long-term closure of schools due to pandemic influenza. For purposes of confidentiality, the two BOCES and 19 associated school districts are not named.

To help see the enormity of the issue should a pandemic occur, demographic information on the school districts and BOCES examined as part of this study are described in Appendix A. In general, each BOCES involved in this study is a large and active educational enterprise. They are contiguous and surround a large northeastern city. The two BOCES districts encompass 19 suburban school districts. Within the study region there are approximately two hundred K-12 public schools serving over 100,000 students. There are an additional 60 schools and near 35,000 students when the nearby city school population is included. Each of the nineteen school districts offers community schools that reflect each district’s needs and values.
BOCES services are cooperatively shared between local school districts. BOCES supports the local school districts because working alone can be a drawback when a school district needs to: (a) update its instructional or administrative technology, (b) provide state-of-the-art job training, (c) educate children with special needs, (d) better manage administrative operations and facilities, or (e) provide comprehensive academic enrichment activities. In the mid 1980's BOCES began to offer component school districts environmental health and safety support, such as: staff training, chemical safety services, asbestos inspections, air quality testing, fire safety inspections, emergency planning, etc. By year 2000 most BOCES throughout the state were offering various levels of environmental health and safety services including school emergency planning and support.

The researcher is employed by a BOCES described in this study. He directs the BOCES environmental health and safety service provided to many of the component school districts described in Appendix A. School pandemic preparedness as the research topic of this study is linked to BOCES through its environmental health and safety service. In May 2006 BOCES environmental health and safety office began to include pandemic response planning as a shared service. All county school districts could benefit through the coordinated efforts. At the same time, through BOCES health and safety service, a regional pandemic planning task force of volunteers was established to look at the pandemic planning issue.

In May 2007 there was a fact-sharing meeting at the County Health Department with the County Health Director and a core of three school superintendents. The County health director and superintendents listened to presentations by three members of the
regional pandemic planning task force. The goal of the meeting was to seek local superintendents' support and guidance for the next phase of pandemic planning. The focus of the meeting was to look at school policy implications associated with long-term school closure due to a community disaster such as pandemic influenza. School leaders were asked to consider the need for policies on continuing education in the face of community disaster and improved communication between school districts. The ultimate hope of the task force is to come up with a countywide school pandemic plan that could be used uniformly throughout the region.

Over the last year area superintendents had opportunities to share their ideas with the core three superintendents. During that time, further planning by the regional task force proceeded and as a result a skeletal regional plan was developed and made available. Its purpose was to serve as an interim plan if superintendents felt they needed to have something in place. The plan is a template that allows the user to "fill in the blanks" making the plan district specific.

General Perspective

The three research methods used here embody the following perspectives: (a) survey (b) interviews, and (c) focus group. The multi-method study demonstrates triangulation in the research. In triangulating the research methods the researcher has improved accuracy and precision of the research findings.

The electronic survey data, a quantitative research method, has been analyzed using descriptive statistics, including means and percentages of response. The qualitative examination used analytical strategies to condense and summarize the interview and focus group data. The information participants provided was examined, condensed and
summarized using analytic strategies described by Miles and Huberman (1994). Codes were affixed to a set of field notes drawn from observations and interviews. Sorting and sifting through information was completed to identify similar phrases, relationships between variables, patterns, themes, distinct differences between subgroups, and common sequences. Isolating the patterns and processes, commonalities and differences were identified and taken out to the field for each successive wave of data collection. Elaborations were made from small sets of generalizations that cover consistencies discerned in the database. Constructs and theories were developed, and are based on the generalizations made using a formalized body of knowledge.

Survey. The first research method used was a surveying. The survey was administered to all members of the County Council of School Superintendents including nineteen (19) local school superintendents and two BOCES district superintendents. The surveys were administered before the interviews and focus group research. Surveys are sometimes referred to as questionnaires and used in evaluation to measure attitudes, opinions, behavior, or life circumstances (Fitzpatrick, Sanders, and Worthen, 2004). Braverman (1996, p. 17) notes that “surveys constitute one of the most important data collection tools available in evaluation”. The survey was administered electronically. Appendix C of the dissertation includes a copy of the survey instrument.

The survey results provide a quantitative description of trends, attitudes, or opinions of School Superintendents throughout the County. The purpose of the survey and the rational for its selection was to generalize from the sample results so that inferences could be made about attitudes of this population. The advantage of the survey design was the economy of the design, convenience and the rapid turnaround in data
collection. The survey was cross-sectional, with the data collected over a two week period. The self-administered questionnaire was an internet survey and administered online. The BOCES Technology Services Department provided the researcher with the online software (e.g., survey monkey) to administer and analyze the survey.

The survey given was developed using a commercially available web-based electronic survey template provided by www.SurveyMonkey.com. Survey questions and statements were developed by the investigator, placed into the electronic survey format and designed to answer the research question. The survey included twenty four (24) separate statements that solicited responses from the superintendents. They responded by placing a check mark in the appropriate box and by typing short comments in the areas provided.

To help interpret the data descriptive statistics including mean, and percentages were calculated by the researcher. The types of scales used to measure the items on the instrument included continuous scales, e.g., strongly agree to strongly disagree and categorical scales (e.g., yes/no).

The survey was a nonrandom single-stage sampling procedure in which the researcher had access to the names of all County School Superintendents and was able to sample the entire population directly. The population has been selected based on their convenience and availability. In addition, the information collected was used to understand the attitudes and opinions of this specific population. The data has not been used to generalize school superintendent’s attitudes outside of the survey population.

*Face-to-face interviews.* The second research method used included interviews. Three local school district superintendents were interviewed on the research topic.
Interviews were qualitative and used for learning the perspectives, behaviors, and experiences of others who have responsibilities and experience related to the research topic. Fitzpatrick, Sanders, and Worthen, (2004) imply that examining stories of others using the interview process the researcher can understand the various truths and perceptions that different groups and individuals bring to an experience. Appendix B includes the questions asked during the interviews. These same questions were asked of the focus group as well. The interviews were administered prior to the focus group research and after the school superintendent’s survey results were received.

*Focus group.* The final research method incorporated a focus group. The focus group sample was “purposeful”. A focus group is an informal, small-group discussion designed to obtain in-depth qualitative information (Dean, 2004). The participants are part of a local pandemic planning task force. Participation in this task force is a commonality that each of the focus group participants has. The group is working together to address the research topic. The focus group involves a small, non-randomly selected sample. The focus group offers a way to explore the topic in depth with a small group of participants drawn from a narrowly defined population.

The focus group research involved questioning the previously mentioned pandemic planning task force. Participants were encouraged to talk with each other about their experiences, preferences, needs, observations and perceptions. The conversation was lead by the researcher as moderator. The focus group research examined the group’s work over a one-year period. The overall goal of any focus group is to reveal the participant’s perceptions about the topics for discussion (Dean, 2004). The conversations were allowed to develop naturally to provide an opportunity for new dimensions or
insights to arise. The participants were encouraged to use their own words and will not be forced into selecting among predefined answers. This freedom provided an opportunity for the research to show not only what participants think about a topic but also how they approach it and why they arrive at the conclusions they hold as described by Dean (2004). The questions asked of the focus group resulted in a full range of participant responses to each question. The focus group discussions traded-off the generalizability of the structured survey for an in-depth, detailed, open-ended exploration of the issue. In general, the group’s work is being done to help prepare local school districts for an influenza pandemic and long-term school closure. Appendix D includes the moderator’s guiding questions asked of focus group members. This guide outlines the major topics that were covered. The focus group questioning opened with a general question that all participants could answer and felt comfortable answering. The focus group technique places great emphasis on informal and freewheeling conversation (Dean, 2004). The discussion was audio taped. The participants were told at the beginning of the session that was being audio taped. The focus group research was administered after the school superintendent’s survey results were received and shared with the focus group. The goal of the focus group was to learn what the participants think. Upon conclusion of the focus group the researcher transcribed the audio taped discussion.

Research Participants

Survey: Research participants for the survey included the County Council of School Superintendents. The County Council of School Superintendents includes 19 school superintendents and two BOCES district superintendents. They represent all of the public schools within the two BOCES supervisory districts described herein. They are a
subsidiary of the State Council of School Superintendents. The purpose of the County Council of School Superintendents is to provide leadership through a professional organization of school superintendents. The group fosters support and collegiality among its members. They promote the interest of education and children in the region and influence local, state, and national policy affecting education.

*Face-to-face interviews.* The research participants for the second research method included three local school superintendents. They were interviewed about their attitudes, and experiences related to the research topic. The three school superintendents interviewed represented the County Council of School Superintendents. Each of the three superintendents expressed an interest in acting as liaisons between the regional pandemic task force (focus group) and the County Council of School Superintendents. See Appendix A - Districts 1, 9 and 18 for brief demographic information on the districts represented by the three superintendents interviewed. The interviews were face-to-face: one on one, in person interviews. The advantage of this type of research method is that the participants provided historical information and it has allowed the researcher control over the line of questioning (Creswell, 2003). The researcher conducted an unstructured, open-ended interview and audio taped the interviews. Interviews were transcribed soon after each interview.

*Focus group.* Research participants in the focus group included individuals who participate in the regional school pandemic planning task force. The focus group research examined the perceptions of the group regarding their work over the last year, as well as their thoughts on the superintendent survey and interview results. The focus group included five individuals encompassing the fields of education and health. The group
included: a school physician, assistant principal, administrator, local fire chief, school nurse and facilities operations supervisor. The researcher is a participant within the group. Each group member is employed by local school districts or BOCES. As part of their work related duties each member has school emergency planning responsibilities as well. Membership in the group is voluntary. The group’s charge is to work together on behalf of all schools throughout the county to develop a coordination and education plan aimed at reducing the impact of an influenza pandemic.

Over the last year the task force has developed, for local school districts, a common template-type pandemic plan. The common school pandemic plan has some leeway for individualization for each school district, but also has a global approach to the general problem so that the larger community is working together toward a common goal. The focus group was chosen for the study because their work involves the research topic and their efforts have provided insight into the research question.

 Procedures for Data Collection

As mentioned in the methods sections above several data collection techniques, instruments and recording processes have been used. The first instrument to collect data was a survey. A survey was used to identify local school leader’s perceptions of the problem. The survey was appropriate for answering the research question at hand. Research participants surveyed included all members of the County Council of School Superintendents. The survey group included 19 school superintendents and two BOCES district superintendents. The survey was administered electronically. Respondents completed and returned the survey via the internet. A copy of the survey is attached as appendix B.
Prior to administering the survey it was piloted by five people who have formerly served as school superintendents or who are currently serving as school superintendents outside of the county used for the study. The pilot testing was important to establish the content validity of the survey instrument and to improve questions, format, and the scales. The pilot survey respondents were asked to provide feedback regarding survey design, clarity, and usefulness. The final survey was administered after pilot test data was incorporated into the survey instrument.

The second instrument used in data collection included interviews. The interviews were conducted after the survey and before the focus group research. The questions asked during the interviews were also used during the focus group. A copy of the interview questions is attached as appendix C. The research participants for the interviews included three local school superintendents. Interviews elicited reports of information about the research participants regarding their life conditions, beliefs or attitudes. Questions eliciting the research participant's reports were asked orally.

The final research instrument included a focus group. It examined the yearlong efforts of a regional task force. The focus group research commenced after the results of the initial survey are received and interviews completed. The data obtained from the survey and interviews was shared with the focus group and then they were questioned on their perceptions and attitudes regarding the issue at hand. A copy of the focus group questions is attached as appendix D.

Data Collection and Analysis

Analyzing the data resultant from the research involved describing the meaning derived or attributed to the information collected. The meanings have taken the forms of
answers found for the research question. Data analysis helped to understand the research participant’s perceptions, attitudes, behaviors and experiences related to the research topic and question.

The survey data analysis includes information about the number of members of the sample who did not complete every item in the survey. Numbers and percentages describing respondents and non-respondents have been used to present this information. A descriptive analysis has been done that indicates the means, percentages and range of scores for these variables. The researcher tabulated numerous responses to each survey question. The results are expressed in percentages of the respondents agreeing or disagreeing.

Another type of analyses used for the study included comparing and contrasting. According to Thomas and Brubaker (2000, p 225) “comparing involves identifying similarities among phenomena, while contrasting consists of recognizing differences among them.” The data collected from each of the three research methods were compared for similarities and differences in the participants’ attitudes and perceptions.

In analyzing the data the researcher organized and prepared the data for analysis. This included typing up field notes, transcriptions and sorting and arranging the data into different types depending on the sources of information. The researcher read through all the data, as a first basic step to obtain a general sense of the information and to reflect on its overall meaning. At that time, the researcher determined: (a) the general ideas participants are saying, (b) the tone of the ideas, and (c) the general impression of the overall depth, credibility, and use of the information. The researcher then began detailed analysis with a coding process. According to Creswell (2003) coding is the process of
organizing the material into "chunks". It involved taking text data into categories and labeling those categories with a term, based on actual language of the participant. Creswell calls this an *in vivo* term. The codes included setting and context codes, perspectives held by participants, and the subject's ways of thinking about the research problem. Based on the analysis of data the researcher interpreted it. The analyses focused on perceptions of school leaders and health professionals regarding school policy implications associated with long-term school closure due to pandemic influenza.

