



# Using technology to enhance collaborative learning

Collaborative  
learning

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585

## Abstract

**Purpose** – The purpose of this research project is to explore the use of technology in enhancing and creating opportunities for collaborative learning by connecting prospective school leaders and practicing principals from multiple settings.

**Design/methodology/approach** – This was a research project in which an internet-based network system was created in “LiveText” (software) for cross-collaborative learning among intern prospective school leaders, practicing school administrators from different school settings and university faculty. Data were gathered through focus group discussions, surveys, reflections and the interns’ portfolios.

**Findings** – Responses from participants indicated that the technology used in this project: created a forum for prospective school leaders to network and be involved in experiences spanning multiple settings and multiple mentors; enabled the participants to better understand issues of urban/inner-city, suburban, rural, elementary, middle, and high schools; created opportunities for interns to assess their own knowledge, skills, and dispositions based on Interstate School Leaders Licensure Consortium (ISLLC) standards; and enabled the development of web-based electronic portfolios through “LiveText.”

**Originality/value** – The project demonstrated how technology can be used as a programmatic tool to enhance collaborative learning by: first, countering logistical and structural challenges of organizing multiple setting leadership experiences for aspiring school leaders; and second, dismantling barriers that separate prospective school leaders from diverse practicing school leaders and schools and, thereby, building both strong and weak ties.

**Keywords** Educational administration, Mentoring

**Paper type** Research paper

## Introduction

As society has changed, schools have become increasingly diverse in population and social order. The effects of changes occurring in society are manifested in schools. And just as society and schools have changed, the role of the school leader has also changed from that of being a school manager to that of being a catalyst for success of all students (Wilmore, 2002). As these changes continue, the teaching force and school leaders are predominantly female, white, and middle class (Browne-Ferrigno and Muth, 2004; Hodgkinson, 2002). These phenomena have created the dilemma of how Educational Administration programs can induct prospective school leaders in authentic administrative experiences and mentoring programs that are representative of the diversity in schools and society.

Some practical and successful ways to induct prospective school leaders have been researched and discussed in Educational Administration literature. Browne-Ferrigno and Muth (2004) found that mentoring through clinical practice clarified issues related to role socialization, professional development, and leadership capacity building. Hite and Matthews (2005) discussed professional administrative networks as representing



one of the critical dimensions for effective organizational leadership and learning. Arterbury *et al.* (2005) found that networking was the most highly rated among contextual elements in professional development for school leaders. However, research on the issue of diverse learning experiences that would prepare prospective school leaders for the changing population is limited.

The purpose of this research project was to explore the use of technology in enhancing and creating opportunities for collaborative learning by connecting prospective school leaders and practicing principals from multiple settings. This project was a program initiative that developed and implemented a web-based network for diverse collaborative learning among prospective school leaders engaged in "leadership experience" (internship), diverse practicing principals, and university Educational Administration faculty. The term "leadership experience" was used in this project to signify the use of leadership development approach, where the aspiring school leader assumes school leadership role (Martin *et al.*, 2005). Leadership experience in the institution of study is a one-year standards-based clinical practice through which aspiring school leaders are immersed into leadership roles in order to develop and demonstrate knowledge, skills, and dispositions required to lead in schools. The leadership experiences were guided by the Interstate School Leaders Licensure Consortium (ISLLC) standards.

The project created a network of mentors that would expand the diversity and range of interactions and experiences of prospective school leaders during the internship. Although principal preparation programs are well-positioned to provide candidates with diverse mentoring and network advantages through leadership experiences in multiple and diverse settings, this rarely happens. The importance of internship is implied in the fact that internship (leadership experiences) has become part of both the Educational Leadership Constituent Council (ELCC) standards and Interstate School Leaders Licensure Consortium (ISLLC) standards. The internship standard requires that school leaders in training engage in "sustained, standards based experiences in real settings that are planned and guided cooperatively by university and school district personnel" (Wilmore, 2002, p. 103). National discussions of this standard has led to the identification of the ideal internship as one that is carried out in multiple school and community settings, and/or in multiple age level groups of students over a sustained period of time (at least six months) (Lugg and Shoho, 2002; Martin *et al.*, 2005; Wilmore, 2002; Young *et al.*, 2005). During this period, prospective school leaders are expected to receive rich contextual leadership experiences and interactions in multiple, real, and diverse settings. It is assumed that these experiences and interactions would better prepare prospective school leaders for their roles as leaders in any school and community setting upon completing their program of studies.

