

## **Why do we adopt e-internships in eLearning curriculum development? A Model of Career-oriented Learning Experiences, Motivation, and Self-Regulated Learning**

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**Abstract:** A conceptual paper proposed an integrated eLearning curriculum development model that emphasized the valuable role of career-oriented learning experiences in improving students' motivation and self-regulated learning. The career-oriented learning experiences can be gained through effective e-internship programs that involve three levels of collaboration, including organizational level, departmental level, and instructor level. Notably, an overly focus on early workplace learning experiences might run the risk of excessive vocational curriculum design so that the 'higher' education aspect was cast off. Therefore, an integrated eLearning curriculum development should consider fostering 'full-stack' students who possess the necessary skills for academic and professional success. In essence, technical training should complement academic education to create an integrated and comprehensive e-learning curriculum.

### **Introduction**

#### **The Demand for Expanding Competencies in Higher Education**

Years of research have suggested that there is a skills mismatch between higher education and employment (Farooq, 2011; Gibbs et al., 2011; Hennemann & Liefner, 2010; Kruss \*, 2004; Mourshed et al., 2013; Somers et al., 2019). This issue captures many stakeholders' concerns from institutional administrators, researchers, test developers to policymakers regarding how to improve the employability of graduates. In an ETS's research report, Oliveri and Markle (2017) pointed out that current assessments in higher education were inadequate for producing competitive graduates with sufficient skills to meet workforce demands and preparing graduates for the 21st-century careers outside of schoolwork in complex future. This education-occupation mismatch is not just affecting America.

In McKinsey's report, Mourshed et al. (2013) found that the biggest reason why young people could not land a job after graduation was not only because of the lack of employment, but also a shortage of skills. They surveyed employers, graduates, and education providers with diverse backgrounds and socioeconomic contexts across nine countries and found that there are many gaps between the educational system and workforce skills. A significant mismatch was found in this report. While 72 percent of education providers believed that the career readiness of graduates in schools is adequate, less than half percent of employers and graduates believed that new graduates are adequately prepared for entry-level positions. Specifically, 39 percent of employers indicated a skills gap is a dominant reason for entry-level vacancies. Only half of the graduates considered that their postsecondary education experiences improved their employabilities (Murshed et al., 2013). Therefore, this education-occupation mismatch not only increases graduates' risks of being unemployed, but also hinders the employers from finding the right person for the right job. In addition, Murshed and colleagues (2013) also found that approximately 60 percent of enrolled students showed that hands-on learning and practical job training are the most effective instructional strategies, but less than 30 percent of them have opportunities to experiences those instructional activities. Furthermore, a quarter of students' first jobs are unrelated to their field of study, which leads to high turnover rates

for young workers. It is well known that a high turnover rate could harm overall business success due to the costs of recruiting and retraining employees.

### **Career Readiness**

So, it is not surprising that career readiness has been gaining attention in government, industry, and research (Pimentel, 2013; Darling-Hammond et al., 2014; Piliouras et al., 2014). To date, forty-five states have undertaken the *Common Core State Standards Initiative*, which is a state-led movement to develop the College- and Career-Ready Standards for ensuring student success in the transition from education to work (Pimentel, 2013). These standards not only cover the development of academic skills, but also underline the driving need to improve higher-order skills and real-world problem-solving skills in students. Notably, the U.S. Department of Education has provided more than \$350 million to develop high-quality assessments for College- and Career-Ready Standards, and states are opting to implement those assessments (*College- and Career-Ready Standards | U.S. Department of Education*, n.d.).

Additionally, the development of technology has also affected career readiness. Graduates are expected to have a package of skills including adequate academic skills, a certain level of technological proficiencies, 21st-century skills, social-emotional skills, and other noncognitive skills (Lippman et al., 2015; Dymnicki, 2013; Ainsa, 2016; Anderson, 2018; Kivunja, 2015; Piliouras et al., 2014; Snyder & Bristol, 2015). However, students hardly get opportunities to involve in all types of skills training in the existing higher education system due to the clear-cut distinction between academic education and technical education. In particular, the focus of higher education has always been academic experiences, whereas practical training and professional experiences are usually provided by *Career and Technical Education* (CTE) programs.-

