



Empowering Teachers? An Exploratory Study of Personnel Practices in Virtual Charter Schools in the United States

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Abstract

Virtual charter schools have the potential to transform teacher personnel management. However, there is currently little evidence that they are doing so. This study examined how 89 teachers at two virtual charter schools perceived school personnel practices and leadership. Survey analysis indicated that teachers perceived personnel practices as resembling those of their previous 'brick and mortar' public schools. The results also showed that these teachers had a more positive view of school leaders and the school climate than they had at their previous schools. Implications are discussed in light of teacher education and personnel management literature. Additional research is recommended, as is development of the preparation of school administrators to include online, flexible, and distance learning, and related innovative leadership practices.

Keywords: virtual school; school administration; personnel management

Introduction

Virtual schooling and online distance education are seen by some as having the potential to fundamentally restructure schooling by eliminating many of the usual constraints of time and distance (Moe & Chubb, 2009). In virtual schools, teachers instruct students online through a combination of synchronous and asynchronous technologies. These enable a single instructor to teach students who may be hundreds or thousands of miles away, and enables students to take courses that are not available in their locales. Because most virtual courses are digitally recorded, students can replay episodes to improve their understanding of the content. Virtual schooling demands much of instructors, who may simultaneously teach a class, email questions to individual students to increase their attention, and keep up with backchannel chat. These recordings and online opportunities may also enable administrators to view and evaluate teacher performance in an unobtrusive manner at a time and place of their choice. In short, virtual schooling offers the potential to redesign aspects of educational administration as well as instruction. The redesign of instruction has been described by many authors. For example, Roberts (2009) and Pratt and Pullar (2013) describe practice in New Zealand, while Moe and Chubb (2009) provide a collection of case studies and empirical research on practice in the United States.

In a North American context, innovative virtual schools have been pioneered by charter schools. These charter schools are public schools, in that they are authorised by public bodies, funded by the state, and must accept all students who apply (holding a lottery to select students when there are too many applications). But charter schools also resemble private schools in that they are choice-based, with funding depending on the number of students who *choose* the school. They also resemble private schools in that they are largely autonomous and are not required to comply with most regulations regarding personnel and curriculum (Molnar et al., 2013). (Molnar et al. are based at the National Education Policy Center, a left-of-centre think tank at the University of Colorado Boulder. It is dedicated to producing and disseminating high-quality, peer-reviewed research to inform education policy discussions). The charter schools' independence from the local education authorities, and the fact that each school serves only the parents who choose that school, has led many charter schools to ignore the constraints of the traditional school models which dominate primary and secondary education in the United States, as described by Tyack and Cuban (1995) in their classic historical treatment. The concept of 'real' or 'normal schooling' can also be found in the case studies of other nations (e.g., Ng & Chan, 2008; Glenn & De Groof, 2012). Many charter schools in the United States were started by neoliberal founders who pursued a related educational reform agenda. The beginnings of these charter schools in the United States is in contrast to older schools with their own charter in Australasia, which were set up to offer correspondence study, such as New Zealand's Te Aho o Te Kura Ponamu (previously The Correspondence School) (Barbour & Pratt, 2013).

Critics believe that primary and secondary virtual schooling cannot match the face-to-face relationships and effective pedagogies of traditional schools. Further, they fear that online schools will practice selective admission policies and that, if for profit, such schools will prefer profit over student and faculty needs. Indeed, critics fear that virtual charter schools, in particular, typify reforms seeking to make schools more like commercial businesses (for commentary, see Ravitch, 2010; for social-justice-based scholarship, see works within Kovacs, 2011).

Taken as a whole, the research on student achievement in American virtual schools shows mixed to negative results (Molnar et al., 2013), though there is some evidence that virtual charter schools serve disproportionate numbers of children who have had serious academic or emotional problems in traditional public schools, and thus may have academic disadvantages that are not easily captured by statistical controls (Beck, Maranto, & Lo, 2014; Beck, Egalite, & Maranto, 2014). Little is known about the management practices in these innovative conditions. This study fills a gap by accessing the views of teachers regarding virtual management practices.