**Confidentiality**

The results of the research are reported out in the aggregate. Individual names of school districts, BOCES and persons participating in the survey, interview and focus group are not reported. Individual comments are not reported by name. Individuals and organizations participating in the research are not named and their identity has been kept confidential. The St. John Fisher College Institutional Review Board (IRB) has approved the study. Participants are not mentioned by name or by school district name in any of the research results or reports. Every effort will be made to select narrative quotes to illustrate the concepts analyzed in the research in a manner that protects the anonymity of all subjects. Subjects are linked to the data by an identifying code known only to the researcher. All data including research field notes, transcription records, audiotapes, subject codes, and survey results will be kept in a file in the researcher’s home office.

Due to the small numbers of school superintendents in the area of the study it is possible that an immediate peer of a subject who reads the research report might identify a subject as a participant of the study. However, steps have been taken to reduce this risk. No subject is mentioned by name, position or school district they represent in any of the
research results or reports. In addition, every effort has been made to select narrative quotes to illustrate the concepts analyzed in the research in a manner that protects the anonymity of all subjects. If a subject has identified politically sensitive issues or sensitive personal matters, no information related to these is used in narrative quotes or related to a subject by name, position or school district anywhere in the research results or reports.

Summary of the Methodologies

The research has involved a multi-method study including three research methods. Triangulation of the different sources of information has been made by examining evidence from the sources and using it to build a coherent justification for themes. The first research methodology implemented was a survey. It was administered to the County Council of School Superintendents. The survey was used to understand different school leader philosophies regarding long-term school closure and its impact on school policy.

The second research method included interviews with three local school superintendents. Interviews served the purpose of enabling research participants to report information about themselves, such as their life condition, beliefs or attitudes. The interviews were completed after the survey data had been collected and analyzed.

The final method used to collect data involved a focus group in which the researcher served as a participant observer and facilitator for the group. The group involved the regional school pandemic task force. The group's activities over a one-year period were questioned in detail. Survey data and interview data was used to solicit discussion from the focus group. The same questions used for the interviews were used
for the focus group. The researcher participated with the group as an observer who is studying the group process and was welcomed to make comments. Information obtained from the survey, interviews and focus group will be used to assist the school pandemic task force devise an action plan for the coming year.
Chapter IV: Research Results

Research Question

This study examined the K-12 public school policy issues related to extended school closures due to pandemic influenza. The results of the study are presented in this section, and organized chronologically in terms of how the data were collected. Three research methods were used to answer the research question: What are the perceptions of school superintendents and a community task force regarding the health, pedagogical, social, and economic planning and policy decisions for long-term school closure due to pandemic influenza? The research methods used for this study included: (a) electronic survey; (b) face-to-face interviews, and (c) focus group.

Electronic Survey Results

Perceptions of twenty-one (21) local school superintendents (participants), representing an entire county in upstate New York, were sought through an electronic survey. The superintendents were asked to provide their insight regarding various community health, pedagogical, social and economic policy implications associated with long-term closure of K-12 school districts. Twenty-one (21) of the twenty-one (21) survey participants started the survey; however, only sixteen (16) participants completed the survey, a 76.2% completion rate. Some of the participants did not respond to every statement, and therefore, a reduction in the total completion rate was observed.

Although the majority of respondents completed the survey, two superintendents commented that they had technical difficulties, stating they had trouble seeing whether
the circle preceded or followed the intended response on some items. Other respondents seemed opposed to the topic, and this appeared to affect their motivation to complete some items. Their comments suggested that preparing for extended school closure due to pandemic influenza was not a priority. One respondent mentioned that there was a great deal of media “hype” about an imminent pandemic 18 months ago and wondered if it is a real or perceived danger. Another respondent also objected stating, “Often, when a social issue is raised, schools become the primary audience to address the problem”. They indicated that addressing the issue takes them away from their primary role, which is student learning and success. One superintendent mentioned that, “these are issues that I have not thought a great deal about until recently”, suggesting that he might have left some items blank because he had not yet formed an opinion.

**Demographic data.** The first part of the survey requested demographic information regarding the survey participants. Table 3 shows their demographic characteristics.

Table 3 shows that the majority of respondents were Caucasian males with a mean age of 54 years. Most respondents have over five years of experience as school superintendents. Two respondents skipped the question on ethnicity, and one participant skipped the question regarding gender. Four respondents skipped the question on age, and one skipped the question on years of experience.
Table 3

Demographic Characteristics of Participants ($N = 21$)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>18</td>
<td>95</td>
</tr>
<tr>
<td>African American</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>14</td>
<td>70</td>
</tr>
<tr>
<td>Female</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>Age at the time of survey (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40-44</td>
<td>2</td>
<td>10.5</td>
</tr>
<tr>
<td>45-49</td>
<td>2</td>
<td>10.5</td>
</tr>
<tr>
<td>50-54</td>
<td>4</td>
<td>21</td>
</tr>
<tr>
<td>55-60</td>
<td>10</td>
<td>53</td>
</tr>
<tr>
<td>Over 60</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Years of experience as a superintendent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;1</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>1-4</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>4-6</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td>8-10</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>&gt;10</td>
<td>4</td>
<td>20</td>
</tr>
</tbody>
</table>

Table 4 shows the student populations for the districts represented in the survey.
Table 4

*Student Populations per School District (N=21)*

<table>
<thead>
<tr>
<th>Student population</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1000-3000</td>
<td>5</td>
<td>28</td>
</tr>
<tr>
<td>3000-6000</td>
<td>11</td>
<td>61</td>
</tr>
<tr>
<td>9000 - 12,000</td>
<td>2</td>
<td>11</td>
</tr>
</tbody>
</table>

Note: Three respondents skipped the question regarding their district's student population.

*Probability a pandemic will occur.* The next part of the survey attempted to understand the superintendents' perceptions on the likelihood that a future pandemic event, in their county, requiring long-term school closure, will occur. Table 5 below illustrates what school superintendents think about the likelihood that an influenza pandemic will occur within one, five, and ten years.

Table 5 data show that 58% of the superintendents responding do not believe that an influenza pandemic will occur and cause extended school closure countywide within the next ten years. This issue would appear to be perceived as a low threat and therefore a low priority for most respondents.
Table 5

*Responses to Survey Questions Regarding Participants' Beliefs Whether or not an Influenza Pandemic Will Occur and Cause Extended School Closure Within One, Five and Ten Years*

<table>
<thead>
<tr>
<th>Survey Statement and Response</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>An influenza pandemic will occur and cause extended school closure within <strong>one</strong> year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Agree</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>Disagree</td>
<td>11</td>
<td>61</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>5</td>
<td>28</td>
</tr>
<tr>
<td>An influenza pandemic will occur and cause extended school closure within <strong>five</strong> years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Agree</td>
<td>4</td>
<td>22</td>
</tr>
<tr>
<td>Disagree</td>
<td>10</td>
<td>56</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>An influenza pandemic will occur and cause extended school closure within <strong>ten</strong> years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Agree</td>
<td>6</td>
<td>32</td>
</tr>
<tr>
<td>Disagree</td>
<td>10</td>
<td>53</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>
Policy issues. The primary research question focuses on school policy issues associated with extended school closure due to pandemic influenza. To assist in answering the question, superintendents were asked to comment on whether or not they believe that a school board policy related to long-term closure is necessary. Table 6 illustrates the superintendents’ thoughts regarding the need for a school board policy.

Table 6

Responses to Survey Question, “Is A School Board Policy On Extended School Closures Due To Pandemic Influenza Needed?”

<table>
<thead>
<tr>
<th>Response</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, a policy is needed</td>
<td>9</td>
<td>53</td>
</tr>
<tr>
<td>No, a policy is not needed</td>
<td>8</td>
<td>47</td>
</tr>
</tbody>
</table>

Note: N = 21. Four superintendents did not answer the question regarding policy.

Approximately half of the respondents do not think a board policy is needed while the other half of them do. Those superintendents who wanted a policy indicated that a Board policy would provide direction to those within the district, and regulations would then need to be developed to address its implementation. They mentioned a policy is needed to clarify expectations, duties, and responsibilities of staff, students and the community.

Those superintendents who said a policy was not needed mentioned that a set of procedures for responding to the situation should be developed; however, board approved policy regarding a situation whose conditions are yet to be defined may be more constraining than helpful. Respondents stated that: “a board policy is not necessary because the county health department will provide direction” and “a comprehensive
emergency plan inclusive of procedures for a school closure relative to a pandemic should be in place and it really would not be a policy issue.”

As stated in Chapter 1, the Department of Health and Human Services (HHS) and the Centers for Disease Control and Prevention (CDC) have developed a checklist (2006) to assist LEAs in developing and improving plans to prepare for and respond to an influenza pandemic. The checklist recommends a number of strategies school districts should consider when preparing to respond to a pandemic event. The survey addressed some of those recommendations by getting superintendents to comment on their opinions and perceptions of the CDC and HHS guidelines. One of the survey items suggests that the prevention of the spread of disease will be aided by school districts having policies that discourage employees and students from going to work/school when they are ill.

Superintendents were asked if they agreed or disagreed with this recommendation. Table 7 shows their responses.

Of those superintendents who provided responses, most thought that creating a policy needs to be a judgment determination by each individual district’s superintendent and school board. They also mentioned that schools should discourage people from going to work when they are ill by communicating regularly to parents, students, and staff. Many respondents agreed that the term “ill” must be defined or “people will be out for anything.” Overall, most superintendents agreed that there does not need to be a policy for this. One respondent said: “Schools should discourage people from going to work or school when they are ill, but I do not think that we need a board policy on this.”
Table 7

Responses to Survey Question "Is A School Board Policy On Discouraging Employees And Students From Going To Work/School When They Are Ill Needed?"

<table>
<thead>
<tr>
<th>Response</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, a policy is needed</td>
<td>6</td>
<td>37.5</td>
</tr>
<tr>
<td>No, a policy is not needed</td>
<td>10</td>
<td>62.5</td>
</tr>
</tbody>
</table>

Note: N = 21. Five superintendents did not respond to the question.

Responsibility for feeding students. The CDC checklist also recommends that schools develop plans for feeding students receiving free and reduced-priced meals when schools close for extended periods. When asked whether or not school superintendents agreed with this recommendation, virtually all, 100%, of the respondents indicated that they disagreed or strongly disagreed that they have responsibility for feeding students when schools are closed for long periods. Two superintendents added comments regarding this item. One indicated that, "if we are closed then we are closed", and the other said, "In an emergency, state, governmental, and community entities share this responsibility." These comments suggest that some superintendents see their districts' response as a part of a larger response supervised by another agency and informed by a larger, more encompassing county, state or federal effort.

Annual training. Another CDC recommendation is that at least once a year, students, faculty and staff be educated on how and why it is important to improve personal hygiene (e.g., training in use of non-medical ways to reduce the spread of influenza, such as covering coughs and sneezes, washing hands, and staying home if you are sick). Table 8 shows how superintendents thought regarding this training recommendation.
Table 8

At Least Once A Year, Students Faculty And Staff Shall Be Educated On Non-Medical Ways To Reduce The Spread Of Influenza

<table>
<thead>
<tr>
<th>Response</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>10</td>
<td>62</td>
</tr>
<tr>
<td>Disagree</td>
<td>6</td>
<td>38</td>
</tr>
</tbody>
</table>

Note: N = 21. Five superintendents did not respond to the question.

Those who felt annual training for students was needed suggested that it could be accomplished through health education programs and embedded into the current school curriculum. They suggested that staff training could be done during the annual Right-to-Know training on infectious diseases that staff receives every year. One superintendent who did not believe training should be mandatory suggested that this is a public health concern, not necessarily a K-12 issue.

Alternative learning options. Superintendents were asked: If schools are closed for long periods should schools have alternative learning options available for students? Table 9 shows their responses.

Table 9

Alternative Learning Options Are Needed When Schools Close For Extended Periods

<table>
<thead>
<tr>
<th>Response</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>12</td>
<td>80</td>
</tr>
<tr>
<td>Disagree</td>
<td>3</td>
<td>20</td>
</tr>
</tbody>
</table>

Note: N = 21, Six superintendents did not respond to the question.

Of those who responded, all mentioned that alternative learning might be accomplished by using web-based instruction such as online programs, distance learning,
teacher websites, and volunteer community online tutoring. Others offered: self-guided instruction using appropriate resources (e.g., textbooks, mailing home assignments, phone conferencing, television programming, book mobiles, and tutoring centers). One superintendent said that he would rely on “State Education Department (SED) options.” This Superintendent would appear to be depending on SED to provide instructional options, possibly through their website.

Communication methods. Superintendents were asked what communication methods their district might use to maintain contact with employees and students during long-term closure. Table 10 lists their responses.

