Editorial: Putting the Career in College and Career Readiness

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This issue of *School Libraries Worldwide* is based on the theme of career and college readiness. Technology-related employment needs are projected to grow fast in the next 10 years and a steady supply of well-prepared new professionals is essential to address workforce expansion. To ensure that learners readied for technical careers, college and career readiness (CCR) is the overarching policy imperative for K-12 public education (National Research Council, 2012). Throughout the world, CCR emphasis has led to new educational standards, increased focus on secondary school graduation rates, and paths directly to high demand technical jobs.

As the global economic base shifts to technology centered industries, business leaders have called for graduates with workforce-ready skills. In 2011, 20% of all jobs required high level STEM knowledge of, yet only half of those jobs required a tertiary degree; the rest required other post-secondary work and certifications (Rothwell, 2013). The work outlook is bleak for young people with a high school diploma (or less) and no postsecondary credential (SREB, 2015) because the number of jobs available has steadily declined for decades (Carnevale, Jayasundera, & Hanson, 2012), particularly in the southern United States (Carnevale & Smith, 2012). However, many regions are quickly expanding employment in health, STEM, and computing occupations. These jobs' requirements are pressuring the education system to produce more employees skilled with information technology (IT) and information systems (IS). By 2020, economists predict that 58% of all jobs will require some postsecondary IT training (Vitner, Feik, & Carmichael, 2017).

Although over 70% of secondary graduates attend college, only half of those learners attain a degree; as a result, educators are focusing on the career aspect of college and career readiness (CEV Multimedia, 2016). Learners are college and career ready when they have the:

> …knowledge, skills, and academic preparation needed to enroll and succeed in introductory college credit-bearing courses within an associate or baccalaureate degree program without the need for remediation. These same attributes and levels of achievement are needed for entry into and success in postsecondary workforce education or directly into a job that offers gainful employment and career advancement (Florida Department of Education [FLDOE], n.d.-a, n.p.).

Career and technical education (CTE) is one way educators can help learners to achieve CCR by readying them to "become aware of potential STEM careers and connect these career decisions to their educational decisions" (Hall, Dickerson, Batts, Kauffmann, & Bosse, 2011, p. 41). A challenge

to increasing high school students' participation has been the false perception that CTE provides low-level vocational skills, leading students and parents to believe the courses are one step away from dropping out of high school (Withington et al., 2012). This perception is especially troubling for the IT sector since in secondary school, IT and computing courses are usually classified as CTE offerings.

CTE drives economic development and innovation because it propels high school learners into the IT workforce (ACTE, 2014). Most high school students in the United States take at least one CTE course, and about a quarter of all students take three or more courses in a single CTE program area (King & Wang, 2008). In the last decade, many public school districts have raised graduation requirements to include core courses like math, reading, and English and high stakes exit exams; it has become difficult for secondary school students to focus on a purely vocational path through high school (Altonji, Blom, & Meghir, 2012; Stone & Lewis, 2012).

School Level CTE Challenges

Compounding the challenge of pursuing CTE in secondary school are classroom conditions. Secondary CTE teachers have struggled to integrate their curricula to extend core academic competencies to a vocational context (Stone & Lewis, 2012). This lack of integration has led CTE to be perceived as a separate curriculum with less emphasis on academic skills. Because CTE enrollment reflects an overrepresentation of minority youth, a decreased emphasis on improving cross-cutting abilities to read or compute has the potential for longlasting dire consequences (Carnevale, Hanson, & Fasules, 2018).

Teacher readiness. Vocationally-centered secondary schools have difficulty attracting and retaining high quality CTE teachers (Wilkin & Nwoke, 2011). CTE teacher certification requirements vary and often pose barriers for talented professionals to move from industry to teaching (Jacques & Potemski, 2014). Therefore, the CTE teacher core can contains instructors with wide range of CTE content preparation. These factors pose a challenge to ensuring that CTE curricula reflect current workforce tools and requirements (Thompson, Bell, Andreae, & Robins, 2013).

In information and technology related topics, teachers' experience with and beliefs about technology strongly affect learners' learning opportunities and stifle curriculum (Brinda, Puhlmann, & Schulte, 2009). When teachers are covering too many CTE courses due to teeacher shortage and no direct industry experience, they are not passionate about the course topics and students do not have an environment to become technology professionals (Colley, James, Diment, & Tedder, 2003). This lack of commitment to technical currency risks students being subject to a "hidden curriculum" composed of instructional choices influenced by teachers' topical confidence and personal biases (Alsubaie, 2015; Stone & Lewis, 2012).

Student Advising. Guidance counselors play an important role in the CTE education, too. Counselors have overwhelmingly agreed that the purpose of secondary education is to ensure that students complete their senior year ready for college and career; yet, they expressed concern about suboptimal counselor staffing in high schools (Hurwitz & Howell, 2013). Guidance counselors are often tasked with getting as many students as possible into four year colleges and

universities at the expense of guiding students who are interested in post-secondary programs that will prepare them for technical careers (Kemple, 2008).

School librarians guide, support, and often play the role of academic and career counselors and technology specialists in schools. As providers and facilitators of learning opportunities that complement and extend classroom activities, school librarian are actors in career readiness.

In This Issue: Opportunities for School Librarians

This issue brings you six papers in which researchers explore various dimensions of professional and learner growth that lend themselves to future preparedness. In "The Information Literacy Continuum." Elizabeth A. Burns, Melissa Gross, and Don Latham compare the American Association of School Librarians (AASL) *National School Library Standards* learner framework to the Association for College and Research Libraries (ACRL) *Framework for Information Literacy* to detect the K-20 information literacy continuum vital for lifelong learning and career readiness. Next, Abigail Leigh Phillips, Mimi Recker, and Victor R Lee present "A Framework for Characterizing 21st Century School Librarianship," in which they document their experiences with three school librarians who implemented makerspaces to engage learner interest and provide opportunities for hands-on STEM knowledge building. Kwan Yi and Ralph Turner examine technology readiness and integration among rural Kentucky,USA school librarians in "Investigating Technology Integration Practices and Competencies of School Librarians," to determine the role school librarians play in helping underserved learners gain vital technology competencies. In a take on modeling and implementating data driven decision making, a workplace skill in high demand, Deborah Rinio relays "Social Network Analysis for School Librarians to Evaluate and Improve Teacher Collaboration." In "The School Librarian's Role in the Adoption of Open Textbooks," Alesha Baker, Kelli Carney, and Cates Schwark study another important aspect of the 21ˢᵗ century workplace: knowledge construction from diverse information sources. Finally, Kgomotso Hildegard Moahi and Christinah Dipetso provide us with a look at workplace readiness and lifelong learning in an African context in "Information Literacy Skills of High School Students in Botswana."

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