The growth of primary and secondary virtual schooling

Despite mixed academic results, primary and secondary virtual schooling continues to grow in North America. Restricting our discussion to full-time enrolment in virtual charter schools, we note that Christensen, Horn, and Johnson (2008) projected that, by 2019, 50% of all high school courses will be delivered online. Vander Ark (2012) makes similar claims. These predictions are supported by regular reports regarding the growth of primary and secondary online learning enrolments, which has been the topic of annual reports in North America (e.g., Watson, Murin, Vashaw, Gemin, & Rapp, 2012 from the Evergreen Group) and the *NMC Horizon Report* (Johnson, Adams, & Cummins, 2012) from the New Media Consortium. Here it is useful to note that the Christiansen et al. work is written from a neo-liberal business perspective and Vander Ark is a former traditional public school administrator who later worked for the Bill and Melinda Gates Foundation. The Evergreen group and the New Media Consortium are pro-high-technology groups that receive funding from a variety of sources.

Much of South Asia has yet to harness the full potential of technology for creating, constructing, capturing, managing, and sharing information and knowledge in primary and secondary education (Bacsich, Pepler, Phillips, Öström, & Reynolds, 2011). Many nations have developed policies to support virtual school development, but their access to technology is extremely limited (*Information and communication technology for education in India and South Asia*, 2010). New Zealand and Australia stand apart in their development of virtual schooling, including their nationwide schools that were established primarily with correspondence mode. In addition, in New Zealand individual courses have been offered across mainly rural 'brick and mortar' schools, taking advantage of synchronous audio and video telecommunications technology (Roberts, 2009; Anderson & Simpson, 2012). The Virtual Learning Network (VLN) in New Zealand is "... a network of school clusters and educational institutions who collaborate to provide access to a broad range of curriculum and learning opportunities for students through online learning." (*About the Virtual Learning Network Community*, 2014). Founded in the mid-1990s, the VLN included geographic clusters such as CantaNet (Wenmoth, 1996), the OtagoNet e-learning cluster (Pullar & Brennan, 2008; Pratt & Pullar, 2013), and the FarNet e-learning cluster (Barbour & Bennett, 2013; Bennett & Barbour, 2012). Recently, OtagoNet and CantaNet have combined to offer courses more widely under the name of NetNZ (<http://pol.vln.school.nz/cluster/view/21/NetNZ>). Online and synchronous conference-based instruction is also growing in other parts of the Pacific; for example, there is an initiative in the Cook Islands with expanding online access (Twining & Davis, 2015, in press).

Teacher performance: An educational lynchpin

A key part of any schooling, including virtual schooling, is teacher quality. As a range of North American studies suggest, teacher quality is the single biggest school-level variable predicting student success. For example, in a highly rigorous quantitative study, Hanushek (1992) found that, after controlling for student characteristics, a student assigned a top 25th-percentile teacher will gain a mean of a year in measured reading skill than they would from a teacher in the bottom 25th percentile. More recent studies by different researchers have tended to confirm Hanushek's work. Further evidence suggests that teacher quality is real; it does not simply reflect class composition (for a summary, see Winters, 2012). For these reasons educational policy at the federal level in the United States has emphasised improving teacher quality (Brill, 2011; Maranto & McShane, 2012). Similarly, the Ministry of Education in New Zealand has recently introduced exemplary postgraduate initial teacher education programmes to improve teacher quality and address the needs of 'priority learners' (Lind, 2013).

Internationally, public schools are increasingly empowering administrators and teachers to make site-level decisions rather than simply following directives from central authorities. This reflects increased understanding of information asymmetries; that is, those at the school level are more likely to understand what needs to be done to best serve children. (See Ng & Chan, 2008, for examples from Singapore and Hong Kong; Lo & Gu, 2008, for examples from Taiwan and South Korea; and Maranto & Shuls, 2011, for a United States case study).

Despite the push by policy makers to improve teacher quality, public schools in the United States have traditionally done little to mentor and evaluate teachers, as educational leadership scholar Popham (2013) notes. Schools have rarely used material incentives to encourage teacher improvement or to retain the best teachers (Ritter & Barnett, 2013). Virtual schools may have the potential to do better. DiPietro, Ferdig, Black, and Preston (2008) examined teacher quality through a qualitative study of 16 American Virtual School teachers in the state of Michigan. Michigan Virtual School is technically not a charter school, but like most charters it is a not-for-profit school of choice. Their results emphasise the importance of self, peer, and mentor evaluations as a best practice for primary and secondary virtual school teachers.