Table 10

<table>
<thead>
<tr>
<th>Communication Methods That Schools May Use During Extended School Closure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Superintendents’ Responses</td>
</tr>
<tr>
<td>Internet, and web-based sources</td>
</tr>
<tr>
<td>Mass notification via telephone and automated phone messages</td>
</tr>
<tr>
<td>Email</td>
</tr>
<tr>
<td>Public television</td>
</tr>
<tr>
<td>U.S. mail</td>
</tr>
<tr>
<td>Connect Ed calling system</td>
</tr>
<tr>
<td>News media</td>
</tr>
<tr>
<td>Local cable television</td>
</tr>
</tbody>
</table>
Table 10 is a compilation of methods that superintendents said they would use to communicate with students, parents, and staff during extended school closures. The survey question was open-ended, and each superintendent had his or her own list of communication methods that they would use.

*Paying staff.* Superintendents were asked if all staff should be paid their full salary while schools are closed long-term. Table 11 shows the superintendents’ responses.

Table 11

| Staff Should Be Paid During Extended School Closure |
|---------------------------------|--------|---|
| Agree                           | 10     | 67% |
| Disagree                        | 5      | 33% |

Note: N = 21, Six superintendents did not respond to the question.

Most superintendents agree staff should be paid, provided all aid sources continue and the staff participates in supporting home schooling. Some suggested that staff should be paid, only if the government does not penalize districts if they are closed and therefore do not meet aidable days. One superintendent thought that schools would have to make up the time by canceling breaks including summer, if necessary.

*Critical functions needed to continue operations.* Superintendents were asked what critical functions must continue while schools are closed for long periods. Table 12 below shows their responses. They were allowed to select more than one option, and therefore, the total number of responses exceeds 100%.
### Table 12

**Critical Functions Needed to Continue (n = 21)**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Facilities (phones, boilers, energy management, etc.)</td>
<td>15</td>
<td>94</td>
</tr>
<tr>
<td>Payroll services</td>
<td>15</td>
<td>94</td>
</tr>
<tr>
<td>Business services</td>
<td>14</td>
<td>88</td>
</tr>
<tr>
<td>Computer services/email</td>
<td>14</td>
<td>88</td>
</tr>
<tr>
<td>Communications / public relations</td>
<td>14</td>
<td>88</td>
</tr>
<tr>
<td>School Administration</td>
<td>13</td>
<td>81</td>
</tr>
<tr>
<td>Custodial services</td>
<td>11</td>
<td>69</td>
</tr>
<tr>
<td>Mail services</td>
<td>11</td>
<td>69</td>
</tr>
<tr>
<td>Alternative instruction</td>
<td>10</td>
<td>63</td>
</tr>
<tr>
<td>Security</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>

Note: Five respondents skipped the question.

Superintendents were asked how the critical functions listed above might continue during school closure. In other words, they were asked, what is needed to be in place to keep these functions active during a school closure? Of those who provided responses, the majority believed that the emergency plan for covering key positions, such as facilities operations, communications, and web sources would need to be maintained. Most superintendents agreed that a limited number of staff will need to continue to work, if able, either on-site or from home. They thought that school offices would need to remain open, at least skeletal, even when kids cannot be in school.
School employees expected to report to work. Table 13 below shows the school employees who superintendents felt should be expected to report to work when schools are closed for long periods. They were allowed to select more than one option, and therefore, the total number of responses exceeds 100%.

Table 13

School Employees Expected to Report to Work (N = 21)

<table>
<thead>
<tr>
<th>Response</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilities Staff</td>
<td>13</td>
<td>81</td>
</tr>
<tr>
<td>School Superintendent</td>
<td>12</td>
<td>75</td>
</tr>
<tr>
<td>Principals</td>
<td>11</td>
<td>69</td>
</tr>
<tr>
<td>Payroll staff</td>
<td>11</td>
<td>69</td>
</tr>
<tr>
<td>Administrators</td>
<td>9</td>
<td>56</td>
</tr>
<tr>
<td>BOCES Superintendent</td>
<td>8</td>
<td>50</td>
</tr>
<tr>
<td>Transportation staff</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>None</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>

Note: Five respondents skipped the question.

Superintendents felt that certain individuals should report to work if able. Of those who responded most thought facilities staff should report to work to keep the school buildings operational. They also thought it would be important for the school superintendent to report to work. Many believe other business services staff and personnel office staff should be expected to report to work so that payroll services could continue. One suggested that security staff should report to work, too. Some thought that all who are not “ill” should report to work.
School employees expected to work from home. Superintendents were asked if they believe employees should work from home when schools are closed for long periods. Table 14 shows their responses.

Table 14

<table>
<thead>
<tr>
<th>Response</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>13</td>
<td>87</td>
</tr>
<tr>
<td>Disagree</td>
<td>2</td>
<td>13</td>
</tr>
</tbody>
</table>

Note: N = 21, Six superintendents did not respond to the question.

Many superintendents felt that administrators and teaching staff should be expected to work from home and be responsible for professional responsibilities, e.g., supporting alternative learning methods and preparing lesson plans. Most thought that, if employees are paid, they should work from home, if able.

Authority to close all county schools. Superintendents were asked who has the authority to close all county schools in the event of an influenza pandemic. Table 15 below shows the superintendents' responses. They were allowed to select more than one option, and therefore, the total number of responses exceeds 100%.
Table 15

*Individuals Who Have The Authority To Close All County Schools (n=21)*

<table>
<thead>
<tr>
<th>Response</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governor</td>
<td>11</td>
<td>69</td>
</tr>
<tr>
<td>Commissioner of Education</td>
<td>10</td>
<td>63</td>
</tr>
<tr>
<td>County Health Director</td>
<td>10</td>
<td>63</td>
</tr>
<tr>
<td>BOCES Superintendent</td>
<td>4</td>
<td>25</td>
</tr>
<tr>
<td>School Superintendent</td>
<td>3</td>
<td>19</td>
</tr>
<tr>
<td>County Executive</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>

*Note: N = 21, Five respondents skipped the question.*

Many superintendents were unsure who has the authority to close all county schools. One superintendent stated, “It is an interesting question that needs to be researched for unintended consequences of the action.” This appears to have meant that by closing schools for extended periods many problems could arise (e.g., loss of instruction time, loss of state aid, or the issue of paying staff while schools are closed). They also thought that the county health director could close schools only for medical reasons.

*Interagency collaboration.* The superintendents were asked if they agree or disagree with the statement: “Interagency collaboration to ensure unified responses between school districts, BOCES’, county health department and other agencies will be necessary before, during, and after a pandemic.” Table 16 shows superintendents’ opinions regarding the need for interagency collaboration.
Table 16

*Interagency Collaboration Is Necessary*

<table>
<thead>
<tr>
<th>Response</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>15</td>
<td>93</td>
</tr>
<tr>
<td>Disagree</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>

Note: N = 21, Five superintendents did not respond to the question.

The large majority of superintendents believe interagency collaboration is necessary. However, one superintendent strongly disagreed with the statement. This may have been an error in the marking of the survey response. The superintendents who responded and agreed that interagency collaboration was important were asked to briefly describe how it might be accomplished. One mentioned that he did not know how it might be accomplished. Others suggested that regional planning is imperative, and a coordinated approach between the county and BOCES will be needed for a start. They suggested a task force should be established, and include representatives from these core groups so that collaboration is ensured and communication is coordinated across entities.

In terms of more formal collaboration, superintendents were asked if BOCES should coordinate a countywide task force comprised of representatives from county school districts and other stakeholders to address the issue of pandemic planning and extended school closure. Table 17 shows their responses.
Table 17

Responses to Survey Question, "Should BOCES Coordinate A Pandemic Planning Task Force?" (N = 21)

<table>
<thead>
<tr>
<th>Response</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>7</td>
<td>44</td>
</tr>
<tr>
<td>No</td>
<td>5</td>
<td>31</td>
</tr>
<tr>
<td>Not Sure</td>
<td>4</td>
<td>25</td>
</tr>
</tbody>
</table>

Note: N = 21, Five superintendents did not respond to the question.

There was almost an equal division on the superintendents' thoughts regarding whether or not BOCES should coordinate a countywide task force. Those who did not think BOCES should coordinate a countywide task force suggested that the county health department or emergency management office is a better choice over BOCES. One Superintendent said: “These agencies already have a team that has worked on this, so why duplicate efforts?” Of those superintendents that thought BOCES should coordinate a task force, some believe that “BOCES is the best place for this coordination to occur because it enables all school districts to help each other while providing a coordinated approach.”

Interview Results

The purpose of the face-to-face interviews was to examine school policy issues associated with long-term school closure due to an influenza pandemic event. Together with the electronic survey results and focus group data, the interview results have been used to estimate the influence that extended school closures may exert on school districts throughout the county assuming an influenza pandemic will occur in the days or years...
ahead. The analyses of the interviews included constant comparison and axial coding as described by Miles and Huberman (1994).

Perceptions of three (3) local school superintendents (participants), each representing his or her school district, within the same county used for the survey, were sought. These individuals were chosen to be interviewed because they volunteered in a meeting to represent their peers who make up the County Council of School Superintendents. The three superintendents were interviewed separately in the spring of 2008.

The three superintendents were asked a series of the same eight questions, and to provide their insight regarding the survey results. The researcher who, during the interviews, referenced the results of the survey prepared the questions. The interview questions can be found as Appendix C of this report. The interviews were tape recorded and transcribed. The perceptions of the interviewed superintendents were sought regarding the variance of responses and meaning of the survey data. The face-to-face interview questioning began by describing the purpose of the interview, which was to have them help interpret the results of the survey.

Demographic data. Each of the three superintendents interviewed represented suburban school districts in upstate New York. The student enrollments for their districts ranged between 1,100 – 3,700. The annual budgets for the districts ranged from about $17,000,000 to $54,000,000.

Probability a pandemic will occur. The interviews began by asking interviewees why they believe the majority of local school superintendents do not think a pandemic will occur that causes long-term school closure within the next 10 years. Three different
opinions were expressed. The first superintendent mentioned that a pandemic of this nature has not happened in their lifetime; therefore, what would cause them to think that it is likely to happen. He suggested that if they have never experienced it, then they probably cannot relate to it. The second superintendent said that superintendents may not be completely informed about this topic and they often delegate this work to subordinates. Therefore, they generally are not part of the discussions regarding this topic. The third superintendent mentioned, “There was a lot of hype, a lot of media attention; however it has waned over the last year or so.” He continued by saying: “This year’s flu season was uneventful, and I think it is human nature that people begin to put certain things aside and, unless it is immediate, you tend not to prioritize it until it is necessary.” This superintendent thinks it will happen sooner rather than later. All of the superintendents felt that there is probably a certain degree of cynicism that superintendents develop about the likelihood of anything happening that has not already happened in their experience.

Policy issues. The interviewees were asked why approximately half of the superintendents surveyed think that a board policy on extended closure due to pandemic influenza is needed and the other half did not. All three interviewees felt that a policy on this issue should be in place. However, they all agreed that those superintendents who do not believe it is going to happen, also do not believe there should be a policy. Superintendents do not want to put a policy in place for something that they do not believe will even occur.
The first interviewee said:

The discrepancy is based on how much thought and exposure the superintendent may have had to these potential issues. Some purists say this is a management issue so there should be a plan, but not necessarily a policy. I advise that a model policy be developed so that people could refer to it and use as a starting point for discussion with their boards about what will we do if we need to close school for extended periods. You are never going to get unanimity of opinion among superintendents.

The second interviewee agreed: “For those who do not want a policy, having the definitive steps to follow, procedures to be addressed in a pandemic flu situation, would be very helpful for everyone to have”. Based on the interviewees’ responses, the difference of opinion regarding the need for board policy seems to be based on each school superintendent’s and school board’s philosophy regarding policy.

**Responsibility for feeding students.** The next interview question referred to current CDC guidelines that suggest schools should incorporate into their pandemic influenza plans a process to address students who receive free and reduced priced meals at school. One hundred percent (100%) of the respondents disagreed that schools have a responsibility to feed students who rely on free and reduced lunch while schools are closed for extended periods. The interviewees thought school superintendents did not believe they have a responsibility to continue providing subsidized meals to students during an extended school closure because there is a presumption that their custodial duty to children ends with the timeframe in which school is conducted. They do not provide free lunch to students during April break or summer vacation, why would there be a
presumption that they should provide food during an extended epidemic type of situation? Most school districts do not have the capacity to transport food that could be like "Meals-on-Wheels" and still be quality meals by the time they got to the students in need. All of the interviewees agreed that if schools are closed as a site, no one should be there and they do not want people congregating, increasing the potential of spreading disease. In addition, they agreed that logistically and financially schools are not set up to provide this service when schools are closed.

Annual training. The next interview question referenced that 63% of the superintendents surveyed agree, that at least once a year, students, faculty, and staff should receive training on the use of non-medical ways to reduce the spread of influenza, such as covering coughs and sneezes, washing hands and staying home if you are sick. Approximately 40% of the superintendents surveyed did not believe this training is necessary. All of the interviewees felt that some sort of training be done. Although the first superintendent disagreed that annual training should be required, he said:

Incorporating this kind of training into health instruction makes perfect sense.

Incorporating it into the annual Right to Know training and basic health related issues that we do with our staff annually makes sense, but if somebody asked me to sign a piece paper to guarantee that every person that enters these school buildings will have this instruction at least annually, I would have a hard time swearing to that.