So, how can we embrace and utilize the power of digital learning to improve college and career readiness in higher education? The purpose of this paper is to explore the benefits and potentials of incorporating e-internships into eLearning curriculum development. The focus will be on how a proposed model can improve academic motivation and self-regulated learning by providing students with career-oriented learning experiences. Specifically, career-oriented learning experiences are embodied in e-internships that help students increase their employability skills and self-efficacy as well as autonomously establish career goals. These practical experiences and skills improvements students had during the e-internships can intrinsically motivate them to attend school purposefully (e.g., clear career goals) and engagingly, and therefore improve academic achievement (Jacob, 2017). Besides, designing an effective e-internship program is the prerequisite for making full use of this proposed model. Thus, I identified three levels of collaboration that contributed to an effective e-internship program, including organizational level, organizational level, and instructor level.

## **Career-oriented Learning Experiences**

### **Internship and Employability**

The internship has been a commonly used method for students to gain real-life work experiences in the field of learning. This approach is not only an effective way to get student's foot in the door, but also offer them valuable opportunities to explore and hone their skills in their interest areas (Chi & Gursoy, 2009; Dean & Clements, 2010; Hcora et al., 2017; Hora et al., 2017).

A stream of practitioner reports and empirical research (Chi & Gursoy, 2009; Trede & McEwen, 2015; Townsley et al., 2017; Hora et al., 2017) has examined the role of internship in increasing job placement rates for graduates. For example, Chi and Gursoy (2009) considered internship participation as an essential factor for successful job placement by surveying 102 hospitality recruiters and HR managers. Specifically, they found that the Ph.D. hospitality programs prefer to admit applicants who have extensive work experience because these applicants could provide a direct industry learning experience for undergraduates as TAs. In another study, Trede and McEwen (2015) found that early workplace learning experiences in university had a positive impact on student retention and employability by clarifying the relationship between academic courses and career choices. Likewise, Townsley et al. (2017) confirmed that undergraduate students who completed more internships tended to get off to a good start in their early careers as well as have higher odds of admissions to graduate schools. They underscored that universities should substantially increase students' access to internships while supporting their academic success in school. Similarly, Hora and colleagues (2017) advocated that internship participants indeed have a smooth college to work transition.

### **Internship and Soft Skills**

Apart from having higher chances of being employed after the completion of internships, studies also reported that one significant benefit of students' participation in internships is the improvement of various skills essential to career success (Hora et al., 2017; Dean & Clements, 2010). For example, Hora et al. (2017) believed that internships, as an effective strategy, played an essential role in filling the skills gap which has been perpetuating in

higher education between education and employment. They proposed that a comprehensive assessment of students' academic achievement should take into account their development of critical skills (e.g., interpersonal and leadership skills). In particular, Dean and Clements (2010) presented a learning-orientated internship approach called *Commerce Internship Program* (CIP) as a pathway for adult learners to engage with the industry and develop their soft skills (e.g., communication and interpersonal skills) in the workplace. CIP is a 16-day pre-placement that is designed to support students' transition into the workplace by enabling them to reflectively assess their practices in the workplace. The assessment takes place in a daily e-log format including four modules of assessments (e.g., workplace environment, teamwork, creative and critical thinking, and a reflective journal). The authors found that such assessment-related internship practices informed students on what they have learned and how to apply their knowledge in future workplaces. Most notable is the improvement of their employability skills (e.g., effective communication, networking, confidence, and self-awareness, etc.; Dean & Clements, 2010). However, higher education has been facing challenges in developing and implementing effective internship programs, such as whether or not to implement an internship program, how to measure the effectiveness of an internship program, and how to assist students in finding an internship (Divine et al., 2008)? Especially for students who do not enroll in ground-based programs, it was imperative to find a new way for them to gain relevant work experiences regardless of their physical location and other restrictions.

### **Virtual Internships**

The rise of educational technology and the proliferation of digital learning have spawned a new form of internships - virtual internships, also known as e-internships and computer-mediated internships (Jeske & Axtell, 2013, 2019; Ruggiero & Boehm, 2016; Van Dorp, 2008; Hora et al., 2020). This concept stemmed from the virtual collaboration that is mediated by technologies in both synchronous and asynchronous environments (Jeske & Axtell, 2013, 2019). However, there has been a limited empirical exploration of the impacts of e-internships on student outcomes (Jeske & Axtell, 2013; Hora et al., 2020).