The importance of teacher education for teacher quality

An international review of professional development is provided as an output from the systematic review at international and national levels of fully virtual schools and colleges (VISCED research project; Davis, 2012). The differing media opportunities in virtual schooling highlight specific skills needed by teachers (e.g., synchronous vs. asynchronous technologies). For example, classes in the largely synchronous VLN in New Zealand need teachers who are trained in facilitating live student interactions (Anderson & Simpson, 2012), whereas the largely asynchronous modes of most virtual schooling in other contexts need a somewhat different skill set. The importance of on the job training and mentoring in schools is widely recognised and there have been a few programmes of preservice/initial teacher education that have included virtual schools in their field experience or practicum, but more are needed (Davis & Ferdig, 2009; Kennedy & Archambeau, 2012).

Administrators have a major influence on teachers' continuing professional development (Davis, 2012). They can also influence teacher quality through personnel practices such as support for course and teacher professional development, merit pay, tenure, and teacher evaluation. Unfortunately, administrator education programmes continue, by and large, to ignore the need to prepare administrators for virtual positions (LaFrance & Beck, 2014). Virtual charter schools have the independence to explore new modes of personnel management, but little is known of the practices in these newly emerged schools. That is the focus of this paper.

A potential solution to increasing teacher quality through innovative personnel practices: The virtual charter school

Virtual charter schools have the potential to help manage and address personnel practice problems. According to the Nation's Report Card (an annual United States government report on educational progress, a charter school is:

a publicly funded school that ... has been granted a charter exempting it from selected state or local rules and regulations. A charter school may be newly created, or it may previously have been a public or private school; it is typically governed by a group or organization (e.g., a group of educators, a corporation, or a university) under a contract or charter with the state. In return for funding and autonomy, the charter school must meet accountability standards. A school's charter is reviewed (typically every 3 to 5 years) and can be revoked if guidelines on curriculum and management are not followed or the standards are not met.
(<http://nationsreportcard.gov/glossary.asp#c>)

For the charter school to be considered virtual, they usually need to offer at least 50% of their curriculum online.

In the authors' view, virtual charter schools have the potential to eliminate localised teacher shortages by employing teachers from any location, to teach children from any location, as is currently done by networked schools in New Zealand and the nationwide Te Kura. Finally, because they are typically independent from school districts and are exempt from certain rules, virtual charters could have the freedom to invent new and more professional (and less hierarchical) models for personnel practices that influence teacher management and leadership, as has already happened in some parts of the private sector (see Moe & Chubb, 2009; Vander Ark 2012) and in government (Lind & Otenyo, 2011).

A range of evidence on personnel practices suggests that many traditional public schools treat teachers as "tall children", and do not consider how educational personnel practices can negatively influence teacher quality (see Ingersoll, 2003). By their very nature, virtual charter schools should have more leeway in reinventing personnel practices to the advantage of teachers.

But do they? This study examined the personnel practices of virtual charter schools to see if these schools have significantly changed personnel practices that may influence teaching and learning.

Theoretical orientation

In the authors' view, teacher opinions of administrators' personnel practices may be considered, integrated, and synthesised to increase effective social constructivist practices in education, drawing on the theory of social constructivism described by Vygotsky (1978). An important aspect of social constructivism for teachers and administrators in virtual charter schools is the sharing of artifacts and shared meanings. When teachers and administrators are immersed in a school culture, they are constantly learning about how to be a part of that culture on many levels. Through this process, virtual charter school leaders and teachers may create and maintain innovative personnel practices that have direct and indirect influences on teacher quality. Personnel practices are developed through a process of testing ideas, synthesising the ideas of others, and making coherent, persuasive arguments. This study explores whether virtual schools are socially constructing new practices or whether, like many brick-and-mortar schools, such processes are at times short-circuited through the implementation of personnel practices in a top-down, authoritarian context.

This need to explore transformative practices is argued because schooling that is mediated through digital technologies (including learning management systems) could free teachers to concentrate on building relationships with their students, leaving the most mundane aspects of their work—from taking roll to basic tutoring—to software (Parish, 2013; Vander Ark, 2012; Moe & Chubb, 2009). Teachers would gain the increased flexibility (such as working from home) that is afforded by technological innovations. Further, as information technology workers, teachers would have greater influence and respect within the workplace. The social-justice-oriented perspectives (e.g., works within Rofes & Stulberg, 2004) argue that because of their independence, small size, and potentially progressive orientation, charter schools (including virtual schools) have the potential to personalise and de-bureaucratise traditional hierarchical relationships between school leaders, teachers, and students. Vander Ark (2012) proposes that virtual charter schools generally have the potential to re-personalise the role of the teacher in both pedagogical and personnel practices, empowering teachers with new tools to serve children and parents.