The second superintendent said:

I can only guess why some may be averse to the training. I believe the training is necessary, and it should be included in the annual mandatory training that we do
for the many other mandates that we have. The only assumption I could make in terms of the minority of superintendents who don’t believe it’s necessary is that maybe they are averse to the whole notion of yet another mandate, another requirement. Providing some examples of how this could be done in entertaining in brief way, e.g., a packaged presentation that is not lengthy, that could be rolled out at staff meetings, and is user friendly would probably be a palatable way to provide the training.

The third superintendent said: “The superintendents who think that training should not occur, likely do not believe it needs to be an added requirement. It is already built right into the curriculum. There is not one year that goes by that the message doesn’t go out.”

Overall, the interviewees thought that providing education and information to students and staff on the use of non-medical ways to reduce the spread of influenza was a good idea. However, making it a mandated annual requirement was probably not a good idea, because they could not guarantee that everyone in the district could receive such training. Furnishing the information to students through health education classes, and to staff through the annual Right-to-Know training, appear to be feasible ways to make the information available.

Interagency collaboration. The interviewees were asked about the survey result that indicated: (a) 43% of superintendents believe BOCES should coordinate a countywide task force to address pandemic planning, while 38% do not, and (b) 25% of superintendents are not sure whether or not BOCES should coordinate such a task force. All three interviewees agreed that there definitely is a role for BOCES in this. BOCES
represents the educational aspect of pandemic planning on which a county would not necessarily be focused. They all felt that the charge to the task force should be really to help develop a model plan and policy. By having a school board policy as a template school districts can decide to use it or not. At least there is something available to consider. They all agreed that BOCES should reach out to the county for collaborative planning and one of the first things to sort out is, what the county already has in place and what assistance do they need from the schools, so that schools are not replicating efforts. They felt that information on what is being done should be communicated through the BOCES Superintendent and then he or she could update the school superintendents as necessary at monthly superintendent meetings.

The interviewees were told that 94% of survey respondents believed that interagency collaboration to ensure responses between school districts, BOCES, county health department and other agencies will be necessary before, during and after a pandemic. The interviewees were asked what methods they believe should be used to notify school superintendents of pandemic planning efforts conducted by outside agencies, e.g., county health department and county emergency management office. The first superintendent mentioned “it is not effective to hear something from three different agencies unless hearing it at the same time in a coordinated fashion. A way to do that might be to produce a DVD or a PowerPoint presentation including, prerecorded pieces from outside agencies as a part of it. Everybody gets that consistent message and then maybe there is an opportunity for questions and answers.”

The interviewees all agreed that information should be provided to the BOCES District Superintendent and he or she can bring it to school superintendents at their
monthly meetings. The BOCES district superintendent should get information regarding interagency collaborative efforts from a task force or other means.

*Current status of school districts' preparedness.* The interviewees were asked if a flu pandemic were to happen tomorrow in our county what procedures would be in place for schools, and what procedures are still needed? The interviewees all felt that most of the schools would look to the BOCES superintendent for direction about a response. BOCES would be expected to have a distinct role in coordinating response efforts. The first superintendent mentioned that: “Probably the smartest thing would be to make sure that the county health commissioner, county emergency manager, and the two BOCES district superintendents for the County have the same information and are acting in a coordinated fashion in advising the schools what to do.” The second superintendent mentioned, “I don’t know the status in the school districts throughout the County, but my guess is that very few have any procedures outlined yet.” The third superintendent said: “Probably about 50% would use their own calling systems that provide messages and ongoing messages to them. On a regular basis parents would be getting updates and information on where we are, from a personalized point of view.” The majority of school superintendents would turn to the media and districts would use television or radio to communicate. The interviewees all mentioned that most districts have general procedures for some sort of an emergency situation and have a format to communicate to their parents in some way (e.g., whether school is open or not). The one issue that they all had a concern about was that districts have not clarified the particular issue regarding ongoing instruction, and what implication that would have for contractual obligations if school is closed for a prolonged period of time.
Other comments. At the conclusion of the interviews, participants were asked if there is anything else they would like to say about the implications regarding long-term school closure or pandemic planning. One interviewee said: "I’d just reinforce the fact that it is important for somebody, I think perhaps other than the school superintendents themselves, to be thinking about this and to be making plans." Another interviewee mentioned that:

It would be interesting for us as a region to explore online use of web-based Blackboard technology. I am surprised that coming from other segments of New York State that we do not have more active use of Blackboard technology, and an implication would be, this is a perfect opportunity for us to begin to fully exploit some instructional technology that we haven’t used in the past that could be valuable in the case of a pandemic school closure. This is just one other reason to consider a motivation to use that technology.

Interviews summary. In general, the interviewees’ responses concur with the survey results. However, more strongly than the survey respondents, they stated that a board policy on extended school closures should be developed. They also believe that BOCES should take a more active role in coordinating a pandemic preparedness task force than do the survey respondents. They agree that interagency collaboration is an important aspect of pandemic preparedness. In addition, the interviewees believe more work is needed to identify and develop methods to educate students during extended school closures. They suggest that the focus of this educational process should be linked to technology, such as web-based learning and the use of “black-board” technology.
Focus Group Results

The third analytical method used to examine school policy implications associated with long-term school closure due to a pandemic influenza outbreak was a focus group. A task force of ten people working on pandemic planning for local school districts was asked to participate in the focus group. The focus group began with a review of the survey data and interview results. The group was asked to comment on their perceptions of the results and data presented. They were asked what they believed the next charge of the task force should be for the upcoming year.

Members of the task force are employed by, or represent, various local school districts throughout the county. Each participant of the focus group worked for, or represented, the local suburban school districts. Of the ten individuals invited to the focus group, six participated. Those six included a school physician, a school nurse, an assistant principal, a local fire chief who works as a district-level custodial supervisor, a district level administrator, and a business official. Those on the task force who were invited, but did not participate included: an assistant superintendent for business, a district level administrator, a facilities director, and a school principal. The focus group discussion was tape recorded and transcribed. The analyses used for the focus group data included comparing and contrasting. According to Thomas and Brubaker (2000, p 225) “comparing involves identifying similarities among phenomena, while contrasting consists of recognizing differences among them.” The data collected was compared for similarities and differences in the participants’ attitudes and perceptions.

The group discussed the K-12 school policy issues related to extended school closures due to pandemic influenza. The researcher who is also a member of the task
force facilitated the focus group. The questions asked of the focus group can be found in Appendix D.

Probability a pandemic will occur. The first question to the group was: Why do you believe that the majority of local school superintendents do not believe a pandemic will occur that causes long-term school closure within the next 10 years? Focus group respondents reacted to the superintendents’ lack of concern in several ways. One person felt that it was dismissed because of the media. He said: “There was a lot of media hype when they started talking about it and then it kind of faded out, there hasn’t been much in the news, there hasn’t been much going on and let’s face it superintendents are busy.” The group questioned whether or not the survey should have focused only on extended school closure due to pandemics. They wondered if the issue would be more important to superintendents if all disasters that could cause extended closure were considered. The school nurse stated that: “I wonder if, the way the question is worded, it says an influenza pandemic, they may have been thinking of only influenza and that is why more of them do not think its going to happen. There are many events that could cause long-term closure. I would hope that many of them are not in denial regarding this potential problem, but you never know.” Another acknowledged how busy superintendents are by saying: “Stuff like this gets put on the back burner, yeah it is important, yeah we should do it, you know, next week, but it just doesn’t happen.”

Policy issues. The next question to the group addressed the need for board policy on extended school closure due to pandemic influenza. The group was asked: Why do you believe half of the superintendents feel a policy is needed and the other half do not. The group seemed unsure why the superintendents were split on this issue. There was not
a lot of discussion by the group, because they did not seem to know, but one of the group members said: “The health department will make the decision as to schools being closed or not, but then what happens with Board policy? It would not necessarily be the same for every district.” The group indicated that there is some conflict in terms of not feeling policy is warranted, but then when challenged superintendents say that you need to have a plan. “So is it that you would just develop the plan in the event that it was needed, rather than having a policy?” Another person said: “I think it’s that superintendents are not exactly sure what they want to do, that’s how I would interpret the survey results regarding policy.”

When asked if districts should have policies regarding people staying home when they are ill the group had more thoughts on this issue. The school nurse indicated that a policy of this nature is pretty generic. She said:

It is somewhat of an overall guidance type of policy; procedures and guidelines that get specific may be more appropriate than a policy. A policy recommending staying home when you are ill would have to include a definition of the meaning of “ill”, which would be difficult. Who is going to define what is ill? The district should have some basic guidelines not to expect you to attend work or school if you are ill when you may be highly contagious.

A participant in the group mentioned that a policy regarding staying home when you are ill could be a “double-edged sword” for districts too. “I mean as an employer you are setting yourself up if you are telling people they are not expected to be there when they are ill. Having a policy on this will not allow districts to take punitive action for people being out.” The school nurse suggested that districts should have a policy that
requires people who are out for more than a certain number of days (e.g., four days in a row, must obtain documentation from their physician upon their return).

The group felt that schools do not need a policy for every type of medical emergency. The school physician said: “My medical book is thick and I don’t think we need a policy for every single medical condition. I think we need a general policy for dealing with children with serious or life-threatening medical conditions, but not each one individually, and I think this is the same for disasters that could impact on school closure”.

Responsibility for feeding students. The group was asked to discuss why they thought all superintendents felt they do not have responsibility for feeding students who rely on free and reduced meals when school is closed for extended periods. The group’s response was similar to the superintendents interviewed. A participant in the group said: “Let’s face it, when we are closed for vacations and summer we do not feed kids during those times.” Another mentioned that: “My understanding is that one of the key elements of having a preparedness plan is that there are children whose only food source is school lunch and school breakfast, and so when we first started doing this I thought the transportation was a key element in picking up those kids and getting them in for food”. Another participant said: “You know you can look at it as a superintendent, providing food is not really a school’s job. It is a community health issue.”

Annual training. The group was asked to discuss their thoughts on the CDC recommendations for annual training of staff and students on the use of non-medical ways to reduce the spread of influenza, and the fact that about 40% of the superintendents surveyed did not believe this training should be mandatory. One group member replied:
"I don’t think they’re saying that it is not important. They’re just saying that they have so many mandates, and to try to throw one more thing in there is difficult." Another participant said:

If you look at it from financial viewpoint, and if kids are not covering their mouths and teachers are not having them wash their hands, and people are not communicating how to reduce the spread of influenza, then schools are going to have more teachers and students out ill. The district will potentially lose money by paying substitute teachers and loosing state aid that schools get for attendance. In addition, if the kids are not in school they’re not learning. When superintendents say it’s a public health concern, it is, but it is also a school concern. If you want kids to be in school and you want teachers and staff to be there, this type of training helps keep people healthy and in school.

Paying staff. The next item discussed by the group was whether or not all staff should be paid their full salaries while schools are closed long term. The focus group agreed with the superintendents by indicating that staff should be paid only if the government does not penalize districts when they are closed. They also thought that if staff is paid, they should work from home, if they are able, in an effort to support educating students while schools are closed.

Interagency collaboration. The group was asked to discuss the need for interagency collaboration. A group participant said: “It needs to be coordinated. I mean everybody needs to get the same message. You can’t have two districts in one county making two different recommendations; I think that would be confusing.”
The group was asked to comment on whether or not BOCES should continue the pandemic planning task force even though over 50% of the superintendents did not believe it was BOCES duty to establish a task force, but rather the county health department’s responsibility. One group member said: “Maybe there needs to be a little bit more of a formal agreement that if this committee is to continue, because it’s a time commitment that we’re all keeping and with 56% of the superintendents either unsure or don’t think we should be doing this. I don’t want to waste my time, because they’re not going to listen.” The other group members agreed.

The group agreed that while their focus has been pandemics, they thought they should be talking about community-wide disasters, natural disasters, terrorist disasters, biological disasters, and not just focus on pandemics.

Other comments. When the group was asked if they had any additional comments about the issue one participant mentioned that there was a great deal of media hype 18 months ago and it seemed that President Bush was trying to distract us from the war and now no one is talking about pandemic influenza anymore. Another member added:

I have to agree; is this really dangerous or is it perceived? Superintendents don’t seem to feel it’s a real danger if they’re saying it’s not going to happen in the next 10 years. I don’t know how I would answer it: I mean how would all of us answer that? Do you think a pandemic is going to happen in the next 10 years? A participant in the group said:

No, I honestly believe, a more localized long-term closure might happen. I mean Columbine was closed for weeks, you know, actually a month and a half, or so. It was near the end of the year, but that type of long-term closure can happen and
whatever is the case, if it’s biological, it doesn’t have to be large scale, and it can be small. We actually put long term closure into our emergency plan based on the fact that many things could cause an extended closure. We did not focus on a pandemic.

Another member of the group agreed and indicated that the emergency plan or policy does not need to focus necessarily on a pandemic, but anything that could potentially cause extended school closure. The school physician said:

I don’t think that we’re going to encounter a pandemic of that level; I have incredible faith in the public health system in the United States. I think the third world countries may suffer a catastrophic outcome from a pandemic. China may be at risk for a catastrophic outcome if they do not improve their public health structure. But you know, SARS was contained in Canada and SARS was not even an issue in the United States, and I do not believe that a catastrophic pandemic in the United States is going to happen. I have faith in the CDC, and think CDC is world class, and that there is nothing out there better. However, I do believe that Superintendents need to think about the impact of long-term school closure and I don’t think they have.

