

A Case Study Preparing Online Instructors Seven to Ten Years Later

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With the continued growth of K-12 online learning, there is a need to train online instructors and understand professional development (PD) experiences that impact their success when teaching in blended and online environments. This mixed-methods case study was conducted to gain insights on the long term impacts of the Kamehameha Schools Online Instructor Training Institute (OITI), seven to ten years later, of four teachers who became online instructors.

Keywords: e-learning, professional development, online instructor, case study

Introduction

Kamehameha Schools (KS) is a private, pre-K to 12 institution, founded by the legacy of Princess Bernice Pauahi Bishop, with a mission to “create educational opportunities in perpetuity to improve the capability and well-being of people of Hawaiian ancestry” (KS, 2015, p. 1). In 2004, Kamehameha Schools Distance Learning (KSDL) launched the Online Instructor Training Institute (OITI), a one year-long PD opportunity that was offered to increase the number of teachers working with Hawaiian learners to be familiarized and trained in distance learning (DL) pedagogy and technologies. KSDL collaborated with the University of Hawai‘i’s Educational Technology Department to offer college-credit courses that were adapted to meet the needs of K-12 in-service teachers interested in learning more about technology integration and becoming online instructors. After offering three OITI cohorts in the years 2004-2007, 32 teachers were serviced with a 72% completion rate (23 teachers), with the preliminary evaluation indicating on average knowledge increase in all topics covered (Hirata, 2007). Informal conversations throughout the years later with various graduates of the OITI program led the researcher to believe they continued to integrate the concepts and skills they had gained from the OITI within both their face-to-face classroom and online environments. Although the OITI no longer existed, there was a desire to discover and learn more about how graduates of the program were doing, including how they were applying the skills they have learned to impact student learning. The purpose of this case study was to provide insight on potential long term impacts of the OITI to improve K-12 online PD training programs for teachers. A mixed-methods case study approach was implemented referencing the Technological Pedagogical Content Knowledge (TPACK) framework (Mishra & Koehler, 2006) and Thomas Guskey’s model for evaluating professional development (Guskey, 2000) as theory bases.

Research Questions

There were several research questions that guided this case study:

1. How does the OITI professional development experience continue to impact teachers and their integration of technology into their curriculum in a blended environment?
2. How does the OITI professional development experience continue to impact teachers implementing distance learning instructional strategies in an online environment?
3. How do teachers who completed the OITI perceive themselves impacting their students as a result of the professional development training?
4. What is the impact of the professional development experience as perceived by teachers who completed the OITI and are now online instructors?

Review of Literature

Based upon international and national trends, distance learning has grown over the years. Internationally, many countries such as Australia, China, Finland, Hong Kong, India, New Zealand, Singapore, Turkey and the United Kingdom have engaged in online and blended learning strategies and initiatives at the national or government level (Barbour, et al., 2011). Nationally, numerous publications indicate growth in K-12 online learning. In 2006, Michigan was the first state to require students to experience online learning for high school graduation (Keeping Pace, 2015). Clayton Christensen, Harvard Business Professor and author, made a bold predication in his popular book, *Disrupting Class*, 50% of all U.S. high school classes will be delivered online by 2019 (Christensen, Horn, & Johnson, 2009). In 2012, Project Tomorrow, an organization that conducts national educational research projects focused on preparing students for tomorrow's society, published a five-year review of online learning growth. The report indicated continual widespread growth in online learning, with 69% of administrators and 50% of middle school students supporting online course requirements and one-third of parents supporting increased investments in online learning (Project Tomorrow, 2012). Furthermore, in the most recent Keeping Pace publication (Watson, Pape, Murin, Gemin & Vashaw, 2014), 26 states have virtual schools serving an estimated 741,000 K-12 online course enrollments. As of August 2014, five states (Alabama, Arkansas, Florida, Michigan and Virginia) currently require students to complete an online course to graduate, with North Carolina also considering this requirement (Watson, et. al., 2014).