However, at this university as in many universities, the critical design element of internship is often limited in providing opportunities for diverse experiences and interactions in multiple settings. The implementation of an internship that spans multiple settings and mentors is a challenge for preparation programs as it requires them to find new ways of offering the internship. Currently, the leadership experience for interns is mostly part-time and limited to one school setting with one mentor. Interns do not typically reach beyond their local areas or home school for leadership experiences. Wilmore (2002) indicated that efforts to create clinical experiences that

provide more diverse components from multiple networks and contexts are both logistical and structural challenges for many universities and schools. These challenges if not acted upon, may adversely impact the ability of aspiring school leaders to achieve maximum growth opportunities in their school leadership internship and practice.

### Theoretical framework

From the perspective of network theory, administrative networks in educational organizations are critical for effective leadership as they provide the conduits and bridges through which administrators can access and provide essential resources. Networks are defined as the aggregate of relationships among people (Arterbury *et al.*, 2005). These relationships include both strong (egocentric) and weak ties (Granovetter, 1973). Strong ties denote close relationships and frequent interaction between family members, close friends, or colleagues. Strong ties provide a more effective structure for communication because individuals share common meaning, mutual sub-cultural language, and may be alike in personal and social characteristics (Rogers, 1995). However, strong ties inhibit infusion of new or different perspectives or ideas. To counter the weakness of strong ties, Granovetter (1983) developed the theory of weak ties.

In his classic work, “The strength of weak ties,” Granovetter (1983) claimed that “our acquaintances and friends of friends are less likely to be socially involved with one another than are our close friends” and are therefore sources of new information (p. 201). The significance of “weak ties” is that they are the avenues through which new ideas or innovations that are socially remote may reach an individual. Weak ties bring new knowledge, perspectives, and opportunities for mobility. Granovetter concluded that while the strength of weak ties is in networks that convey new information, the strength of strong ties is in networks that convey interpersonal influence. In the context of prospective principals, strong ties (networks within the school) increase the likelihood of access to information and resources within the school while, weak ties (principals and teachers from outside their schools) increase the likelihood of access to new information and resources from external sources.

### Project description

This project explored the use of technology as a programmatic tool to enhance collaborative learning.

The objectives of the project were:

- to provide prospective school administrators access to diverse practicing principals and schools (weak ties);
- to use technology to expand the range of interactions and experiences of aspiring school administrators;
- to use Livetext to develop web-based electronic portfolios that may be viewed by multiple supervisors for feedback; and
- to create opportunities for aspiring school leaders to enhance and assess their own knowledge, skills, and dispositions based on ISLLC standards.

The participants in this project were 13 intern prospective school leaders in the Educational Administration program. The interns worked with their school principals, and eight other volunteer principals from rural, urban and suburban schools. All of the 13 interns received their leadership experiences in suburban schools of a Midwestern state, USA.

In the project, an Internet-based network system was created in “LiveText” for cross-collaboration among intern prospective school leaders, practicing school administrators from different school settings, and university faculty. “LiveText” is web-based software existing in the university’s college of education with the capability of hosting web-based resources, gathering, and storing data. “LiveText” also has the capacity for organizing and storing documents for collaboration, creating projects and links, and the construction of web-based electronic portfolios amongst other things. In this project, “LiveText” was used to:

- develop and share online materials;
- securely host the interactive activities and portfolios;
- host web-based surveys, assessments, and evaluation tools for the project; and
- provide immediate feedback.

Included in “LiveText” were names and contacts of volunteer principals in the region from different school settings (rural, urban, suburban, high, middle, and elementary schools). These principals were available to the intern prospective school leaders via e-mail, phone, or personal visit. The volunteer principals were encouraged to post issues or activities they were engaged in at their respective schools that would interest the attention and learning of aspiring school leaders. They were also requested to post innovative ideas and/or programs currently going on in their respective schools. Aspiring school leaders would pick up some of these ideas to either utilize in their leadership experience and/or to enhance their learning. Prospective school leaders engaged the diverse group of practicing principals by posing questions or issues for which they needed help, further understanding, or different perspectives.

As the intern leaders constructed their professional portfolios on-line in “LiveText,” volunteer principals provided bi-weekly feed back to the interns. Also, over this period of leadership experience, the interns were engaged in three focus group discussions (one at the beginning, one mid-way through the process, and one at the end). The discussions were focused on the processes leading to the leadership experience, the impact of “LiveText,” the interactions with other principals involved in the project, and the development of electronic portfolios in “LiveText.” They also responded to the following surveys:

- The self assessment of Interstate School Leaders Licensure Consortium (ISLLC) – this is a Likert Scale self-report survey designed to measure knowledge, performance skills and dispositions in each of the ISLLC standards.
- Use of “LiveText” Questionnaire – the questionnaire was designed to solicit information on the advantages and challenges of using this technology to develop and share portfolios with other principals; to receive feedback and network with other principals besides their supervisor; and to respond to the surveys.