On the other hand, as noted above, de-personalised educational bureaucracies (Ingersoll, 2003) and, increasingly, corporations (see works within Kovacs, 2011) may standardise and commodify in-school relationships. The absence of traditional collective bargaining and bureaucratic protections in the virtual sector, particularly the virtual charter sector, has the potential to disempower teachers while potentially increasing the influence of for-profit objectives and unpredictable market forces (Ravitch, 2010; works within Kovacs, 2011).

Methodology

The purpose of this study is to examine the personnel practices of virtual charter schools through the eyes of virtual charter teachers to see if these schools have significantly reinvented personnel practices that could influence teaching and learning. A survey was used to explore how teachers at two virtual charters differed in their perceptions of personnel practices at their current schools compared to their previous brick-and-mortar public schools. The study aimed to find out how the teachers perceived themselves, their administrators, their peers, and their students. We also sought to understand the meanings they gave to their actions, and the issues that concerned them.

An exploratory research design was chosen because of the relative newness of the field and the lack of research on teachers' perceptions of their virtual school leaders' personnel practices. Questions were designed for teachers who were employed at a virtual charter school. Dillman's Tailored Method Design (2011) was used to construct a survey instrument (see Appendix A). The survey questions were derived from and validated by prior research on the personnel practices of traditional public schools (Chubb & Moe, 1990) and charter schools (Maranto, Milliman, Hess, & Gresham, 2001), as well as one study comparing the two sectors (Podgursky & Ballou, 2001). The survey included Likert scale items (1–5, Strongly Disagree to Strongly Agree) in this analysis to measure teacher evaluations of a variety of personnel policies, school climate, and school leadership practices. Before they were used, the surveys were sent to two expert reviewers—a survey methodologist and an educational statistics faculty member at the authors' universities. Based on the experts' suggestions, the items were revised for consistency of terminology, specificity of questions and responses, and additional items that should be included. An online survey tool, Qualtrics, was used to administer the survey. This research was approved under the authors' university's institutional review board. Although created for use in the United States, these instruments have potential for application in other contexts with appropriate modification to reflect cultural and linguistic differences. For this study, 12 survey items were analysed.

Sample and analyses

While the expert review was being conducted, the researchers contacted administrators at all 13 virtual charter schools in a single American state, asking permission to survey their teachers. Pennsylvania was the state selected because it has 13 virtual charter schools serving 32,322 students in the primary and secondary grades (Watson et al., 2012) and virtual schooling is currently dominated by virtual charters. Two schools responded, from which the researchers created a database of teachers' names, titles, and email addresses.

Once compiled, the list of contacts comprised 140 possible respondents. Implementing Dillman's Tailored Method Design (2011) for deployment, the researchers sent out notification emails to the potential respondents. The purpose of this initial email was to refine the list by removing incorrect email addresses and to allow potential respondents to notify the researcher of others who could better describe programme plans. One week later, the survey link was sent out. The researchers followed up with three subsequent email reminders. The internet-based survey was open during June 2013.

Data received from the surveys were analysed using SPSS 20. Data were analysed using descriptive statistics and independent sample *t* test for closed items. After it was determined that there were no differences between the two schools, a one sample *t* test was used to analyse the data. Descriptive statistics were used to quantitatively describe the main features of the data sample, while the *t* test was used to estimate relationships among pertinent variables. One hundred and forty teachers were sampled to give 89 respondents, which was a useful 64% response rate. However, this paper restricts analysis to the 62 teachers who reported having previous teaching experience in traditional public schools. Table 1 provides a description of the 62 teachers in the study.

Table 1 Descriptive statistics of the teachers in this study ($N = 62$)

Category		<i>N</i>
Gender	Male	12
	Female	49
Age	21-30	23
	31-40	23
	41-50	7
	51-62	7
Race	White	59
	Hispanic	1
College major	Education	42
	Other	18
College origin	One of the 3 flagship state universities	15
	Regional/state college/university	16
	Small liberal arts college	13
	Private university	11
	Out of state	7
Teacher training	Conventional programme	55
	Alternative certification	7

Although the evidence is drawn from two virtual schools, an extremely low response rate from one of the schools limited the data that was available to investigate differences between the schools. As a result, all of the teacher responses were combined to investigate the difference between teachers' perceptions of the personnel practices of the leaders in their previous school and the leaders in their current school. However, because it is limited to teachers in two virtual schools in one state the evidence must be treated with caution. In addition, teachers' self-reported survey data is likely to be limited by participant biases such as selective memory, telescoping, attribution, and exaggeration.