As K-12 online learning continues to expand (iNACOL, 2013), the demand for high quality online teachers increased along with the need for quality PD and training to ensure a solid teaching force for online learning (Davis & Rose, 2007; U.S. D.O.E., 2010). According to many authors, "professional development for K-12 online teachers is important because compared to face-to-face instruction, effective online teaching requires a different set of skills and strategies" (Veletsianos, Doering & Henrickson, 2012, p. 46). In addition to subject matter licensure, online teachers need to be capable in applying appropriate pedagogical strategies to communicate, facilitate, and engage with diverse students learning at a distance (NEA, 2012). Online teachers also need to be comfortable using a wide variety of online instructional technologies, while remaining effective in communicating and interacting with students in online environments (Natale, 2011).

Various standards-based competencies and educational frameworks have been useful in the development of online instructor training programs (Rice, 2012): National Education Association Guide to Teaching Online Courses (NEA, n.d.), International Society for Technology in Education Teacher Standards (ISTE, 2008), Southern Regional Education Board Guidelines for Professional Development of Online Teachers (SREB, 2009), Partnership for 21st Century Skills Learning Framework (P21, 2011), and International Association for K-12 Online Learning Standards (iNACOL, 2011).

With so many required skills of online teachers alongside continued growth of online learning, it is surprising there are only a few teacher education programs in the U.S. offering training for online teaching (Patrick & Dawley, 2010). Venues for training new in-service online teachers include K-12 virtual schools, several university programs, or organizations with a focus in online learning. Despite these venues, there are only 2% of teacher education programs preparing online teachers (Kennedy, Tysinger, Bailey & LaFrance, 2013). According to Dr. Leanna Archambault (2011, p. 74), a respected K-12 online learning researcher, "Little is known about the population of educators who teach online, especially with relation to their teacher preparation." To date, there are limited amount of studies focused specifically on teachers who teach online (Dawley, Rice & Hinck, 2010; Kennedy & Archambault, 2012; Kennedy, Tysinger, Bailey & LaFrance, 2013). Experts indicate the greatest need that is impacting the growth and depth of knowledge in K-12 online learning is the lack of scholars researching this focus (Barbour, Archambault, & DiPietro, 2013).

Methods

A mixed-methods case study approach was implemented to integrate the strengths of both quantitative and qualitative data to provide an "in-depth look at context, processes, and interactions" (Lodico, Spaulding, &

Voegtle, 2006, p. 282) of the four teachers participating in the case study. The criteria used to select potential participants were based upon the following: 1) successful completion of the OITI, 2) currently involved with development or facilitation of online curriculum, and 3) willingness to participate in the study to completion. The study began with five teachers who met the criteria. One teacher removed herself from the study due to her busy schedule. Considering the research questions and intent to focus on teachers' behaviors and perceptions after their completion of the OITI, qualitative methods took precedence over quantitative.

Table 1.
Teacher Participant Demographics

Partici- pant	Gen- der	Age	Highest Ed Degree	Student Gr. Level	Subject Specialization	Teaching Experience (Yrs.)	National Board Cert.
Lani	F	40-49	Master's	Middle	Math	17	Yes
Kaila	F	30-39	Master's	High	Science	12	No
Jasmine	F	40-49	Master's	High	Math	22	No
Tara	F	30-39	Master's	High	Literacy	11	No

Research instruments administered included an online demographics survey, an online self-assessment TPACK survey, an online ISTE teachers standards self-assessment, an iNACOL standards for quality online teaching self-assessment, and a set of open-ended interview questions. Data collection included conducting a series of quantitative online surveys with participants followed by conducting qualitative in-depth informal face-to-face or online synchronous individual interviews. Member checks were conducted to ensure data collection and analysis were accurate and credible.

