Understanding the Essential Employability Knowledge and Skills Needed for Textile and Apparel College Graduates: A Triangular Design Approach

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Introduction and Literature Review. The U.S. textile and apparel (T&A) industry has experienced a dramatic transition in the last decade. Knowledge and skills needed by the workforce in this sector has been transformed as the result of a more globalized economy and the rapid infusion of new technologies along the supply chain (Jasper, 2011). Jobs in the T&A sector span from product development and sourcing to retailing, branding, and marketing. These jobs require basic employability skills (also known as soft skills including communication skills, interpersonal skills, leadership etc.) and disciplinary knowledge and skills (e.g., fiber, fabric, and apparel knowledge, product development skills, and business operations etc.).

Employers can be reluctant to provide new employees with remedial training to supplement gaps in needed skills and knowledge due to lack of resources or cost consideration (Rosenberg et al., 2012). This industry position gives impetus for graduates to gain needed skills and knowledge before entering the workforce (Finch et al., 2013). There is an expectation shared by students and industry that postsecondary coursework can instill in students the disciplinary and basic employability skills required to avoid the need for additional training (Crawford et al., 2011). However, postsecondary programs have often been criticized as being too theoretical, out-of-date and thus producing graduates lacking in the knowledge and skills that industry requires (Irvine et al., 2013). Programs in postsecondary institutions are encouraged to revisit their relationship with the industries that recruit their graduates to meet human capital needs (Rosenberg *et al.*, 2012). In order to ensure to prepare graduates with the knowledge and skills needed to succeed in the 21st century global economy, faculty should continually review the content and rigor of courses and curricula (AAC&U, 2011).

To address this problem in today's postsecondary education and align the T&A curriculum with the industry needs, this study aimed to identify the essential employability skills and disciplinary knowledge needed for T&A graduates to succeed in the workplace. Based on preliminary interviews with T&A educators and corporate employers and relevant literature reviews, we developed the following research questions: 1). What are the essential soft skills for T&A college graduates to obtain prior to entering workforce? 2). What is the essential discipline knowledge for T&A college graduates to learn prior to entering workforce? 3). What are the essential technology skills for T&A college graduates to obtain prior to entering workforce? 4). What is your ranking of soft skills, discipline knowledge, and technology skills in terms of their importance for workforce preparedness for entry-level positions in the textile and apparel industry?

Method. This study used a qualitative method, which entailed the practice of snowball sampling to recruit interview participants. Total 36 semi-structured interviews using the aforementioned research questions were conducted with 18 recent T&A graduates who were working in 14 U.S. textile/apparel companies, 12 faculty in the U.S. postsecondary T&A programs, and six corporate human resource managers. Unlike previous studies that have primarily focused on the responses of corporate recruiters, the novelty in this study was that the inputs from recent T&A college graduates and college faculty were also gathered. This triangular approach allows us to contrast all three participant groups and to determine whether any critical gaps exist regarding the basic employability skills and discipline knowledge and skills needed for T&A graduates to succeed in the workplace.

Findings and Discussion. The responses to what are the essential soft skills, discipline knowledge, and technology skills from all three respondent groups were quite consistent. However, their perceptions of job preparedness in terms of these needed skills and knowledge showed quite significant disparities. With regard to soft skills, leadership skills, communication skills (both oral and writing), problem solving skills, team skills, and professionalism skills are commonly listed as the most important skills for the college graduates. Most interviewed faculty indicated their curricula have covered all these soft skills and can help their graduates to achieve the needed level of proficiency before entering the workplace although curricula do need continuous updates. In contrast, both recent graduates and corporate recruiters indicated that leadership skills, communication skills, and problem solving skills are critical for job readiness and career advancement but college graduates are not fully prepared to meet the industry requirement. Three corporate human resource managers explained this deficiency in the T&A programs has made them recruit more graduates from college of business. As for discipline knowledge, most of the recent graduates and corporate recruiters indicated the curricula in the T&A programs offer a full spectrum of courses covering the critical subject contents, which is aligned with the responses of the faculty. Several subject topics were repeatedly mentioned as the important knowledge by the recent graduates and corporate recruiters are merchandising math, global sourcing, fashion forecasting, product development, technical design, pattern making, retail management, e-commerce/m-commerce, and supply chain management. In particular, quantitative reasoning and data analytical skills are highly desired by the industry and reported as need for improvement for T&A college graduates. In regards to the technology skills, Excel, Word, Powerpoint, Adobe Illustrator, and Photoshop were considered critical for T&A college graduates. All three respondent groups indicated that college students need to learn and practice more Excel skill. Finally, soft skills, discipline knowledge, and technology skills are all essential for job preparedness for college graduates although there seems more emphasis placed on soft skills as indicated an area of deficiency.

The findings from this study provide T& A educators with a better understanding of the knowledge and skills that employers expect from graduates. A better alignment of courses and curriculum with the industry needs will improve graduates' school-to-work transition, and increase their employment opportunities, job performance and career advancement potential.

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