Results

Results for how teachers rated their current and previous schools on personnel-related issues are reported in Table 2. The teachers' ratings of their previous schools on personnel-related issues were subtracted from how the teachers rated their current school on personnel-related issues. The resulting mean differences were used to conduct a one sample *t* test to evaluate whether the means were significantly different from those of their previous school. The first four categories (bolded in Table 2) have medium or large effect sizes worthy of further review.

Virtual school teachers in these schools appeared to trust their current head administrator better than those in their previous, brick-and-mortar school (large effect size, $r = .51$). The mean difference of .60 ($SD = 1.03$) was significantly different ($t(54) = 4.32, p = .0001$) using a one sample *t* test conducted to evaluate whether the means for "I trust my head administrator" were significantly different from that of their previous school.

The teachers also perceived that their colleagues shared their beliefs and values about the mission of the virtual school more than those at their previous school (large effect size, $r = .51$). The mean difference of $-.69$ ($SD = .90$) was significantly different, $t(54) = -5.69$, $p = .0001$.

Virtual school teachers in these two schools rated their current school better than their previous, brick-and-mortar school on how the leadership consults with teachers regarding matters that affect the school (medium effect size). The mean difference of $.67$ ($SD = 1.32$) was significantly different ($t(54) = 3.78$, $p = .0004$).

Teachers in these schools rated their current school better than their previous, brick-and-mortar school on whether their administrator had helped improve their teaching (medium effect size). The mean difference of $.47$ ($SD = 1.09$) was significantly different ($t(54) = 3.23$, $p = .002$).

Table 2 Results of one-sample t test and descriptive statistics for current virtual school vs. previous public school (items with a medium or large effect size are in bold)

Category	\bar{x}	SD	N	95% CI for mean difference	t	df
The leadership consults with teachers regarding matters that affect the school	.67	1.32	54	.32, 1.03	3.78***	54
My administrator has helped improve my teaching	.47	1.09	54	.18, .77	3.23***	54
I trust my head administrator	.60	1.03	54	.32, .88	4.32***	54
My colleagues share my beliefs and values about the mission of the school	-.69	.90	54	-.93, -.45	5.69***	54
Too many teachers use their classes as a "soap box" for their point of view	.33	1.19	54	.01, .65	2.04**	54
I look forward to each working day at this school	.49	1.12	54	.19, .79	3.25***	54
Many of the children at this school are just not capable of learning the material	.06	.97	54	-.21, .32	.42	54
Schools should not be judged on students' test score gains	-.02	.93	54	-.27, .23	-.15	54
There is nothing a teacher can do if a students' family is not supportive	-.15	.76	54	-.35, .06	-1.43	54
The personnel rules at this school are clear	.11	.46	54	-.02, .23	1.77*	54
The personnel rules at this school reward teacher effectiveness	.06	.65	54	-.12, .23	.62	54
The administration maintains an atmosphere where the rules and the authority of adults are respected.	.07	1.02	54	-.20, .35	.53	54

* $p < .10$. ** $p < .05$. *** $p < .01$

Discussion

Before discussing the implications directly, it is important to recall the context in which this study has been placed: it is an era of bold, largely unfounded promises regarding primary and secondary virtual schooling's impact on areas ranging from student performance to teacher quality. Primary and secondary virtual schooling in the United States has been proclaimed to be a way of addressing the needs of those seeking to overcome geographic constraints, and to assure the public that students anywhere can take a wide range of courses. It is also seen as providing a haven for students who are being bullied or are physically ill, accommodating the difficult

schedules of students who are themselves parents, and perhaps offering appropriate accommodation for some special education students who need more time on task (Moe & Chubb, 2009; Vander Ark, 2012). However, results from this study on how teachers' rated their current virtual school versus their previous brick-and-mortar public school fell far short of these expectations. It appears that innovations in the mode of learning and teaching might not be spreading into administration and opportunities for professional development support.