To strengthen the case study findings, the researcher applied multiple triangulations (Mills, Durepos, & Wiebe, 2009) such as data triangulation (multiple data sources from different individuals) and methodological triangulation (multiple methods use to gather data), to achieve a greater insight during data analysis. A case study report provided individual perspectives of the four teachers with data analysis focused specifically according to the proposed research questions. After individual analysis, cross-case analysis was completed with a focus of understanding patterns and explanations across cases. Common qualitative and quantitative themes were extracted according to each research question in sequential order. To identify qualitative common themes, triangulation of data was applied by comparing qualitative codes sequentially according to the research questions (using qualitative data analysis software). To identify quantitative common themes, triangulation of data was applied by comparing TPACK, ISTE, and iNACOL data (using an Excel spreadsheet).

Results

Both qualitative and quantitative data were analyzed for individual case study participants according to proposed research questions, resulting in a detailed case study report. Qualitative themes from individual interviews emerged, supported by the integration of educational technology frameworks and standards-based research instruments.

A cross-case analysis was conducted after completion of the case study report to understand the data at a deeper level. Common qualitative and quantitative themes were extracted according to individual research questions in sequential order. To identify qualitative common themes, triangulation of data was applied by comparing qualitative codes (derived from teacher interviews and open-ended survey questions) according to the research questions. To identify quantitative common themes, triangulation of data was applied by comparing quantitative data of teachers using an Excel spreadsheet for the TPACK, ISTE, and iNACOL data.

Table 2.
Cross-Case Analysis Summary

Research Question	Similarities	Differences
1. How does the OITI PD experience continue to impact teachers and their integration of technology into their curriculum?	<ul style="list-style-type: none"> • Consistent in applying knowledge gained from OITI experiences for blended environment • Integration of Blackboard Learn LMS with positive perception • Technology integration intent with a focus on students • Teachers felt technology access improved over the years • Two most common TPACK strengths: PCK and TCK • Most common TPACK weakness: TK 	<ul style="list-style-type: none"> • Application of OITI knowledge varied • Blackboard Learn LMS tools varied • Technology integration approach with students varied • ISTE teacher standards strengths varied • ISTE teacher standards weaknesses varied
2. How does the OITI PD experience continue to impact teachers implementing DL instructional strategies?	<ul style="list-style-type: none"> • No online teaching experience prior to the OITI • Consistent in applying knowledge gained from OITI experiences for online environment 	<ul style="list-style-type: none"> • Application of distance learning instructional strategies varied • iNACOL standards for quality online teaching strengths varied • iNACOL standards for quality online teaching weaknesses varied
3. How do teachers who completed the OITI perceive themselves impacting their students as a result of the PD training?	<ul style="list-style-type: none"> • OITI experience provided skills and technology tools to differentiate instruction for students • Better teacher and student relationships as a direct result of applying OITI skills 	<ul style="list-style-type: none"> • Approach to student impact varied

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4. What is the impact of the PD experience as perceived by teachers who completed the OITI and are now online instructors?
- Learning emerging technologies = new instructional tools to impact student learning
 - Teachers expressed although challenging, the OITI increased their comfort level of exploring and integrating technologies into instruction for blended and online environments
 - Attitudes, beliefs and dispositions changed as a result of the OITI
 - Shifted successfully on the blended and online instruction spectrum to become online instructors
 - After completing the OITI, KSDL part-time online instructor gatherings and KS Technology Slam PD offerings were common
 - Teachers were satisfied with the OITI professional learning community
 - Teachers were initially not aware the OITI would be a springboard to other opportunities
- Prior to the OITI, two teachers began with traditional (face-to-face) instruction and two teachers began with a some technology integration
 - PD experiences related to technology integration or online learning after the OITI varied
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In summary, all four teachers integrated technology consistently, applying what they have learned from the OITI, even seven to ten years later. With newer technologies introduced over the years and transition to 1:1 environments, teachers continued to focus on students and progress with exploring and integrating technologies that would engage their students in a blended environment. All four teachers were also successful transitioning from not having online teaching experience prior to the OITI, to consistently applying distance learning instructional strategies as online instructors seven to ten years later. Furthermore, all four teachers perceived themselves impacting their students as a result of the OITI. Lastly, all four teachers shared insightful perspectives on what they felt were most impactful from their OITI experiences, resulting in meaningful themes that were incorporated into recommendations for future PD when training online instructors.