In particular, Van Dorp (2008) introduced the first large-scaled computer-mediated internship called *Cross Sector Virtual Mobility* (CSVM) which was coordinated by the *European Association of Distance Teaching Universities* (EADTU), in conjunction with regional stakeholders (e.g., business communities and job centers) across seven European countries. CSVM initiative focused on increasing graduates' employability and the competitiveness of small to medium-sized companies by affording students and employers a matchmaking service. After examining 187 e-internship internet postings across six countries, Jeske and Axtell (2013) confirmed the prevalence of e-internships. They found that e-internships have been widely implemented in various countries as co-curricular programs, especially in technology-related fields (e.g., marketing, sales, IT, and journalism). They also concluded that e-internships have proven mutually beneficial to both students and employers by improving students' school to work transitions meanwhile reduce employers' office costs (e.g., lodging allowance and travel expenses, etc.). Notably, due to the shelter-in-place and work-from-home situations caused by the COVID-19 pandemic, *The Center for Research on College-Workforce Transitions* (CCWT) recently released a report reviewing the affordance of online internships from both academic and practitioner literature (Hora et al., 2020). Hora and colleagues (2020) pointed out the lack of robust empirical studies in the effectiveness of e-internships. Then, they proposed three variables to differentiate whether or not an online internship is a high-quality program. These variables contain host organization (e.g., employer versus third-party vendor), program duration (e.g., 4-40 hours, 2-4 weeks, and 1+ months), and experiential learning standard (e.g., CCWT and NACE standards; National Association of Colleges and Employers, 2018; Hora et al., 2020). In short, the authors above and the disruption to internships amid the COVID-19 pandemic have confirmed that there is a need to shift in-person internship programs to online internships.

### **Motivation and Self-regulated Learning**

In an e-internships related article, Roy and Sykes (2017) were the first authors to develop a hospitality e-internship program through the lens of self-regulated learning. They proposed an e-internship model emphasizing four stages of action including (1) planning (e.g., specify the learning objectives, design curriculum and assessment, and seek internship opportunities); (2) engagement (e.g., create activity logs for self-reflection and periodically feedback); (3) assimilation (e.g., participate in role-play or interact with simulations to apply their knowledge), and (4) review and reflection (e.g., free-form post-internship reflection such as blogs, virtual meetings, and discussion forums, etc.). They believed that a proper design e-internship model enables students to gain valuable skills (e.g., interview and professional development) and confidence to find their passion and achieve their career goals.

### **Motivation**

Accordingly, we believe that e-internships could have a positive impact on student motivation and self-regulated learning (SRL). Broadly speaking, contemporary motivation theories involve three fundamental concepts

(Irvine, 2018; Cook & Artino Jr, 2016) including (a) beliefs about competence (e.g., am I capable of doing it?); (b) values about the tasks (e.g., is it worth to do? what is my goal?), and (c) social and cognitive elements (e.g., emotion). These three concepts are not mutually exclusive; instead, they are reciprocally related to each other.

It is worth noting that *Self-Determination Theory* (SDT; Deci & Ryan, 1908) has a unique feature that sets it apart from other motivation theories by emphasizing the role of autonomy in students' academic decision-making. For example, Vansteenkiste et al. (2006) noted that student ownership over learning plays a vital role in motivating themselves to internalize extrinsic motivations and regulations such as peer-pressure, family expectations, grades, rewards/punishment, and deadlines, etc. Many researchers have agreed on the potentials and benefits of autonomous motivation in increasing student retention, learning outcomes, and creativity (Soenens & Vansteenkiste, 2005; Vansteenkiste et al., 2006; Deci & Ryan, 2008; Ren et al., 2017).