For example, although these teachers' rated their virtual charter administrators higher on (a) how the leadership consults with teachers regarding matters that affect the school, (b) how their administrators helped to improve their teaching, and (c) how much teachers trust their head administrator, they did not rate the rules as different. This appears to indicate that, although virtual charter schools hire leaders who inspire trust and are good at implementing personal interaction with teachers in their schools, these leaders either cannot or do not introduce significant innovations in personnel management rules in terms of rules that are clear and reward teacher effectiveness, nor do they provide an atmosphere where the rules and the authority of all the adults within the school are respected. This seems to confirm other research on primary and secondary personnel management that indicates that personnel management rules that influence teacher management and leadership are largely hierarchical (Moe & Chubb, 2009; Vander Ark, 2012; Lind & Otenyo, 2011). In effect, teachers appear to be experiencing administrators who lead by applying 'old-school' hierarchical rules.

Personnel management also touches on how teachers perceive their peers and their work. This study showed that teachers perceived that their virtual charter colleagues shared more of their beliefs and values about the mission of the school. They also looked forward to each working day more in their current virtual charter school than in their previous school. Empirical research shows that a positive attitude toward work is predictive of teacher self-efficacy (Skaalvik & Skaalvik, 2010; Muijs & Reynolds, 2002; Fuchs, Fuchs, & Bishop, 1992; Guskey, 1988), which has been related to teacher quality (see case study by Maranto, 2014; empirical work by Woolfolk & Hoy, 1990). It also makes sense that working with like-minded colleagues would contribute to higher teacher self-efficacy and quality (Chubb & Moe, 1990). Therefore, it appears that the increased interactions with, and trust in, their administrators, as well as ownership of their school's personnel practices, may be connected with teachers possessing higher self-efficacy and quality of instruction.

Another area of teacher perceptions not affected by their administrators' personnel practices was how the teachers viewed students. They were uniformly in agreement that all students at their current and previous schools are capable of learning, that schools should not be judged on students' test score gains, and that teachers can make a difference in students' lives even when family support is not present. There was no significant difference between the virtual and previous schools. This may suggest that current teacher education programmes provide a broad-based education that covers these topics, and that virtual charter school teachers consider themselves to be teachers foremost, integrating their virtual responsibilities with those they have as a teacher in general.

Few educators become familiar with the potential innovations that virtual charter schools may offer in the areas of teacher identification, teacher selection, initial teacher training, and ongoing professional development (Barbour, Kinsella, Wicks, & Toker, 2009). Informal interviews with the leaders of both schools indicated that, while both held an advanced educational leadership/administration degree from a traditional university, their training did not include any training or induction relating to leadership of a virtual school. This was not surprising, given LaFrance and Beck's (2014) research showing that a very small percentage of educational leadership programmes accredited by NCATE (a United States higher education organisation that offers accreditation to high quality teacher, specialist, and administrator preparation) offer

any virtual school training for pre-service administrators. It may also reflect the small number of programmes that offer field experiences for pre-service teachers in primary and secondary virtual schools (Davis & Ferdig, 2009; Kennedy & Archambeaut, 2012).

Conclusions and recommendations

In summary, the findings in this study that indicate teachers with experience in both virtual charter and traditional public schools tend to rate the virtual charters more positively on empowering and respecting teachers, and on developing a student-centred school culture. There is potential for more innovative personal practices, but little evidence of social constructivist practices were found. The limitations of the sample suggest a need for caution in generalising from these results and a need for further research.

Based on this exploratory research, we recommend extensive research into the personnel practices of virtual school leaders and their impact on and perceptions by teachers. Additionally, we recommend that administrator education programmes implement innovative strategies to cover virtual schooling such as those described for initial and preservice teacher education (Compton, Davis, & Mackey, 2009) and ongoing professional development (Davis, 2012), possibly drawing upon the Virtual Professional Learning and Development programme in New Zealand (Owen, 2011; 2012). Programmes could consider drawing from advanced programmes like University of Kentucky Center for Advanced Studies in Technology Leadership in Education (<http://schooltechleadership.org/>) that include the growing primary and secondary virtual school population and the need to educate future administrators for these schools. They are also recommended to consider drawing from the work of Smith (2009), who indicated the benefits of teachers becoming online learners before they become online instructors; and from the work of Anderson and Simpson (2012), who advocate for online teacher training tailored to specific regional and national contexts. Online learning and teaching experience for pre-service administrators could surely also aid their preparation to lead a virtual school.

Ferdig, Cavanaugh, DiPietro, Black, and Dawson (2009) explored best practices in virtual teaching and this research is also recommended for administrators. An attempt to synthesise the best practices and standards for leading virtual schools could help pre-service administrator education programmes to better prepare their students to lead virtual schools. Finally, examination of experimental teacher education models focused on the preparation and professional development of virtual school teachers (e.g., Dawson, Dana, Wolkenhauer, & Krell, 2013; Kennedy, Cavanaugh, & Dawson, 2013) is also recommended to support the development of a professional development programme to better prepare virtual school leaders.