Implications

Based upon the findings in this case study, there were several proposed recommendations for training online instructors. First, teachers participating in the case study varied in what they learned, internalized, and implemented in their blended and online teaching environments seven to ten years later. This reaffirmed the need to not only personalize instruction for students (U.S. D.O.E., 2010), but also understand the importance of personalizing learning for teachers (Vega, 2013; Lange, 2014; Quattrochi, 2014) in online instructor training programs. Secondly, this study confirmed that building comfort and confidence in technology integration foundational skills is a necessary first step in becoming successful online instructors. Highly skilled facilitators or trainers need to be capable of modeling effective online teaching strategies while creating relevance and building relationships with teachers interested in becoming online instructors. Thirdly, teachers in this case study mentioned how the professional learning community (PLC) was an enjoyable experience, allowing them to connect, build relationships, and share teaching

practices with each other. Therefore, it would be beneficial to thoroughly research PLCs (Feger & Arruda, 2008), determining which type of instructional strategies could be incorporated to ensure meaningful, relevant, and long lasting PLCs for online instructors. In addition, it is important to model and encourage teachers to incorporate PLCs with their students, similar to how one teacher felt confident her learners would experience the same sense of community she experienced in the OITI. Fourthly, based upon some teacher responses during the interview sharing not being as comfortable addressing special needs students in an online environment, it would be beneficial to incorporate universal design learning (UDL) in future training curriculum, a framework that assists teachers in creating curricula that addresses the needs of all learners (National Center on UDL, 2014). Lastly, there is a lot of content to cover to ensure teachers gain skills essential for online teaching. Teachers from the study indicated increase in technological skills through exploration of technology tools. The recommendation is to be selective of tools introduced during training that would address foundational skills, easy to learn, and serve multiple purposes in engaging students and increasing student impact and achievement.

The findings of this study also provided insights on recommendations for future research. First, it would be interesting to study the new generation of teachers and research their confidence levels as it relates to the TPACK framework, ISTE teacher standards, and iNACOL standards for quality online teaching. Knowing what technological and pedagogical skills are being taught in pre-service versus in-service PD for online teacher preparation is important. Secondly, given all the teachers in this case study did not have prior online teaching experiences, conducting additional research on how to seamlessly connect pre-service teacher trainings with in-service K-12 PD opportunities to increase the pool of competent online instructors is needed to ensure quality online learning for students as online learning continues to expand. According to researchers (Barbour, Siko, Gross & Waddell, 2013, p. 60), “At present, there are few examples of the preparation of teachers for the online environment in teacher education. Even more unfortunate is less than 40% of all online teachers in the United States reported receiving any professional development before they began teaching online.” Lastly, conducting research studies focused on professional learning community models to determine what frameworks and strategies would be most effective for online teachers is integral in supporting continued growth and development.

Conclusion

Conducting this case study expanded the researchers’ understanding of the long term impact of the Kamehameha Schools OITI PD experience of teachers who became online instructors. Building on the limited current knowledge of training K-12 online instructors, this research study contributes to the body of knowledge in the field of distance learning, showcasing how four teachers continued to be impacted by the OITI seven to ten years later. Even with the completion of this study, there is a need to continue conducting additional research on various aspects of training and sustaining competent online instructors.