Another participant in the group suggested that:

We have shifted our focus from global catastrophe to pandemics and I think it was pretty clear from the outset that this group felt very strongly it needed to be broader and I would like to see that presented back to superintendents in a broader way to see what their response would be. I think we need to finalize our template and maybe beef it up a little bit more. focus on all types of disasters that could
cause long-term school closure, provide specifics and present it to the
superintendents as something that you need to adopt in some capacity whether its
policy, guidelines, or regulation.

*Focus group summary:* In general, the focus group agreed with the survey results
and the comments made by the superintendents who were interviewed. However, the
school physician thought that schools should take responsibility for feeding students who
receive free or reduced priced meals when schools are closed for extended periods. This
is contrary to the survey data and the interview results. The majority of the focus group
does not believe a pandemic that causes extended school closure county-wide will occur
within the next ten years. In addition, they do not think that they should continue
working as a task force on this issue if school superintendents do not support their efforts.
If they continue as a task force, they believe they need to broaden their focus beyond
pandemic planning. They think it would be more sensible to address all types of
emergency disasters that could cause long-term school closure (e.g., natural disasters,
terrorist events, or community-wide disasters). The group felt that they should, at least,
for the coming year prepare a “draft extended school closure policy and a set of
procedures” that districts could consider using if they desire. Although there was talk of
discontinuing as a task force, based on the superintendents’ lack of interest, the group
decided that the Chair would schedule a meeting in the fall to discuss future efforts.

*Unanticipated Results*

This section briefly describes the researcher’s comments on unanticipated results
identified during the study. In chapter V further details about the implications for these
results will be given. In general, there were three unanticipated results that surprised the
researcher. The first unanticipated result was that school superintendents do not have a clear understanding of who has the authority to close all county schools in the event of a pandemic. This uncertainty could result in delays in school closings if a pandemic were to occur, thereby jeopardizing the health of students and the community. The second unanticipated result was that school superintendents are essentially equally divided on whether or not a school board policy on extended school closure is needed. Half of the superintendents believe a board policy would be prudent and establish the process used to develop plans and procedures. The other half of the superintendents do not believe a policy is necessary for extended school closure due to pandemic influenza. There is essentially no consensus on this issue. The final unanticipated result was that over 50% of the superintendents were not sure or did not believe BOCES should coordinate a task force to address the issue of pandemic influenza planning in schools. The existing task force was established through the BOCES Environmental Health and Safety Service in an effort to provide a cooperative service to help support local schools with their planning efforts. Without more of the superintendents' support on this issue, the task force felt that they could not be effective. The task force felt that if superintendents do not believe their work is needed then they would not listen to the task forces' recommendations.

Conclusion

During a U.S. Department of Health and Human Services (HHS) leadership forum held on June 13, 2007, Stephanie A. Marshall, Director of Pandemic Communications, described how community leaders think. Ms. Marshall used various terms to describe community leaders' responses regarding how they felt about preparing for a pandemic. Some of these terms she used to categorize various community leaders
thoughts included: “disbelievers”, “unengaged”, “fatalists”, “preparers”, “avoiders”, “unable” and “influencers”.

This study essentially concurs with Ms. Marshall’s descriptions. Based on superintendent responses provided during the study they too could be placed into these categories. The study found that some superintendents were unengaged by saying “It’s not important enough to spend time on right now”. Few indicated that “preparing won’t help anyway” and they could be categorized as fatalists. Others were seen as preparers who said “I’ve already begun preparing and continue to work on it”. Many could be considered avoiders because they said: “I can’t deal with it right now, and there are too many other more important issues to tend to”. Few would be considered influencers because they said “It’s not my job”. Finally, many superintendents could be seen as disbelievers because they indicated that: “I don’t believe it is a real problem right now”. 
Chapter V: Discussion

Introduction

Schools play an important part in protecting the health of their students, staff, and the community from highly contagious, infectious diseases such as seasonal or pandemic influenza. Research conducted by the Centers of Disease Control and Prevention (CDC) and others suggest that community-wide school closures may lessen the prevalence of pandemic influenza, thereby reducing its affect on people and the economy. The public health belief is that timely closure of schools may limit the spread of pandemic influenza.

This study investigated the question: What are the perceptions of school superintendents and a community task force regarding the health, pedagogical, social, and economic planning decisions for long-term school closure due to pandemic influenza?

Three research methods were used sequentially to collect data: a survey of superintendents in an upstate county in New York State, interviews of three superintendents to help interpret survey responses, and a focus group consisting of members of a task force charged with the responsibility to draft possible policies for schools. The primary themes that emerged from the data were provided in Chapter IV. Taken together, these data describe, at least in part, the current thinking of these stakeholders regarding local K-12 public school policy issues related to extended school closures due to pandemic influenza.

The implications or actions that should be considered in light of the results as they relate to the literature, future practice and future research are provided in this chapter.
The recommended actions are based on the research literature as well as the beliefs and practices of local school superintendents and the other stakeholders participating in this study.

**Implications for Future Research**

This study shows that school superintendents are essentially not in agreement with many of the recommendations provided in the literature. While many of the recommendations for schools described in the literature are direct, some are implied. Table 18 lists the recommendations for schools that emerged from the literature, the literature sources, and the percent of superintendents who agreed on the survey with the recommendations.

Table 18 illustrates that school superintendents do not embrace all of the recommendations for schools that are found in the literature. This resistance to some of the recommendations could bring about potential adverse implications on the community and students in the event extended school closures are necessary.
Table 18

Superintendents Reactions to the Recommendations Found in the Literature

<table>
<thead>
<tr>
<th>Recommendations from the literature</th>
<th>Literature sources</th>
<th>Percentage of superintendents who agreed with the literature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interagency collaboration is necessary when responding to a pandemic</td>
<td>CDC (2006), New York State Education Department (2007)</td>
<td>93%</td>
</tr>
<tr>
<td>Alternative learning options are needed when schools close for extended periods</td>
<td>DHHS (Dec. 9, 2006).</td>
<td>80%</td>
</tr>
<tr>
<td>Staff should be paid when schools are closed for extended periods</td>
<td>CDC (2006), Hodge, et al., (2008).</td>
<td>67%</td>
</tr>
<tr>
<td>At least once a year, students faculty and staff shall be educated on non-medical ways to reduce the spread of influenza</td>
<td>DHHS and CDC (2006)</td>
<td>62%</td>
</tr>
<tr>
<td>Policy on extended school closure is needed</td>
<td>DHHS and CDC (2006), Kahn (2007)</td>
<td>53%</td>
</tr>
<tr>
<td>Superintendents have a clear understanding of who has the authority to close all schools in the event of a pandemic</td>
<td>Hodge, et al. (2008).</td>
<td>0%</td>
</tr>
<tr>
<td>Districts are responsible for feeding students who receive subsidized meal programs when schools are closed for extended periods</td>
<td>DHHS and CDC (2006)</td>
<td>0%</td>
</tr>
</tbody>
</table>
The following subsections describe how this study supports existing literature related to extended school closure due to pandemic influenza, and provides recommendations for further research.

*Probability a pandemic will occur.* The literature suggests that, "many experts believe the question is not whether there will be another pandemic, but when" (Harvard, 2006, p 8). Even though the literature indicates that the United States is due for a pandemic event, this study suggests that preparing for extended school closure due to pandemic influenza does not appear to be a priority for school superintendents. Participants offered several reasons for this low priority designation: the main one being that addressing the issue takes them away from their primary role, which is student learning and success. The perceptions of school superintendents are that it is more important to focus their efforts on the daily educational needs of students than to prepare for extended school closure due to an influenza pandemic.

The United States Department of Education website [http://www.ed.gov/admins/lead/safety/emergencyplan/pandemic/index.html](http://www.ed.gov/admins/lead/safety/emergencyplan/pandemic/index.html), February 14, 2008, page 1, indicates that scientists predict that the world is due for an influenza pandemic, a global outbreak from a new strain of influenza. The literature suggests that the threat of a human influenza pandemic has greatly increased over the past several years with the emergence of highly virulent avian influenza viruses (Fauci, 2006). In response to this potential threat, in August, 2006, the New York State (NYS) Commissioners of Education and Health coauthored a letter to NYS School District Superintendents and School Board members asking them to work closely with their local health departments to prepare schools for an influenza pandemic. This information
heightened the awareness of local schools about pandemic preparedness and the potential for extended school closures. At that time, schools began to think about how it would impact their operations and started to develop plans to address the issue. However, since the issuance of the coauthored letter (NYS Health and Education Departments, 2006), there has been little additional guidance or information provided directly to school superintendents regarding the issue.

While the literature suggests that there is an increased threat of a pandemic, the majority of school superintendents and other stakeholders who participated in this study do not believe a pandemic will occur and cause extended school closure within the next ten years. How much should school superintendents worry about pandemic influenza? According to Thaler and Sunstein (2008):

In answering questions of this kind, most people use what is called the availability heuristic. They assess the likelihood of risks by asking how readily examples come to mind. If people can easily think of relevant examples, they are far more likely to be frightened and concerned than if they cannot. A risk that is familiar, like that associated with terrorism in the aftermath of 9/11, will be seen as more serious than a risk that is less familiar, like that associated with sunbathing or hotter summers. Homicides are more available than suicides, and so people tend to believe, wrongly, that more people die from homicide. (p. 25)

Based on this theory, most school superintendents have never experienced a pandemic and are unfamiliar with the risk it presents. They cannot readily think of a time when schools were closed for extended periods due to a pandemic, and therefore, do not believe the risk is great.
The study participants mentioned that there was a great deal of media "hype" about an imminent pandemic 18 months ago and wondered if it is a real or perceived danger. They also mentioned "often when a social issue is raised, schools become the primary audience to address the problem." It seems that the lack of experience school superintendents have had with an actual pandemic, and the inaction of the state health department and state education department in keeping the issue of pandemic preparedness at the forefront of school superintendents' agenda, has caused many of them to question whether the threat is real. This lack of experience and continuous information to superintendents about the pandemic threat appear to be major factors in their beliefs.

While the threat may or may not be real, this research adds to the literature by providing the perceptions of actual school leaders who are faced with dealing with the issue. Superintendents appear to need more proof of a pandemic as a threat before they expend time and begin thinking how to plan for one. Future research on how superintendents decide to act on perceived threats may help determine how to get them to understand that preparing for such events is important.

Policy issues. This study suggests that school superintendents are divided on whether or not a school board policy on extended school closure is needed. Most superintendents do not believe a separate board policy is required, although the majority do think that procedures should be developed and incorporated into existing school emergency plans. The literature (Kahn, 2007) implies that schools should have policies related to extended school closure and pandemic preparedness. Without policies or plans related to extended school closures, schools will not be prepared to respond to a pandemic event. Kahn (2007) reports that there are only two states and four localities in
the northeastern United States that have policies for extended school closures. Holmberg et al. (2006) suggests that state pandemic plans in the United States represent a “patchwork” without central coordination or direction, which appears to be reflected in the community associated with this study. These concerns are especially pertinent for school closure decisions during an influenza pandemic. There did not appear to be consensus on what organization should be responsible for this coordination. Whether or not school superintendents decide to have a policy on extended school closure, they all agreed that procedures should be in place in the event a future pandemic occurs.

This study suggests that most superintendents recognize the need for a unified policy or plan, but that the responsibility for coordination lies elsewhere beyond, but including the school districts. Future research should address whether or not school policies on the issue of extended school closure would be prudent. It should examine whether or not incorporating plans and procedures without a policy is sufficient. Research on the number of districts that have policies related to extended school closure and the substance of those policies would help to determine the prevalence and content of policies on this issue.

Responsibility for feeding students. Even though the Centers for Disease Control and Prevention (CDC) checklist (2006) recommends that schools develop plans for feeding students receiving free and reduced-priced meals when schools close for extended periods, all superintendents participating in the research agreed that providing subsidized meals while schools are closed was not their responsibility. While the literature suggests that schools should have plans to provide subsidized meals, the superintendents indicated that their schools are not set up financially or logistically to
provide meals to students when schools are closed, and that there are not systems in place to provide such services. The superintendents in this study suggest that the CDC recommendations on this issue may not be feasible for most districts. Future research should examine options for feeding students, who receive subsidized meals, during extended school closures. The research should address how districts might collaborate with food pantries and other food supply sources so that students receiving subsidized meals are fed during long-term school closure.

Annual training. This study shows that superintendents agree that some form of training on infection control should be provided; however, they do not think it should be mandatory. The literature (CDC, 2006) suggests that schools provide this type of training at least annually. The superintendents in this study wondered about how to provide this training and when. Superintendents thought that it could be offered to students during health education classes. While health education standards in New York State cover infectious disease, not all students at every grade level are required to receive health education. Most districts integrate health education somewhere throughout the K-12 curriculum, but it is not offered to all K-12 students every year. Also, teachers might not cover this type of training unless they are directed to do so by the superintendent. This study suggests that, unless information about pandemics is embedded in existing curriculum, the recommendations from the literature are not realistic in light of other learning and professional development demands.