In particular, the first two aforementioned fundamental concepts (e.g., beliefs about competence & values about the tasks) recurs in almost every motivational theory. For example, *Expectancy-value Theory* (EVT; Eccles et al., 1994) explained motivation through the perspective of values/beliefs, including task values and expectancy beliefs. The most significant difference between these two concepts is the perceptions of the task. For instance, if one thinks that a task is useful and he/she can complete this task without any problems, this perception will positively influence how he/she will perform the task. EVT (Eccles et al., 1983) uses *task values* to denote the perceptions of the tasks including four subcategories (a) attainment value (importance); (b) intrinsic value (enjoyment or interest); (c) utility value (usefulness), and (d) cost (loss of time, demand efforts, and stressful feeling). Likewise, *expectancy beliefs* refer to a confidence one has regarding his/her success on a task (Eccles & Wigfield, 2002). EVT researchers found that student motivation could be increased by enhancing expectancy beliefs and task values (especially attainment, intrinsic, and utility values) while attenuating students' emotional costs (Blackwell et al., 2007; Hulleman et al., 2010; Ramirez & Beilock, 2011). Moreover, *Social Cognitive Theory* (SCT; Bandura, 1986) focuses on the external and internal social reinforcement in students' learning. Specifically, SCT posits three critical factors including belief factors, behavioral factors, and environmental factors. It was the complex interplay between these three factors that account for people's behaviors (e.g., triadic reciprocal determinism; Bandura, 1986). *Self-efficacy*, a belief about what one can do, has been linked to students' positive behaviors (Bandura, 1997; Zimmerman & Cleary, 2006). For example, Bandura depicted that if people do not believe they can achieve desired outcomes, they will not be motivated to act (Bandura, 1997). Therefore, self-efficacy plays a critical role in driving behavior change (Bandura, 2004). *Achievement Goal Theory* (AGT, Barron & Harackiewicz, 2001), also known as *Goal Orientation Theory*, focuses on the role of the goals people strive to achieve in orienting their behaviors. AGT examines achievement from two dimensions – valence (e.g., approach versus avoidance) and competence (e.g., mastery versus performance). Furthermore, the combination of these two dimensions produces four types of goal orientations including performance-approach, performance-avoidance, mastery-approach, and mastery-avoidance (Elliot & Harackiewicz, 1996; Elliot & Dweck, 2013; Elliot & Dweck, 2013).

As for the third fundamental concept (e.g., social and cognitive elements), *Attribution Theory* (AT; Weiner, 1985, 2005) places particular emphasis on emotion. AT states that the different reactions people have regarding a given task originate from their interpretations of the initial outcome. Causal attributions for success or failure within AT contain three distinct dimensions (a) locus of control – internal/external (e.g., the beliefs that people have about what control their own life. Is it themselves or external factors that they cannot influence?); (b) stability – stable/unstable (e.g., whether or not the causation changes over time), and (c) controllability – controllable/uncontrollable (e.g., whether or not one can control the causes). For example, Weiner (1985) believed that attributions could guide emotional reactions to influence the expectancy of future success. (e.g., mastering a skill will make people feel happy and pride, if they think they did it because of their ability and efforts). In essence, how people think will influence how they feel.

### **Self-Regulated Learning (SRL)**

Research has indicated the interplay between Self-Regulated Learning (SRL; Zimmerman, 1986) and motivation (Pintrich & de Groot, 1990; Pintrich et al., 1993a; Pintrich, 2000). Specifically, Pintrich and colleagues (1990, 1993a) made the main contribution to craft the SRL conceptual framework by conducting empirical work to examine relationships between motivation, SRL, and students' academic performance. Notably, the *Motivated Strategies for Learning Questionnaire* (MSLQ) they designed was one of the most widely used instruments to assess students' motivation orientations (Pintrich et al., 1993b). Pintrich's (2000) SRL model encompasses four phases: (a) forethought (e.g., planning and goal setting); (b) monitoring; (c) control, and (d) reaction/reflection. For each phase, there are four areas of regulation needed to be considered including cognition, motivation/affect, behavior, and

context. The aforementioned four phases together with four areas of regulation, reveals the complexity and diversity of Pintrich’s SRL process. Furthermore, the forethought phase involves students’ goal orientation. People will feel motivated to develop plans that will allow them to achieve their goals. During the planning phase, self-efficacy will play an important role. Their judgments of their own competency could either ease or hinder the planning process. The monitoring process is influenced by individuals’ awareness. Self-regulated people usually associate with high self-awareness. During the control phase, Pintrich (2000) believes that it is critical to manage motivation/emotion and adapt strategies to refine tasks. Lastly, how people interpret the outcomes is the key during the reaction/reflection phase. Attribution theory can explain the different reactions people have toward the same tasks as well as how they will perform in the next tasks. Thus, the good self-regulators appear to have positive motivational beliefs (e.g., positive emotion, high self-efficacy, and positive expectancy judgments; Weiner, 1986; Zimmerman, 1998).