### Research findings from the project

The findings of this project were based on the surveys, focus group discussions, and the reflections in the interns' portfolios. Participants reported that participation in the project enabled them to reach beyond familiar contexts and gain exposure and broad-based experiences across multiple settings. This was possible because of tele-mentoring (telephone), e-mentoring (e-mails), observations, and shadowing principals in schools that were different from their home school either in population or grade level. "LiveText" met and enhanced other learning needs. It enabled the participants to share experiences and information in the process of formulating their portfolios with each other, their principal, and other principals on-line. Through "LiveText," the participants received immediate and continuous feedback. Concurrently, aspiring school leaders indicated that they benefited by engaging in discussions with other practicing school leaders on topics that they would not discuss with their own principals. Responses from participants indicated that the technology used in this project:

- created a forum for the prospective school leaders to network and be involved in experiences spanning multiple settings and multiple mentors;
- enabled the participants to better understand issues of urban/inner-city, suburban, rural, elementary, middle, and high schools;
- created opportunities to assess their own knowledge, skills, and dispositions based on Interstate School Leaders Licensure Consortium (ISLLC) standards; and
- enabled the development of web-based electronic portfolios.

#### *A forum for prospective school leaders to network with multiple mentors*

This project created a forum for aspiring school leaders to network with mentors and to be involved in experiences spanning multiple settings and multiple mentors. Participants in this project were able to engage in purposeful reflective interactions with multiple principals in the network through phone calls, e-mail, and subsequently visits and shadowing in school settings different from their schools. This process created mutual advancement of professional practice and learning for both aspiring and practicing school leaders as they shared knowledge and experiences. Experiences based on visits to other schools indicated that there is much to learn through weak ties. For example, this prospective leader explained her experience:

I was amazed at the ability of these teachers to draw such a large number of students into this program. They had amazing facilities, dynamic personalities, and an organized recruiting system. Though I came into the site visit with much skepticism, I left feeling that this program could work and be quite effective if put in the hands of the right teachers at our school.

Another said, "It was interesting to see the background on how the vision was derived and implemented. I returned from the visit and gave my principal a detailed description of what I saw and what inspired me."

Experiences in other settings were so profound, motivating some prospective leaders to apply their new found knowledge immediately. For example, one intern wrote:

In April, I met with a woman named Grace Tarino who runs the First Year Teacher Program at Manamba High School. We swapped ideas and talked about her achievements and frustrations with starting up a program. Our discussion gave me the confidence to ask our assistant principal for the opportunity to lead the First Year Teacher Program at Uchumi High School for the 2006-2007 school year.

*Opportunities for prospective leaders to better understand issues of urban/inner-city, suburban, rural, elementary, middle, and high schools*

Prospective school leaders in this project regularly engaged in discourse about schools and school leadership with a variety of practicing school leaders. The topics of discussion included school leadership issues, especially those that pertained to different school settings; unit school districts; differences in leadership among elementary, middle, and high schools; differences in leadership among rural, suburban and urban schools; negotiating contracts, school boards, referendum, day to day responsibilities of principals; bi-lingual and special education; how to run a meeting, discipline and scheduling at different levels; professional development for school leaders and dealing with conflict among adults; and stress on the job, and accountability at different levels. Prospective school leaders were able to focus on the various topics of interest that they would not typically engage in with their principal for a variety of reasons. Reasons given included the fact that the issues did not exist in their school; the setting is different; fear of victimization; or a lack of interest in the topic by the home school principal.

*Participants assessed their own knowledge, skills, and dispositions based on Interstate School Leaders Licensure Consortium (ISLLC) standards*

Prospective school leaders in this study responded to a Likert Scale survey based on ISLLC standards (Martin *et al.*, 2005). The purpose of the survey was for the interns to self-assess their competency levels in knowledge, skills and dispositions based on the six ISLLC standards. Descriptive analyses indicated that on the 1-4 point Likert scale, 4 representing high levels of competencies, these aspiring school leaders had mean scores of 3.23 (standard 1-shared vision), 3.41 (standard 2-school culture and instructional program), 3.05 (standard 3-management and operations), 3.01 (standard 4-diversity, family, and community), 3.53 (standard 5-ethics and integrity), 3.26 (standard 6-political, social, economic, legal and cultural context), and 3.87 (dispositions) by the end of their internship. Their average competency levels were lowest in standard 4 and highest in standard 5. Their score in dispositions which was higher than all the scores in the six standards indicated that they had developed high levels of competency in the values, commitments and professional ethics that influence behaviors toward students, families, colleagues, and communities (NCATE, 2002).