This study showed that superintendents agree that some form of training in practical ways to prevent disease should be provided to staff and students. However, they are not sure how to implement the training and what should be included. Future research
could focus on strategies to incorporate this training into existing curriculum and
different options schools may use to offer it to staff and students.

*Alternative learning options.* The Department of Health and Human Services’
checklist (DHHS, Dec. 9, 2006) recommends that schools develop alternate procedures to
ensure the continuity of instruction in the event of district-wide school closures. While
school superintendents agree with this recommendation, there are few strategies in place
to do so locally. Few suggestions exist in the literature on ways school districts may
easily implement continuity of instruction programs while closed for extended periods.
Future research should examine methods to educate students, which schools could
realistically implement quickly, when they close for extended periods. This study
suggests that superintendents do not have an organized approach to offering alternative
teaching methods as suggested by the Department of Health and Human Services.

*Communication methods.* The literature (CDC, 2006) suggests that schools be
prepared and have a process to communicate with staff and students when schools are
closed for extended periods. This study showed that most schools have adequate means to
communicate with employees, parents and students in the event of extended school
closure. These methods include: news media, telephone, or web sites. According to
superintendent responses, how to effectively coordinate this type of communication has
not been articulated. They appear to be aware of the methods, but a plan for accessing
and using these tools does not appear to be present. Research demonstrating practical
methods that school districts can use to uniformly communicate unified messages to their
constituents is needed.
Paying staff. After Hurricane Katrina, the Louisiana Education Department sent out a statement to schools showing its willingness to work with states hit by the hurricane especially concerning waivers and modifications, teacher requirements, reallocations of funds, and supplemental appropriations (Hodge, et al., 2008). Similar waivers would be needed in New York State in the event of long-term school closures. During the January 24, 2007, school-closure, discussion-based-exercise workshop sponsored by the New York State Department of Health, New York State Education Department, and New York State Emergency Management office the issue of paying staff when schools are closed for extended periods was raised. It is unknown what the effect of long-term closure would have on school funding in New York State. It is clear that schools would need regulatory relief since school districts get state funding based on average daily attendance records. Current bargaining agreements do not have provisions for paying staff while schools are closed. This study adds to the literature on school closings by offering superintendents opinions on whether staff should be paid. Superintendents believe staff should continue to be paid when schools are closed for extended periods as long as districts continue to receive state funding while schools are closed. Future research on the legal implications of paying staff while schools are closed is needed. School districts should consult with their legal advisors to determine their legal obligations regarding paying staff when schools are closed for extended periods.

Critical functions needed to continue operations. After Hurricane Katrina, schools that were not damaged during the storm remained open as shelters. In the event of a pandemic, schools may need to be opened and as points of distribution sites (PODS) for dispensing medication. This study showed that school superintendents think certain
operations will need to be maintained even when schools are closed. These critical functions include such items as facilities operations (boilers, phones, and web-site), payroll and business services, school communications, and alternative instruction. These items will need to continue to help maintain the school infrastructure and enable school leaders to communicate with their constituents. Schools will need to develop plans to keep these operations functional if schools are closed. They will need back-up plans in the event those individuals who manage these areas cannot report to work due to illness.

This study adds to the school literature by demonstrating a need to keep school buildings open even while students are dismissed for extended periods. Future research should examine the critical functions that need to continue when schools close for extended periods. It should address how these critical functions will be carried out when schools close for extended periods.

School employees expected to report to work. In carrying out the critical functions mentioned above, certain staff will need to report to work. Even though students may be dismissed from school for extended periods, the facilities may be needed for other purposes such as temporary shelters, points of distribution for medical supplies, or care centers. During Hurricane Katrina, approximately a third of schools in New Orleans were closed due to physical damage and not necessarily to prevent the spread of disease (Hodge, et. al, 2008). Some of those facilities not damaged were used for the purposes listed above (Hodge, et al., 2008). This study documents superintendents’ beliefs regarding the need for facilities staff, payroll staff, some instructional staff, and themselves to report to work when schools are closed, if they are able. Future research on the legal implications of requiring certain staff to report to work while schools are
closed is needed. School districts should consult with their legal advisors to determine their legal obligations as to requiring certain staff to report to work when schools are closed for extended periods.

*School employees expected to work from home.* In an effort to provide alternative instruction to students while schools are closed for extended periods, teaching staff may be expected to work from home. The majority of school superintendents expect staff to work from home during a pandemic, if they are able. This line of thinking is in agreement with the current literature (CDC, 2006). Allowing staff the option to work from home could lessen the societal impact by encouraging families to continue working, even though it is from home, without fear of employment loss (Hodge, et al., 2008). This study adds to the school closure literature by demonstrating some agreement among school superintendents regarding the issue of employees working from home during a pandemic.

The majority of superintendents believe most staff should be expected to work from home, if able, when schools are closed for extended periods. Further research on what staff will be expected to do and how their work may be accomplished is needed.

*Authority to close all county schools.* Making the decision to close schools for extended periods in response to pandemic influenza will significantly impact the community and students. CDC has reported on the community impact of school closures on families and the workforce in its *Interim Pre-Pandemic Planning Guidance* (2007). It recognizes four major areas of concern, including the potential: (a) adverse economic impact on families, (b) disruption of businesses, (c) reduced access to essential goods and services, and (d) disruption of school related services.
This study showed that school superintendents are unclear who has the authority to close all county schools in the event of a pandemic. This suggests that express legal authority to close schools may be lacking or at least confusing for school superintendents. The majority of superintendents believe that the county health director likely can close schools when there is a public health emergency.

As mentioned in Chapter 2, in January 2007 the New York State Department of Health, New York State Education Department, and New York State Emergency Management office sponsored a school closure discussion-based exercise workshop. During the workshop it was reported that New York State’s “trigger” to close schools in a severe pandemic influenza event is one laboratory confirmed community case in the county, and schools would remain closed for 12 weeks. During the workshop, a need was identified that the trigger discussion needs to be held with local health departments and communities, so that decisions can be made proactively rather than reactively. During the workshop it was reported that the legal authority to close school district schools remains with the superintendent of that district.

Following Hurricane Katrina the decisions to close schools were made on a district-by-district basis (Hodge, et al., 2008). There was no statewide closure of schools before or after the hurricane by the Health Department, Education Department or the Governor (Hodge, et al., 2008).

In November 2006 in Yancee County, North Carolina schools were closed in response to an outbreak of influenza B virus. While local officials were able to contain the spread of disease, disagreements among state and local government officials as to the efficacy of school closures as a control measure illustrate the potential for delays or
resistance to efficient statewide school closures in response to pandemic influenza
(Hodge, et. al, 2008).

As mentioned above, the study showed that superintendents are uncertain who has
the authority to close all county schools. This uncertainty could result in delays in
closing if a pandemic were to occur, thereby jeopardizing the health of students and the
community. The superintendents in this study could face a similar situation as those
recorded in the literature, which may result in similar confusion. Future research to
examine who has the authority to close all county schools to reduce the impact posed by a
pandemic is needed.

Interagency collaboration. The literature (CDC, 2006) implies that interagency
collaboration is crucial for the community-wide preparation of a pandemic. Even though
most superintendents do not think a pandemic causing extended school closure will occur
within the next ten years, they all think interagency collaboration is necessary to prepare
for such an event. They do not believe schools should be the lead agency in this
collaborative effort, but do believe schools should be part of the planning process. Many
superintendents were against or unsure whether or not BOCES should coordinate a task
force to address the issue of extended school closure. They thought that the county health
department or emergency management office would be a better choice. They stressed the
importance that schools are involved with the collaborative process. The superintendents
appear to agree with the recommendations of the literature for interagency collaboration,
but see themselves as a member of the team not necessarily the key leader of the effort.
Future research on how to incorporate schools into interagency collaborative efforts is
needed.
Implications for Future Practice and Recommendations for the Local County

This section provides a summary of recommendations made by the author based on his study’s findings. It includes recommendations for future practice and actions that the county, local schools and BOCES regional pandemic planning task force should consider. It includes recommendations for changes in organizational procedures and practices for the local districts and community addressed in this action research study.

Interagency collaboration. The study showed that most superintendents were unsure or against BOCES coordinating a task force to address extended school closure due to pandemic influenza. Those against BOCES coordinating such a task force felt the local health department or emergency management office should be responsible to take the lead, and should invite school representatives to attend their planning sessions. The county health department currently has a group that addresses pandemic preparedness called the “Bio-Terrorism and Communicable Disease Task Force”. Through the BOCES cooperative health and safety service superintendents could be notified of county-wide efforts to prepare for a pandemic. This may be accomplished by having a BOCES representative from the health and safety service participate on the county’s Bio-Terrorism and Communicable Disease Task Force and attend any local or state sponsored sessions on the issue. The BOCES representative should report back to the BOCES District Superintendent. The District Superintendent then should provide the information to school superintendents. Having a BOCES representative actively participate in interagency meetings would provide a liaison for school district input and communication. The BOCES representative would be able to offer the school districts’ perspectives during the planning process.
One action the BOCES regional pandemic planning task force needs to consider is whether or not to continue their efforts, or be subsumed by the county’s Bio-Terrorism and Communicable Disease Task Force. With over 50% of the superintendents uncertain or who do not believe it is BOCES duty to establish a task force, but rather the county health department’s responsibility, maybe a BOCES lead task force is not necessary. One focus group member said: “Maybe there needs to be a little bit more of a formal agreement if this task force is to continue, because it’s a time commitment that we’re all keeping and with 56% of the superintendents either unsure or don’t think we should be doing this, I don’t want to waste my time, because they’re not going to listen.” The other group members agreed.

The focus group thought that the task force should consider expanding their efforts to encompass all emergency situations that could cause extended school closure. This may be a good idea as long as they obtain buy-in from the school superintendents. If they decide to do this, the task force would need to establish a mission and goals that the school superintendents should approve in advance.

While the superintendents were not sure whether or not a BOCES coordinated task force was needed, the majority did think that it would be helpful to have an example school closure policy and procedures that they could share with their school boards for discussion purposes. The author recommends that the local pandemic planning task force prepare a draft policy and procedures that superintendents can consider with their school boards. While each school district’s procedures will have to be crafted specifically to meet their individual needs, a draft policy and procedure would be a helpful starting point for them to consider when updating their existing emergency management plans. After
that, if the task force decides not to continue as a group they can disband. If they decide to break up, a process should remain in place to notify schools of county-wide efforts to prepare for a pandemic event.

Authority to close all county schools. Each school superintendent has the authority to close his or her school district in the event of an emergency. While the literature (Hodge, et al., 2008) suggests that the effective use of school closure is a community strategy to reduce the impact of pandemic influenza, school superintendents are unsure who has the authority to close all county schools. This lack of certainty may result in disagreement or delays in implementing school closure as superintendents and other local and state government authorities debate whether, when, and how to close schools (Hodge, et al., 2008). This uncertainty may preclude timely, consistent implementation of school closure decisions at the local level.

The author recommends that the BOCES superintendent discuss the school closure issue with the Commissioner of Education, county health director, the county executive, and their legal counsel to help clarify who has the authority to close all county schools in the event of a pandemic and how it will be accomplished. They should attempt to work out any recognized issues that may delay successful implementation of school closure as a social distancing measure. As a result of the meetings, the BOCES superintendent should confirm an agreed upon extended school closure process that BOCES, the local school districts, and the county health department can incorporate into their emergency plans. Once this mechanism is established, the BOCES superintendent should share it with the local school superintendents who should then incorporate it into their district emergency plans.
Another recommendation would be that BOCES health and safety service or the local pandemic planning task force facilitates a tabletop exercise for school superintendents during their annual retreat. The tabletop exercise is a simple exercise requiring minimal preparation. It is an excellent vehicle for training officials and other key responders and decision makers in selected components of school district safety plans. Its purpose is to detect potential problems with coordination and to determine the appropriateness of assigned responsibilities. It also reveals potential problems in response procedures and can help determine requirements for further training. To undertake the exercise, school superintendents would gather in an informal setting, such as a conference room, and are presented with a scenario and related problems devised by BOCES health and safety service or the local pandemic planning task force. For example, the scenario will be an identified hazard, such as an impending pandemic that will require the extended closure of schools county-wide. This kind of setting is conducive to free discussion, and participants have the opportunity to practice solving relatively simple problems in a low-stress environment. The goal of the tabletop exercise would be to identify and discuss actions that would need to be taken within county school districts by school superintendents to maximally protect the health and safety of students, staff and school community during a pandemic situation. The exercise objectives would be to identify essential communication and coordination for emergency response activities that would maximize the protection for all county students and staff, test county-wide communication procedures, and to identify staff responses and responsibilities.

*Alternative learning options. Most superintendents thought that continuity of instruction was important in the event of extended school closure. However, few have*
concrete plans to provide such education. Most superintendents suggested technology, such as distance learning, and web-based learning as a means to continue student instruction. The local task force should work with BOCES Technology Services Department to establish a procedure to accomplish this goal. BOCES purpose is to serve students in non-traditional ways, and to provide school districts with shared technology services. Developing and implementing a learning system for schools if they need to close for extended periods is aligned with BOCES purpose.

