

Technology Tango: School Library Media Specialists and Technology Coordinators

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Keywords

library media specialist, technology coordinator, school staffing

Purpose & Objectives

The purpose of this study was to conduct a mixed-methods study, including a phenomenological component, to understand the perceived roles of technology coordinators and library media specialists in Hawaii public schools. The purpose of this study was not to determine the effectiveness of the technology and media-related education programs, but to turn a critical eye toward the personal investment and morale of those involved in such undertakings; a goal was to probe into what these professionals consider their success and challenges, readiness, and what they consider the best direction for technology in schools. The phenomenological component of the study is not discussed at length in this paper.

The study centered on the following research questions:

1. How do K-12 technology coordinators and library media specialists in Hawaii view their job functions and personal preparedness for educational technology efforts in their schools? Do they consider themselves to possess the skill set to succeed?
2. Do technology coordinators and library media specialists feel supported by administration in their schools and at the district level?
3. How have the roles and responsibilities of the school technology coordinator affected that of the school librarian? Have some schools have opted to reduce the role of the librarian in favor of the technology specialist?

Perspective/Theoretical Framework

This mixed-methods study was guided by constructivist-critical theory principles, where multiple realities and perspectives are imperative to gaining better understanding of the technology coordinator and library media specialist phenomenon. The assumption was that collecting diverse types of data best provides an understanding of the problem. Therefore, this study was comprised of two phases and employed the sequential explanatory strategy characteristic of mixed-methods studies. Phase I of the study used an electronic survey and questionnaire for data collection, "in order to generalize results to a population. Phase II focused on qualitative open-ended interviews to collect detailed views of participants" (Creswell, 2003, p. 21). Phase II used phenomenological approaches where individuals who have shared a common experience were interviewed in depth. Results from the quantitative portion informed the qualitative data collection in phase II of the study. Emphasis in this report, however, will be given to the quantitative analysis as is typical (Creswell, 2003).

Research Methods Context and Research Participants

The context of this study is within the public school system in Hawaii. More than 180,000 students are enrolled in the public school system (Knudsen, 2005) that it is geographically located over a series of islands and is considered one large school district. Thirty one principals, thirty six technology coordinators, and forty seven library media specialists responded to the voluntary survey. Information could not be obtained from any HIDOE personnel as to the number of technology coordinators and library media specialists employed in the schools. Assuming each school had one LMS and one TC, the return rates were 10.4%, 12.1%, and 15.8% respectively. Given the general understanding some technology coordinators are shared between schools, the technology coordinator return rate may be higher. On the other hand, given that there are generally more librarians at larger schools, the library media specialist rate may be lower. The majority of participants in phase I of the study were from elementary schools.

Data collection instruments

Two survey techniques were used in the study, a questionnaire in Phase I and long, semi-structured interviews in Phase II. This report is focusing on results derived from Phase I. The questionnaire was developed based on a document analysis of job functions of librarians and technology coordinators. Librarian job function states were derived from two major source, Information Power: Building Partnerships for Learning (1998) by the American Library Association and Association for Educational Communications and Technology and Gardner's (2004) "The role of library media specialist in school technology" in Library Media Connection. Technology coordinator job functions were derived from a series of dissertations (see Cox-Cruey, 1998; Frazier, 2003; Martin, 2004; Wagner, 2004) and the State of Hawaii T3 Initiative, "Technology Coordinator Roles" (available at <http://www.k12.hi.us/~jsuzuki/techcor.html>).

The questionnaire was piloted with a district technology coordinator, two graduate students in social sciences, and five graduate students in educational technology. The final version of the survey and questionnaire was distributed via the World Wide Web with initial requests made through principal, librarian, and technology coordinator listservs in the State of Hawaii. Principals, technology coordinators, and library media specialists were asked to rate their agreement to the job functions stated first for the library media specialist, then for the technology coordinator using a Likert-scale ranging from 1 (strongly disagree) to 5 (strongly agree). The question posed was, "In your opinion, should the stated function/roles be vital and essential for the library media specialist? For the technology coordinator?"

Procedure

Volunteer participants for this study were invited to participate via email to all school principals from the researcher and via email listservs to technology coordinators and library media specialists from district office contacts. Subsequent emails were sent after three weeks and again after six weeks had elapsed from the date of the first email. Managers of the listserv indicated that all personnel are required to be part of the listservs, but reading and responding to requests would be voluntary at best. Volunteer participants were directed by the email to an online, commercial survey site to take the survey where their anonymity was assured.

Data analysis

Data from the online survey was analyzed using descriptive statistics, a one-way between-groups analysis of variance, and canonical correlation analysis. All quantitative data was prepared for analysis using the SPSS® 14.0 for Windows software. The intent of the canonical correlation analysis was to reveal thematic groupings. Canonical correlation analysis is a procedure for investigating relationship between two sets of variables, extracting simultaneous relationships between variables such as three achievement measures and five performance measures (StatSoft, 2003).