As noted in the introduction, virtual schooling offers the potential to redesign aspects of educational administration and instruction in ways that can empower teachers and their leaders. Virtual schooling demands much of teachers, who may simultaneously teach a class, email questions to individual students to increase their attention, and keep up with backchannel chat. Recordings and other online opportunities enable administrators to view and evaluate teacher performance in an unobtrusive manner at a time and place of their choice. These and other innovations also extend to administrator preparation. This exploratory study opens up an exciting new area of personnel research.

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Appendix A: Teachers at Cyber Charter Schools Survey

Q2 Your College major? [Select all that apply.] **(RECODED INTO Q37-48)**

- Economics (1)
- Education (2)
- History (3)
- Philosophy (4)
- Political Science (5)
- Pre-Law (6)
- Psychology (7)
- Sociology (8)
- Computer Science/Information Technology (9)
- Math/Physics (10)
- Biology/Life Sciences (11)
- OTHER (write in) (12) _____

Q3 Including the current school year, for how long have you been a teacher?

	Years					
	1 or less (1)	More than 1 but less than 3 (2)	From 3 to 6 (3)	More than 6 but less than 10 (4)	10 to 15 (5)	Over 15 (6)
at this school (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
total as on- line teacher (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
total years teaching (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q4 Did you receive your teacher training through:

- conventional School of Education at a college or university (1)
- alternative certification program (2)

Q5 Where did you earn your bachelor's degree?

- one of the three flagship state universities (Temple, Penn State – University Park, University of Pittsburgh) (1)
- regional state college/university (2)
- small liberal arts college (3)
- private university (4)
- out of state (write in) (5) _____

Q6 Teachers at my school can earn tenure.

- yes (1)
- no (2)

Answer If Teachers at my school can earn tenure. yes Is Selected

Q7 I have earned tenure at my current school.

- yes (1)
- no (2)

Answer If Teachers at my school can earn tenure. yes Is Selected

Q8 How long does it take to earn tenure on average?

. (1)

Q9 Teachers at my school can earn merit pay.

- yes (1)
- no (2)

Answer If Teachers at my school can earn merit pay. yes Is Selected

Q10 I have earned merit pay awards at my current school.

- yes (1)
- no (2)

Answer If Teachers at my school can earn merit pay. yes Is Selected

Q11 What was the amount of merit pay, as a percentage of your pay?

- < 5% (1)
- 5-10% (2)
- 10-20% (3)
- >20% (4)

Q12 Rate the following criteria used to determine regular pay at your school
(1 = Unimportant to 5 = Very important).

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)
graduate degrees (1)	<input type="radio"/>				
student evaluations (2)	<input type="radio"/>				
experience/longevity at this school (3)	<input type="radio"/>				
principal evaluations (4)	<input type="radio"/>				
student learning outcomes (5)	<input type="radio"/>				
availability of other employment options (6)	<input type="radio"/>				
non-work related factors (7)	<input type="radio"/>				
certification by National Board for Professional Teaching Standards (8)	<input type="radio"/>				
certification for online teaching (i.e. iNACOL, Quality Matters, FLVS, etc.) (9)	<input type="radio"/>				
experience teaching in a cyber school (10)	<input type="radio"/>				
teamwork (11)	<input type="radio"/>				
non-work related factors (12)	<input type="radio"/>				

Answer If Teachers at my school can earn tenure. yes Is Selected

Q13 Rate the following criteria used to determine tenure at your school
(1 = Unimportant to 5 = Very important)

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)
graduate degrees (1)	<input type="radio"/>				
student evaluations (2)	<input type="radio"/>				
experience/longevity at this school (3)	<input type="radio"/>				
principal evaluations (4)	<input type="radio"/>				
student learning outcomes (5)	<input type="radio"/>				
availability of other employment options (6)	<input type="radio"/>				
non-work related factors (7)	<input type="radio"/>				
certification by National Board for Professional Teaching Standards (8)	<input type="radio"/>				
certification for online teaching (i.e. iNACOL, Quality Matters, FLVS, etc.) (9)	<input type="radio"/>				
experience teaching in a cyber school (10)	<input type="radio"/>				
teamwork (11)	<input type="radio"/>				
non-work related factors (12)	<input type="radio"/>				

Q15 What percentage of your teaching day are you:

_____ Centrally located in one location during work time. (1)

_____ Geographically dispersed during work time (i.e. work at home). (2)

Q16 Do your administrators monitor teachers' online courses:

- in real time (1)
- by recording (2)
- both (3)
- my administrators do not monitor my online courses (4)

Q17 How often do your administrators monitor your teaching?