Responsibility for feeding students. The study clearly shows that school superintendents do not believe feeding students who rely on subsidized meal plans is their responsibility when schools are closed for extended periods. In the case of a true pandemic school leaders should ask themselves in advance if school food service workers could report to work to prepare meals and have transportation staff deliver it to students in need.

The implications here suggest that during extended school closures other means to provide food to students receiving subsidized meals should be researched and considered. The county health department’s Bio-Terrorism and Communicable Disease Task Force should be made aware that school superintendents do not think it is their responsibility to feed students who rely on subsidized meal plans during a pandemic. The county needs to look into other options for providing food, such as food pantries, meals-on-wheels, or the Red Cross. This is something the county health department should investigate prior to an extended school closure event.

Probability a pandemic will occur. Unless more evidence is provided on a continuous basis that the threat of a pandemic could cause extended school closure.
school superintendents' preparation efforts may remain minimal. Most superintendents do not believe that a pandemic that will cause extended school closure will occur within the next ten years. The task force should consider contacting the county and state health departments to see what the likelihood of such an event really is. If it seems that it is more likely than not, the task force could work on heightening the awareness of the superintendents by routinely providing them with updates on the topic and suggested planning activities. The task force should consider broadening their focus to address other issues that could cause extended school closures. The focus on pandemics may miss the point for the need to plan regardless of the reason for extended school closure.

Annual training. Most superintendents thought that annual training in use of practical ways to reduce the spread of influenza, such as covering coughs and sneezes, washing hands, and staying home if you are sick was a good idea, but should not be mandated. Future practice should involve providing employees awareness training during faculty and staff meetings. The training should encourage teachers to review it each year with their students prior to the flu season. Most schools provide teachers and staff with annual Right-to-Know training and Blood-borne Pathogen Training as required by the New York State Public Employee Safety and Health (PESH) Bureau. They should incorporate hand-hygiene and respiratory etiquette into the annual PESH safety training that is required to be provided to all staff every year. The task force should develop a short training presentation that could be offered to districts during annual employee Right-to-Know sessions or faculty and staff meetings. The task force could also develop or obtain and distribute grade appropriate training materials teachers could use to inform students about the importance of proper hand hygiene and respiratory cough etiquette.
Communication methods. Most school superintendents reported that they have adequate means to communicate to their school community during extended school closures. One implication is that there is not a regional coordinated effort in place that all districts use together to communicate to their constituents the same information. Future practice should establish a coordinated effort so all communications throughout the region are unified. Prior to, and in the event of extended school closures, the BOCES superintendents along with the county health director should work together and develop a mutually agreed upon, unified message that all districts could use when communicating with their constituents.

Paying staff. Most superintendents agreed that paying staff during an extended school closure was appropriate. However, few had procedures in place on how this would be accomplished. This issue should be addressed in new bargaining agreements. Superintendents should consult with their legal advisors regarding this issue.

School employees expected to report to work. Future practice would dictate that schools should plan and communicate who would be expected to report to work in advance of an extended school closure. They need to know what their responsibilities will be if schools are closed for extended periods. Back-up staff should be identified in advance too, just in case the primary staff was unable to report. School superintendents should consider that their facilities might be needed for other purposes besides education such as points of distribution for medical supplies. They should collaborate in advance with agencies who will likely use their facilities (e.g., Red Cross, Health Department) so that in the event of a pandemic superintendents will understand how their schools may be needed.
School employees expected to work from home. The majority of school superintendents think that staff should work from home if schools are closed for extended periods. Future practice that allows staff the option to work from home could lessen the societal impact by encouraging employees to work from home without fear of employment loss. Such arrangements afford flexibility to determine which member(s) should stay home to care for children (Hodge, et al., 2008).

Teachers and staff would need to be informed in advance of what they are expected to do from home in the event of long-term school closure. Superintendents need to understand that employees may not have the wherewithal to work from home if they or their family members are ill. Bargaining agreement contracts do not address this issue, and future practice would dictate that teaching staff be informed in advance and be prepared to provide educational services from home in the event of extended school closure. Planning how this may be accomplished could be something the task force examines with the help of BOCES Technology Services Department to assist school districts deal with this dilemma.

Limitations

This study confined itself to surveying and interviewing school superintendents in one county and was specific to the upstate New York region where the research was conducted. The survey and face-to-face interviews only obtained the perceptions from school superintendents. It may have been helpful to get the perceptions from other school administrators, other county administrators, and others who have addressed the topic of extended school closure and pandemic influenza. All research participants represented suburban school districts. There were no rural school district participants involved in the
research. The purposive sampling procedure decreases the generalizability of findings. The study will not be generalizable to all K-12 public school systems; however, the findings may be helpful to other communities or school districts considering such plans.

The author of this study was a participating member of the county-wide schools pandemic planning task force. As an action research project this provided the author data for decision making in a real context. However, the findings could be subject to other interpretations. The results will be shared with superintendents who participated in the survey, interviewees and task force members so that other interpretations can be considered for decision-making purposes.

Conclusion

The research has focused on the impact an influenza pandemic could have on K-12 school systems. It examined school policy issues related to long-term closure of schools. The need for planning and policies was examined to help establish a seamless response across the region between school districts and public health authorities. The research looked at responses school leaders may take to reduce the pedagogical, community health, social, and economic impacts of a pandemic. The goal of the study was to examine K-12 school planning and policy issues addressing the topic of long-term school closures due to pandemic influenza.

During an influenza pandemic school districts may be asked to close for as long as 12 weeks to reduce contact among children and stop the spread of disease. School Superintendents' perceptions and attitudes were being sought regarding school planning and policy implications associated with long-term closure of K-12 school districts. The data were gathered using three research methods: (a) electronic survey, (b) interviews,
and (c) focus group. Information and data were collected and examined from 19 school districts within two Board of Cooperative Educational Services (BOCES) supervisory districts. The research findings will be used to inform school and public health officials of the perceptions school district superintendents have regarding the potential for long-term school closure due to pandemic influenza. Recommendations will be provided to school superintendents and the regional pandemic planning task force to help improve current planning efforts. Although no one knows for sure when the next pandemic will occur, or what new influenza virus will cause a pandemic, the impact on schools could be enormous.
References


Appendix A

Enormity of the issue should a pandemic occur.

<table>
<thead>
<tr>
<th>Descriptor</th>
<th>Supervisory District</th>
<th>District Demographic</th>
</tr>
</thead>
<tbody>
<tr>
<td>District 1</td>
<td>BOCES 2</td>
<td>The smallest of the County school districts has approximately 1,100 pupils and two school buildings. Both the Elementary and High school are located in a small, historic village ten miles south of a mid-sized city. Most village pupils walk to school.</td>
</tr>
<tr>
<td>District 2</td>
<td>BOCES 1</td>
<td>The School District features 10 schools, which enjoy a statewide and national reputation for excellence. K-3 students flourish in six neighborhood schools, where they receive individualized attention in a close-knit environment. Two 4-6 schools introduce students to a larger environment, while still offering the support needed for each student to succeed. At the 7-8 levels, students enjoy a wide array of course offerings in addition to focused, integrated core courses. The High School serves the grades 9-12 population with a comprehensive program of offerings, including an Advanced Placement program. Total student population roughly 3000.</td>
</tr>
<tr>
<td>District 3</td>
<td>BOCES 1</td>
<td>The School District has a student population of approximately 9,000 students. It is the County's fastest growing and second largest suburban school district. Located 8 miles outside a mid-sized city in New York. Scenic Lake Ontario to the north and a bay to the west border the Town. It covers 52 square miles and includes four townships. The district serves a primarily residential suburban community. The district's art and music programs rank among the best in the state. Thanks to a unique partnership with the Town, school district residents enjoy some of the finest athletic and recreational facilities available anywhere including a 50-meter swimming pool, multi-purpose field house and all-weather track.</td>
</tr>
<tr>
<td>District 4</td>
<td>BOCES 2</td>
<td>The School District is 10 miles west of a mid-sized city in New York, in a &quot;rural-suburban&quot; community serving one town and parts of three other towns. The district maintains an active partnership with the Town in sharing athletic fields and school facilities. The district has a history of active community involvement with residents’ input sought for budget advisory committees, key leader search committees, planning teams and sports and extra-curricular involvement. The district’s total population is 22,234 with a student enrollment of 4,250. The annual district budget is approximately $61,000,000.</td>
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<tr>
<td>Descriptor</td>
<td>Supervisory District</td>
<td>District Demographic</td>
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<tr>
<td>District 5</td>
<td>BOCES1</td>
<td>The School District is comprised of five elementary schools (K-5), two middle schools (6-8), a ninth grade academy (9), and one high school (10-12), which includes an alternative education program. The district is situated near mid-sized in New York State, 20 minutes south of Lake Ontario. The northern portion of the district is primarily commercial, while the southern portion is rural residential with an agricultural base. The district serves nearly 6,000 students.</td>
</tr>
<tr>
<td>District 6</td>
<td>BOCES1</td>
<td>Centralized in 1946, the School District encompasses 30 square miles including portions of six towns. The district's programs, staff and curriculum are considered among the best available in schools anywhere. Over 1,150 employees including teachers, administrators, and support staff provide quality services for an enrollment of approximately 6,100 students in nine school buildings. The per pupil cost for 2007-2008 is approximately $16,433, with an operating budget of $100,240,697.</td>
</tr>
<tr>
<td>District 7</td>
<td>BOCES1</td>
<td>The school is located in a suburb of a mid-sized city in New York State. The district covers nearly 50 square miles, including sections of six towns. The district serves approximately 4,900 students in grades K-12 at its six schools.</td>
</tr>
<tr>
<td>District 8</td>
<td>BOCES2</td>
<td>The school district is mainly rural and covers 89 square miles. The student enrollment is K-6: 434 7-12: 522. There is a Jr. /Sr. high school and an elementary school.</td>
</tr>
<tr>
<td>District 9</td>
<td>BOCES1</td>
<td>The 74-square mile school district is geographically the largest in the County. In fact, it sprawls across three county lines, and encompasses nine different towns. A progressive district located in the rolling countryside of the southern portion of the County, amid rural ambiance and traditional horse country, spacious modern homes rub shoulders with well-kept Victorian town dwellings. The district population is approximately 10,500 including a stimulating mix of newly arrived professionals, small business owners, farm families, and long-time residents. There are over 2700 students. The annual district budget is approximately $37,300,000.00.</td>
</tr>
<tr>
<td>District 10</td>
<td>BOCES2</td>
<td>The School District has an enrollment of about 4,441 students. The District borders the shoreline of Lake Ontario in portions of four towns and is located 12 miles northwest of a mid-sized city in New York State. The District's five schools and transportation facility are located on a 212-acre campus. The District has completed a $57.9 million capital project, which includes new classroom construction, renovation of existing space, parking and traffic improvements as well as new athletic fields and a new Aquatic Center. A $9.5 million Maintenance and Renovation Project was approved in January 2007.</td>
</tr>
<tr>
<td>Descriptor</td>
<td>Supervisory District</td>
<td>District Demographic</td>
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<tr>
<td>District 11 BOCES 2</td>
<td>The district is located in a northwest suburb of a mid-sized city in New York State bordering Lake Ontario. As the largest suburban district in the County, and the eighth-largest district in New York State, the school district serves a residential community with strong commercial and industrial base. Currently the district provides services for approximately 14,000 students in grades PreK-12 through three high schools, a middle-high school, three middle schools, and 12 elementary schools.</td>
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<tr>
<td>District 12 BOCES 2</td>
<td>The school district serves two towns. The district covers a 26 square mile area in a community situated between Lake Ontario and the Finger Lakes. As a community next to a mid-sized city, it offers easy access to a variety of sporting events, cultural events, several colleges and universities, and employers. The district operates seven schools - five elementary buildings housing grades K-5; a middle school for grades 6-8, and a high school for grades 9-12. The district population is 35,000 including over 5,000 students. The total annual budget is $71,199,124.</td>
<td></td>
</tr>
<tr>
<td>District 13 BOCES 1</td>
<td>The district’s enrollment is just over 7,000 students. There are eight schools including: four elementary schools, two middle schools, one building for ninth graders, and one school for grades 10-12. Three schools opened in the early 1970s, three in the mid-1960s, and two in the 1950s. There have been several additions and renovations over the years, and all schools are maintained in excellent condition. All schools have computer labs, with a district student-computer ratio of 3:1. They have complete cafeteria facilities and auditoriums (sometimes combined), library/media centers, and gymnasiums. The annual budget is about $94,000,000.</td>
<td></td>
</tr>
<tr>
<td>District 14 BOCES 1</td>
<td>The School District serves a residential, easily accessible village of about 7,000, plus about 5,000 residents in parts of three towns. It is a walking district and the only district in the County to house 14 grades -- pre-kindergarten through 12th -- in one building, which opened in September 1995. The campus houses three separate libraries, computer labs, gymnasiums, and cafeterias, while all students share use of the auditorium, indoor pool, and large-group classrooms. The district has an annual school budget of about 25,000,000.00 and student enrollment near 1500.</td>
<td></td>
</tr>
<tr>
<td>Descriptor</td>
<td>Supervisory District</td>
<td>District Demographic</td>
</tr>
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<td>------------</td>
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</tr>
<tr>
<td>District 15</td>
<td>BOCES 1</td>
<td>The School District is located in New York, bordering a mid-sized city. It serves a community of 33,000 residents in the eastern portion of the Town, adjacent to the city. The town is set against a backdrop of natural beauty, with wooded hills and valleys, acres of nearby parkland and miles of water views. Bordering the town are a bay, Lake Ontario, public park and the Genesee River harbor area with its historic lighthouse and beach facilities. Residents enjoy a full spectrum of professional services, shopping, recreational and cultural offerings both in town and in the nearby city. The town is minutes away from the city with easy access to expressways and county and state highways. The district is the oldest suburban area in the County. As such, it has undergone a number of demographic changes. As the population aged, student enrollments declined from a high of over 6,000 students in the ’70’s to about 2,300 students in the mid ’80’s. Housing in the district remains affordable. This has attracted a number of younger families, which has caused a steady rebound in the student enrollment since the mid-eighties. The district has responded to continuing student growth by making more efficient use of existing space and by adding classrooms to existing schools. Continued student growth is forecast for the rest of the decade.</td>
</tr>
<tr>
<td>District 16</td>
<td>BOCES 2</td>
<td>The School District, located amidst rolling farmland and quiet residential neighborhoods, is minutes from a mid-sized city in upstate New York. The School District encompasses portions of three towns and has close to 2300 students.</td>
</tr>
<tr>
<td>District 17</td>
<td>BOCES 2</td>
<td>The school district is one of the oldest centralized districts in the state covering some 72 square miles bordering the shore of Lake Ontario. Located on the banks of the historic Erie Canal. The town is twenty miles west of a mid-sized city in New York State. The community offers the best suburban living combined with the cultural benefits of one of New York State’s finest cities. The total District Population is 30,000 with a student enrollment of 4,345. There are five schools as follows: One school for Universal Pre-K, one school for grades 2-3, one school for grades 4-5, one middle school and one high school.</td>
</tr>
<tr>
<td>District 18</td>
<td>BOCES 1</td>
<td>The School District is located in northeastern New York in a family-oriented community offering excellent public services and recreation to residents of all ages. The town includes attractive residential properties, small businesses and professional office buildings with convenient access to the neighboring City. The school district is a cosmopolitan community with people of diverse nationalities, religions and ethnic backgrounds. This district’s population is: 26,000 with a total enrollment (2005-06) of 3,675. School District Budget: approximately $54,000,000 The district has one primary school, one elementary school, one middle school and a high school.</td>
</tr>
</tbody>
</table>
The NYS Legislature created boards of Cooperative Educational Services (BOCES) in 1948 to encourage school districts to partner to take advantage of their collective purchasing power and human resources to provide students with quality, cost-effective educational opportunities. By sharing costs and resources through BOCES, local districts are able to provide improved programs and services at considerable savings to local taxpayers.