*Web-based electronic portfolios through "LiveText"*

Although all the aspiring leaders in the study were familiar with the use of technology, none had developed a web-based portfolio. A portfolio template was provided with the assistance of a computer science graduate student. Despite initial resistance tendencies, the participants developed web-based electronic portfolios using "LiveText" that were accessible to multiple practicing principals and university professor on-line. The students received continuous and immediate feed back from

practicing principals and university faculty. The process of multiple input and feedback enabled the interns to develop portfolios that demonstrated their knowledge, skills and dispositions from multiple perspectives.

The advantages of the web-based electronic portfolios as stipulated by the prospective school leaders included; access anywhere as long as there was a computer and internet connection, opportunity to have the portfolio evaluated by more individuals, user friendly in attaching documents/pictures/video clips or typing, updating technology skills, ease in organizing work, flexibility of the application (LiveText), being able to update portfolio at anytime, being able to view other people's portfolio, not having to use paper every time I need to make changes. Disadvantages included the steep learning curve for some; not being able to read comments sometimes; and varying opinions on the same subject.

### Conclusion

The project enhanced and created opportunities for collaborative learning among prospective school leaders and practicing school leaders beyond the traditional internship. The technology helped create more weak ties and, thus, new information from a variety of sources that would otherwise be difficult to access. The new networks emerging from the internship experience were found to be sources for new knowledge for both aspiring and practicing school leaders. This project demonstrated how technology may be used as a programmatic to enhance collaborative learning by, firstly, countering the logistical and structural challenges of organizing multiple setting leadership experiences for aspiring school leaders; and secondly, dismantling the barriers that separate prospective school leaders from diverse practicing school leaders and schools, and thereby building both strong and weak ties.

### References

- Arterbury, E., Buck, J. and Crawford, C. (2005), "Professional development for superintendents: a description of essential features and impact on job performance", *NCPEA Educational Leadership Review*, Vol. 6 No. 1, pp. 27-32.
- Browne-Ferrigno, T. and Muth, R. (2004), "Leadership mentoring in clinical practice: role socialization, professional development, and capacity building", *Educational Administration Quarterly*, Vol. 40 No. 4, pp. 468-94.
- Granovetter, M. (1973), "The strength of weak ties", *American Journal of Sociology*, Vol. 78 No. 6, pp. 1360-80.
- Granovetter, M. (1983), "The micro-structure of school desegregation", in Prager, J., Longshore, D. and Seeman, M. (Eds), *School Desegregation Research: New Directions in Situational Analysis*, Plenum, New York, NY.
- Hite, J.M. and Matthews, L.J. (2005), "Assessing impact of leadership preparation programs: an analysis of the effects of student cohorts and administrative internships on the development of candidates' administrative networks", *NCPEA Educational Leadership Review*, Vol. 6 No. 1, pp. 15-26.
- Hodgkinson, H. (2002), "Demographics and teacher education – an overview", *Journal of Teacher Education*, Vol. 53 No. 2, pp. 102-5.
- Lugg, C. and Shoho, A. (2002), "UCEA Review visits the work of the National Commission for the Advancement of Excellence in Educational Administration", *UCEA Review*, Vol. XLIII No. 2, pp. 1-2.

Martin, G.E., Wright, W.F., Danzig, A.B., Flanary, R.A. and Brown, F. (2005), *School Leader Internship: Developing, Monitoring, and Your Leadership Experience*, 2nd ed., Eye on Education, Larchmont, NY.

NCATE (2002), *Professional Standards for the Accreditation of Schools, Colleges, and Departments of Education*, 2nd ed., National Council for Accreditation of Teacher Education, University of Virginia, Charlottesville, VA.

Rogers, E.M. (1995), *Diffusion of Innovations*, 4th ed., The Free Press, New York, NY.

Wilmore, L.E. (2002), *Principal Leadership: Applying the new Educational Leadership Constituent Council (ELCC) Standards*, Corwin Press, Thousand Oaks, CA.

Young, M.D., Crow, G., Orr, M.T., Ogawa, R. and Creighton, T. (2005), "An educative look at 'educating school leaders'", *UCEA Review*, Vol. XLVI No. 2, pp. 1-4.

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