- more than weekly (1)
- weekly (2)
- monthly (3)
- quarterly (4)
- annually (5)
- rarely or never (6)

Q18 Administrators who monitor teaching provide:

- immediate, detailed feedback (1)
- occasional feedback (2)
- annual or semi-annual feedback (3)
- little or no feedback (4)

Q19 Is your supervisor in a different building location from where you usually work?

- yes (1)
- no (2)

Q20 What technologies do you use to interact with your supervisor? [check all that apply]
(RECODED INTO Q49-56)

- email (1)
- telephone (2)
- video chat (e.g. Google Hangout, SKYPE, etc.) (3)
- synchronous classrooms (e.g. Adobe Connect, Blackboard, etc.) (4)
- blog (5)
- Twitter (6)
- Facebook (7)
- other (8) _____

Q21 Have you taught elsewhere?

- yes (1)
- no (2)

Answer If Have you taught elsewhere? yes Is Selected

Q22 Was it at a: (check all that apply) **(RECODED INTO Q57-61)**

- traditional, brick and mortar public school (1)
- online cyber school (2)
- brick and mortar charter (3)
- OTHER (4) _____
- online private school (5)
- brick and mortar private school (6)

Q24 Please answer the following questions for your school, but rate other schools only if you have taught elsewhere.

SD = Strongly Disagree

D = Disagree

N = Neither Agree Nor Disagree

A = Agree

SA = Strongly Agree

	Current School					Other Schools				
	SD (1)	D (2)	N (3)	A (4)	SA (5)	SD (1)	D (2)	N (3)	A (4)	SA (5)
The leadership consults with teachers regarding matters that affect the school. (1)	<input type="radio"/>									
My administrator has helped improve my teaching. (2)	<input type="radio"/>									
My colleagues share my beliefs and values about the mission of the school. (3)	<input type="radio"/>									
Too many teachers use their classes as a "soap box" for their point of view. (4)	<input type="radio"/>									
I trust my head administrator. (5)	<input type="radio"/>									
I look forward to each working day at this school. (6)	<input type="radio"/>									
The personnel rules at this school are clear. (7)	<input type="radio"/>									
The personnel rules at this school reward teacher effectiveness. (8)	<input type="radio"/>									

Many of the children at this school are just not capable of learning the material. (9)	<input type="radio"/>									
Schools should not be judged on students' test score gains. (10)	<input type="radio"/>									
There is nothing a teacher can do if the family is not supportive. (11)	<input type="radio"/>									
The administration maintains an atmosphere where the rules and the authority of adults are respected. (12)	<input type="radio"/>									

Q25 Are you considering leaving your school?

- yes (1)
- no (2)

Answer If Are you considering leaving your school? yes Is Selected

Q26 Please list your reasons for considering leaving.

Q27 Name of the school you work at:

Q35 Demographics

Q28 Gender:

- male (1)
- female (2)

Q29 Age:

Q30 Do you consider yourself:

- Asian/Pacific Islander (1)
- Black or African American (2)
- Hispanic (3)
- White (4)
- Other (5) _____

Q31 Are you a member of the American Federation of Teachers, National Education Association, or an affiliated organization?

- yes (1)
- no (2)

Q32 Generally speaking, do you usually think of yourself as:

- strong Republican (1)
- Republican (2)
- moderate Republican (3)

- Independent (4)
- moderate Democrat (5)
- Democrat (6)
- strong Democrat (7)
- Libertarian (8)
- Socialist (9)
- Other (10) _____

Q33 What is your religious practice?

- Atheist (1)
- Agnostic (2)
- Protestant (3)
- Catholic (4)
- Buddhist (5)
- Hindu (6)
- Muslim (7)
- Other (8) _____

Q34 Religious beliefs

	strongly disagree (1)	disagree (2)	neither agree nor disagree (3)	agree (4)	strongly agree (5)
My religious convictions guide my life. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
School encourages me to practice faith. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
School gives opportunities to express faith. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I agree with the major teachings of my religion. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