References

- Archambault, L. (2011). The Practitioner’s Perspective on Teacher Education: Preparing for the K-12 Online Classroom. *Journal of Technology and Teacher Education*. 19(1), 73-91. Chesapeake, VA: AACE. Retrieved from <http://www.editlib.org/p/31410/>.
- Barbour, M., Archambault, L., & DiPietro, M. (2013). K-12 Online Distance Education: Issues and Frameworks. *American Journal of Distance Education*. 27(1), 1-3. doi: 10.1080/08923647.2013.759452.
- Barbour, M., Brown, R., Waters, L., Hoey, R., Hunt, J., Kennedy, K., . . . Trimm, T. (2011). *Online and Blended Learning: A Survey of Policy and Practices of K-12 Schools Around the World*. For iNACOL. Retrieved from http://www.inacol.org/cms/wp-content/uploads/2012/11/iNACOL_IntnlReport2011.pdf.
- Barbour, M., Siko, J., Gross, E., & Waddell, K. (2013). Virtually Unprepared: Examining the Preparation of K-12 Online Teachers. In Hartshorne, R., Heafner, T., & Petty, T., *Teacher Education Programs and Online Learning Tools: Innovations in Teacher Preparation* (pp. 60-81). Retrieved from http://www.michaelbarbour.com/research/pubs/chaper_hartshorne.pdf.

- Christensen, C.M., Horn, M.B., & Johnson, C.W. (2009). *Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns*. NY: McGraw Hill.
- Davis, N. & Rose, R. (2007). *Professional Development for Virtual Schooling and Online Learning*. VA: iNACOL. Retrieved from <http://files.eric.ed.gov/fulltext/ED509632.pdf>.
- Dawley, L., Rice, K. & Hinck, G. (2010). *Going Virtual! 2010: The Status of Professional Development and Unique Needs of K-12 Online Teachers*. Retrieved from <http://edtech.boisestate.edu/goingvirtual/goingvirtual3.pdf>.
- Feger, S. & Arruda, E. (2008). *Professional Learning Communities: Key Themes from the Literature*. Retrieved from http://www.brown.edu/academics/education-alliance/sites/brown.edu/academics/education-alliance/files/publications/PBS_PLC_Lit_Review.pdf.
- Guskey, T. (2000). *Evaluating Professional Development*. Thousand Oaks, CA: Corwin Press, 79-81.
- Hirata, D. (2007, Feb.). A 3-Year Professional Development Journey in Training K-12 Educators to Become Successful Distance Learning Instructors. *2007 Illionis Online Conference*. Online presentation conducted during the 2007 Illinois Online Conference.
- International Association for K-12 Online Learning (iNACOL). (2011). *National Standards for Quality Online Teaching*, 2nd Version. Retrieved from http://www.inacol.org/cms/wp-content/uploads/2013/02/iNACOL_TeachingStandardsv2.pdf
- International Association for K-12 Online Learning (iNACOL). (2013). *Fast Facts About Online Learning*. Retrieved from <http://www.inacol.org/cms/wp-content/uploads/2013/11/iNACOL-Fast-Facts-About-Online-Learning-October-2013.pdf>.
- International Society for Technology in Education (ISTE). (2008). *National Educational Technology Standards for Teachers*. Retrieved from http://www.iste.org/docs/pdfs/20-14_ISTE_Standards-T_PDF.pdf.
- Kamehameha Schools. (2015). *Mission and Vision*. Retrieved from http://www.ksbe.edu/about_us/about_kamehameha_schools/mission_and_vision/.
- Keeping Pace With K-12 Digital Learning. (2015). *Michigan Data and Information*. Retrieved from <http://www.kpk12.com/states/michigan/>.
- Kennedy, K. & Archambault, L. (2012). Offering Preservice Teachers Field Experiences in K-12 Online Learning: A National Survey of Teacher Education Programs. *Journal of Teacher Education*, 63(3), p. 185-200.
- Kennedy, K., Tysinger, T., Bailey, C. & LaFrance, J. (2013). Preparing Education Professionals for K-12 Online Learning Programs (Chapter). *Educational Media and Technology Yearbook*, 38, 120. NY: Springer. Retrieved from http://link.springer.com/chapter/10.1007/978-1-4614-4430-5_10#page-1.
- Lange, J. (2014). Why Teachers Need Personalized Professional Development. *Edudemic: Connecting Education and Technology*. Retrieved from <http://www.edudemic.com/teachers-need-personalized-professional-development/>.
- Lodico, M., Spaulding, D., & Voegtle, K. (2006). *Methods in Educational Research: From Theory to Practice*. San Francisco, CA: Wiley & Sons.
- Mills, A., Durepos, G., & Wiebe, E. (2009). *Encyclopedia of Case Study Research*. Los Angeles: Sage Publications.
- Mishra, P. & Koehler, M. (2006). Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge. *Teachers College Record*, 108(6), 1017-1054.
- Natale, C. (2011). *Teaching in the World of Virtual K-12 Learning: Challenges to Ensure Educator Quality*. (ETS Report). NJ: Educational Testing Service.
- National Center on Universal Design for Learning. (2014). *About UDL*. Retrieved from <http://www.udlcenter.org/aboutudl/udlguidelines>.
- National Education Association (NEA). (n.d.). *Guide to Teaching Online Courses*. Retrieved from <http://www.nea.org/assets/docs/onlineteachguide.pdf>.
- National Education Association (NEA). (2012). *NEA Handbook and Policy Statement*. Retrieved from <http://www.nea.org/assets/docs/2012-NEA-Handbook-Policy-Statements.pdf>.
- Partnership for 21st Century Skills (2011). *Framework for 21st Century Learning*. Retrieved from http://www.p21.org/storage/documents/1.__p21_framework_2-pager.pdf.
- Patrick, S. & Dawley, L. (2010). *Redefining Teacher Education: K-12 Online-Blended Learning and Virtual Schools*. Embedded within *Going Virtual! 2010*. Retrieved from <http://edtech.boisestate.edu/goingvirtual/goingvirtual3.pdf>.