Results or Expectations

Results from the survey revealed twelve significant differences in the perceived importance of job functions at the $p < .05$ level. The twelve variables were collaborates with students and learning community [$F(2, 432)=4.6, p=.01$], coordinates instruction in computers [$F(2, 432)=4.6, p=.01$], assists students to use information from multiple sources [$F(2, 432)=4.6, p=.01$], shares legal/ethical use of technology [$F(2, 432)=4.6, p=.01$], updates personal skills and knowledge [$F(2, 432)=4.6, p=.01$], works closely with teachers to design tasks and assessments [$F(2, 432)=4.6, p=.01$], provides leadership in acquiring information resources [$F(2, 432)=4.6, p=.01$], brings an awareness of information issues [$F(2, 432)=4.6, p=.01$], models for students strategies [$F(2, 432)=4.6, p=.01$], is an advocate for information literacy [$F(2, 432)=4.6, p=.01$], provides the knowledge, vision, and leadership [$F(2, 432)=4.6, p=.01$], and manages staff, budgets, equipment, and facilities. [$F(2, 432)=4.6, p=.01$]. Despite reaching statistical significance, the actual difference in mean scores between the groups was quite small. A canonical correlation analysis was conducted with the thirty one job function scale variables used as predictors of the collaboration with staff and students, interaction with parents, and leadership scores as criterion variables. Since canonical correlation analysis is a procedure for investigating relationship between two sets of variables (StatSoft, 2003), the variable sets of collaboration, interaction, and leadership showed no significant relationships.

Of the thirty-one job functions, library media specialists generally rated their agreement to job function statements higher than ratings by both principals and technology coordinators. Of note is the large difference

between principals (3.93) and library media specialists (4.83) as to how they perceive the importance of managing staff, budgets, equipment, and facilities. Library media specialists themselves felt strongly that managing these areas were important. The closer the mean is to 5-points, the more strongly the group as a whole perceived the job function was essential. Though there were some differences, overall the top ranking job functions for library media specialist all fell within six ranks of each other.

Technology coordinators and principals rated job functions for technology coordinators similarly for all thirty-one job functions with the notable exception of technical troubleshooting. Unlike for library media specialists, the top three perceived essential job functions for technology coordinators were not similar. Technology coordinators viewed themselves as helping to develop a school-wide Acceptable Use Policy (AUP), updating personal skills and knowledge in order to work effectively with teachers, administrators, and other staff, and sharing legal and ethical use of technology. Principals agreed with the AUP and ethics, but ranked facilitating and assisting staff with the effective integration as high on their list. Library media specialists also ranked AUP at the top, but included creating awareness of new and innovative uses of technology. However, technology coordinators did not rank troubleshooting hardware issues anywhere near the top of their list though both principals and library media specialists ranked it rather high.

Educational and/or Scientific Importance

Computer technology began appearing in schools in the 1980s. Eventually, these computers were machines that in due course needed constant upgrading of monitors and keyboards, cables and wires, software and hard drives. Computer specialists and eventually technology coordinators appeared in schools to help manage the computer technology and networking needs. The long standing librarian became a media specialist to address the issue of retrieval of instant information. Both these roles have evolved over time to overlap with one another, causing confusion and misunderstanding within the professions as well as amongst teachers, administrators, and students (O'Neal, 2004; Erhart, 1997).

However, twenty five years later, this study found that the role of the technology coordinator and the library media specialist seems to have overlapped and caused confusion and concerns over job functions and roles at the school level. Because library media centers were the first computer labs, many librarians engaged in a survival tactic of learning basic troubleshooting of their media machines before the vast computer networks and the Internet became prevalent. Now however, the needs of maintaining the complexities of a computer lab, even one in the library media center, are beyond the capabilities of a library media specialist. In addition, this study also found that technology coordinators do not wish to be considered technicians, but to be regarded as teachers and as colleagues in the education arena.

Results of this study contribute to research on administrator perceptions, technology needs in schools, library needs in schools, funding of computer and technology, and technology integration challenges. The phenomenological approach, though not discussed at length in this paper, provided an in-depth and complicated picture of the distinct roles of technology coordinators and library media specialists in schools and how their roles evolved recently into an overlap of responsibilities. It appears that the role of school library media specialist is well understood by both principals and technology coordinators. Librarians have such a strong identity that they rarely need to be defined. The same is true of the principals, counselors, mathematics teachers, music teacher, etc. Each of these education professionals underwent some form of formal schooling and earned a professional degree in their field. On the other hand, technology coordinators do not possess any formalized degree except for that of licensed teacher. Those technology coordinators interviewed in this study did not have a common education degree bond except for that licensure. Their preparation for their position ranged from love of computers to "just fell into it." This misunderstanding has led to technology coordinators being mislabeled as technicians and also to principals considering their library media specialists as capable part-time technology coordinators.

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