This BOCES operates more than 80 programs and services for area school districts. It is a major contributor to the recognized excellence of County schools and their ability to adapt to the rapidly changing needs of the community. The BOCES is one of 37 Boards of Cooperative Educational Services (BOCES) in New York State, located in a suburb southeast of a mid-sized upstate New York city. BOCES 1 is a cooperative extension of the 10 County suburban school districts on the east side of the county. BOCES 1 employs nearly 2000 staff members and offers more than 84 programs and services to meet the needs of over 5,500 students and community members, from newborns to senior citizens.

At this BOCES, approximately 900 full and part-time staff provides more than 74 separate services and serve more than 43,000 students in nine component school districts and serves the west side of the county.

Located in western New York along the shore of Lake Ontario, the city is the state’s third largest city. It has a city population of 219,773 and a metropolitan population of 713,968. The City School District serves approximately 34,000 students in pre-K through grade 12 and an additional 15,000 adult students in continuing education programs. It operates 39 elementary schools, 19 secondary schools, one adult/family learning center, and several alternative education programs. The ethnic makeup of the student population is 64 percent African American, 20 percent Hispanic, 14 percent white, and 2 percent Native American, Asian, and other minorities. There are 35 different languages spoken within the student population.
School District and BOCES Superintendents of Schools, Pandemic Planning and Policy Survey

Introduction: The purpose of this survey is to estimate the influence that long-term school closures (~12 weeks) will exert on school districts throughout the county in the days or years ahead. During a pandemic school districts may be asked to close for as long as 12 weeks to reduce contact among children and stop the spread of disease. Your perceptions and attitudes are sought regarding community health, pedagogical, social and economic policy implications associated with long-term closure of K-12 school districts. Although no one knows for sure when the next pandemic will occur, or what new influenza virus will cause a pandemic, the impact on schools could be enormous. Your leadership on this vital issue is urgently needed.

Please Circle your gender:

Male Female

Circle or write your ethnicity:
e.g., Caucasian, African American, Hispanic, Asian, Etc: __________

Circle your age group:

(<30-34) (35-39) (40-44) (45-49) (50-54) (55-60) (>60)

Circle the number of years experience you have as a school superintendent:

(<1) (1-2) (2-4) (4-6) (6-8) (8-10) (>10)

Circle your school district's student population: (<1000-3000) (3000-6000)

(6000-9000) (9000-12000) (12000-15000) (15000-<50000)

Directions: Please rate how strongly you agree or disagree with each of the following statements by placing a check mark in the appropriate box then respond to all questions. Return this form to: David Duford
1. A pandemic requiring school closure for long-term (~12 weeks) will occur within one (1) year.
   
<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

2. A pandemic requiring long-term school closure within five (5) years will occur.
   
<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

3. A pandemic requiring long-term school closure within ten (10) years will occur.
   
<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

4. A school board policy related to long-term school closure is necessary.
   
<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

   Why or Why not? ________________________________________________
   ____________________________________________________________
   ____________________________________________________________

5. School districts should have policies that discourage employees and students from going to work/school when they have flu-like symptoms.
   
<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>
6. When schools close long-term districts have the responsibility for feeding students who rely on free and reduced-priced meals.

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

If you agree, briefly describe how this may be accomplished? _______________________________________________________

7. Prior to a pandemic students, faculty and staff should be educated on how and why it is important to improve personal hygiene. For example, training in use of non-medical ways to reduce the spread of influenza such as covering coughs and sneezes, washing hands and staying home if you are sick.

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

If you agree, briefly describe how this may be accomplished? _______________________________________________________

8. Alternative learning strategies should be implemented to educate students while school is closed long-term.

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

If you agree, briefly describe how this may be accomplished? _______________________________________________________

9. All staff should be paid their full salary while schools are closed long-term.

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

10. Interagency collaboration to ensure unified responses between school districts, BOCES', County health department and other agencies will be necessary before, during and after a pandemic.

Strongly agree  Agree  Disagree  Strongly disagree

If you agree, briefly describe how this may be accomplished?

11. Some staff will be expected to work from home when schools close.

Strongly agree  Agree  Disagree  Strongly disagree

If you agree, briefly describe whom this may apply to.

12. Employees who will be expected to report to work when schools are closed for long periods include (circle all that apply):

A. None  B. Principals  C. Facilities staff
D. School Superintendent  E. Food service staff  F. Payroll staff
G. Administrators  H. Transportation staff  I. Others?

13. What individuals do you believe have the authority to close all Monroe County Schools for long periods, e.g., up to 12 weeks? (Circle all that apply)
A. County Health Director  B. BOCES 1 Superintendent  C. BOCES 2 Superintendent  D. Commissioner of Education  
E. County Executive  F. Governor  G. Mayor?  H. Others?

14. What communication methods might your district use to maintain contact with staff and students during long-term school closure? (Write your response)

15. Should BOCES coordinate a county-wide task force comprised of representatives from all County school districts to address the issue of pandemic planning and emergency preparedness?  
   Yes  [  ]  No  [  ]  Not Sure  [  ]

   If yes, how may this be accomplished? ________________________________

   If no, why not? __________________________________________________

16. What critical functions will need to continue when schools close for long periods? (Circle all that apply)

   A. School facilities (phones, boilers, energy management, etc)  B. Computer services/email  C. Payroll services  D. Business Services  E. Alternative Instruction  F. Transportation  G. Communications/public relations  
   H. School Administration  I. Custodial services  J. Food services  
   K. List others that come to mind  L. Mail Services  M. Other?
17. How will the critical functions listed in #16 above be implemented?

18. Please circle the school district that you represent: Not provided for confidentiality purposes

19. Please take a moment and provide any suggestions that you believe are important regarding pandemic preparedness and long-term school closure as it relates to your school district.

Thank you for completing this questionnaire.

Once the survey results are compiled we will share them with you.
Appendix C

Face-to-Face Interview Questions

1. Questions 6 - 8 of the superintendent survey were related to the potential for a pandemic event, requiring long-term school closure, occurring within 1, 5 or 10 years. The survey results indicated that 98% of the superintendents do not believe it will occur within one year, 72% do not believe it will occur in five years and 63% do not believe that it will occur in 10 years.
   a. Why do you believe that the majority of local school superintendents do not believe a pandemic will occur that causes long-term school closure within the next 10 years?

2. The survey revealed that about \( \frac{1}{2} \) of the superintendents believe that a school board policy related to long-term school closure is necessary, while the other \( \frac{1}{2} \) do not believe a board policy is necessary.
   a. Why do you believe \( \frac{1}{2} \) of the superintendents' feel a policy is needed and the other \( \frac{1}{2} \) do not?
   b. What do you advise?

3. Current CDC guidelines suggest that schools incorporate into their pandemic influenza plans a process to address students with special needs (e.g., low income students who rely on the school food service for daily meals). 100% of the superintendent survey respondents disagreed that schools have a responsibility to feed students who rely on free and reduced lunch while schools are closed for extended periods.
a. Why?

4. 63% of the superintendents surveyed agree that at least once a year students, faculty and staff should receive training on the use of non-medical ways to reduce the spread of influenza, such as covering coughs and sneezes, washing hands and staying home if you are sick. Approximately 40% of the superintendents surveyed did not believe this training is necessary.

   a. Why do you think many superintendents do believe this training is necessary and some do not?

   b. What do you advise?

5. 43% of Superintendents believe BOCES should coordinate a countywide task force to address pandemic planning, while 38% do not. 25% of superintendents are not sure whether or not BOCES should coordinate such a task force. Those superintendents who do not think BOCES should coordinate a task force believe pandemic planning for schools should be incorporated into the county’s plan.

   a. What do you advise?

   b. If you believe BOCES should continue to coordinate a task force on pandemic planning, what do you think the charge of the task force should be for the coming year?

   c. How should the task force communicate their efforts to county school superintendents?

6. 94% of respondents believed that interagency collaboration to ensure responses between school districts, BOCES, county health department and other agencies will be necessary before, during and after a pandemic.
a. What methods do you believe should be used to notify school superintendents of pandemic planning efforts conducted by outside agencies, e.g., county health department and county emergency management office?

7. If a flu pandemic were to happen tomorrow in our county what procedures would be in place for schools?
   a. What procedures are still needed?
   b. What could be done to address any identified need?

8. Is there anything else you would like to say about the implications regarding long-term school closure or pandemic planning?
The researcher will ask the following questions during individual interviews and while facilitating a focus group:

1. Tell me about your experience with the BOCES Pandemic Planning Task Force thus far.
   a. What has the task force produced thus far?
   b. What have been the successes of the group?
   c. What else could the task force have done, if anything, in the last year?

2. What do you think the charge of this task force should be in this next year?
   a. How much direction do we need from school superintendents?
   b. How can we get them to buy in and support the work of the task force?

3. In what ways, if any, can this task force be more representative of County Schools or other agencies that may be affected by school closures?
   a. Westside BOCES districts?
   b. Other Agencies?

4. If a flu pandemic were to happen tomorrow in our County what procedures would be in place for schools?
   a. What procedures are still needed?
   b. What could be done to address any identified need?

Is there anything else that you would like to say about the implications regarding long-term school closure, the task force's work, or pandemic planning?
Appendix E

Additional BOCES background information

Almost 50 years ago, New York State created Boards of Cooperative Educational Services, or BOCES, as cost-effective regional partnerships linking rural and suburban school districts. They provide districts with "the BOCES advantage." Each BOCES is a cooperative extension of its component school districts. BOCES provides services to component school districts and working together provide programs and services that individually they would not otherwise be able to offer. Shared services give school districts a major economic advantage including a greater cost savings.

BOCES supervisory districts are sub-regions of New York State created to improve the overall supervision of local schools. In 1967 legislation was passed that allowed BOCES to construct and own facilities with voter approval and to use the Dormitory Authority of the State of New York to finance the cost of facilities. As a result BOCES services began to expand, as most BOCES constructed buildings with classrooms and shops having state-of-the-art equipment. Subsequent legislation was adopted authorizing BOCES to provide data processing services for schools on a multi-BOCES basis. School districts began requesting other services such as computer-assisted instructional services, planning and staff development services, and programs for adults. BOCES services continued to grow through the 1970s and by 1980 most school districts in the state were a member of a BOCES. In the early 1980s BOCES were given the authority to operate academic programs such as summer school and alternative high school. Beginning in the mid-1980's some BOCES began to offer component school districts with environmental