- Project Tomorrow. (2012). *Learning in the 21st Century: A 5 Year Retrospective on the Growth in Online Learning*. Irvine, CA: Speak Up and Washington D.C.: Blackboard. Retrieved from http://www.tomorrow.org/speakup/learning21Report_2012_Update.html.
- Quattrochi, C. (2014). A Path Towards Personalized PD. *edSurge*. Retrieved from <https://www.edsurge.com/n/2014-06-03-a-path-towards-personalized-pd>.
- Rice, K. (2012). *Making the Move to K-12 Online Teaching: Research-Based Strategies and Practices*. NJ: Pearson Education.
- Southern Regional Education Board (SREB). (2009). *Guidelines for Professional Development of Online Teachers*. Retrieved from http://publications.sreb.org/2009/09T01_Guide_profdev_online_teach.pdf.
- U.S. Department of Education, Office of Educational Technology. (2010). *Transforming American Education: Learning Powered by Technology, National Educational Technology Plan 2010*. Retrieved from <http://www.ed.gov/sites/default/files/netp2010.pdf>.
- Vega, V. (2013). Teacher Development Research Review: Keys to Educator Success. Edutopia. Retrieved from <http://www.edutopia.org/teacher-development-research-keys-success>.
- Veletsianos, G., Doering, A, & Henrickson, J. (2012). Field-Based Professional Development of Teachers Engaged in Distance Education: Experiences from the Arctic. *Distance Education*, 33(1), 45-59. Retrieved from <http://www.tandfonline.com/doi/abs/10.1080/01587919.2012.667959#.VDns8fldWSo>
- Watson, J., Pape, L., Murin, A., Gemin, B., & Vashaw, L. (2014). *Keeping Pace with K-12 Digital Learning: An Annual Review of Policy and Practice*. Colorado: Evergreen Education Group. Retrieved from http://www.mivu.org/Portals/0/Files/Articles-Reports/2014/KeepingPace_2014.pdf.