### A proposed model

So far, we have recapitulated the benefit and potential of e-internships in improving college and career readiness by helping students to gain practical experiences with real-world relevance. These practical experiences, in turn, positively affect students’ academic motivation and self-regulated learning by providing them with meaningful goals (e.g., future career). Therefore, I propose that an eLearning curriculum development model should focus on cultivating the ‘full-stack’ students who are equipped with both subject matter knowledge and career readiness competencies. The advantages of this proposed model are threefold: (a) the incorporation of the career-oriented learning experiences will intrinsically motivate students because learning becomes relevant to their own goals (e.g., future career); (b) students can learn to develop ‘soft skills’ from the career-oriented learning experiences (e.g., collaboration, problem-solving skills, communication skills, attitudes, career attributes, etc.), and (c) students can develop their self-regulated learning abilities by strategically applying skills and knowledge to real-world situations. See Figure 1 for the proposed model. The alternating flow process diagram implied the interaction between the aforementioned factors (e.g., career-oriented learning experiences, motivation, self-regulated learning) and career readiness. Notably, the proposed model is not just a linear sequential process. Instead, career readiness will reciprocally affect career-oriented learning experiences, student motivation, and self-regulated learning abilities correspondingly. The proposed model is an ongoing cyclical process where multiple factors interplay to provide students with the necessary technical training. Finally, such technical training will complement academic education to create an integrated and comprehensive e-learning curriculum.

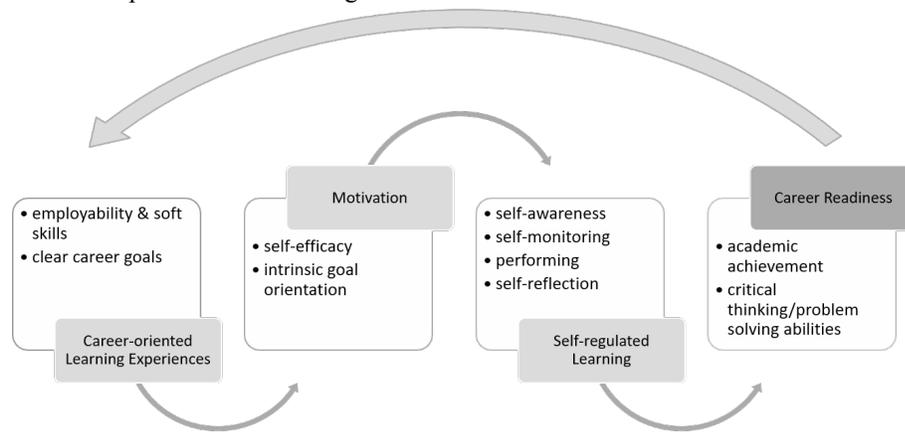


Figure 1. The Proposed Model

Taking Career and Technical Education (CTE) programs as an example, CTE programs majorly aim at teaching students both core academic skills and the ‘soft skills’ necessary in the labor market. CTE advocates claim that CTE programs can motivate students to attend school more frequently and be more engaged, and therefore improve core academic skills (Jacob, 2017). This educational strategy has gained popularity amongst postsecondary institutions nationwide because it bridges the education-workforce skills gap which has created a huge barrier to the U.S. economic competitiveness (Brand et al., 2013; Meeder & Suddreth, 2012; Dougherty, 2018). For this reason, I believe that current eLearning curriculum development should pay more attention to facilitate the transition from education to employment for online students. Work-related or internship-like experiences can immerse students in the organizations which can provide them with opportunities to develop professional networks and job-specific skills and competencies.

So, how should we develop an integrated eLearning curriculum that strikes a balance between academic competencies and professional skills? This paper reviewed and synthesized studies from practitioners and researchers about the design and development of e-internship programs. An effective e-internship program involves three levels of collaboration including organizational level, departmental level, and instructor level. Figure 2 illustrated the three levels of partnerships played by institutions, departments, and instructors in regard to designing an effective e-internship program that provides positive experiences for all who are involved.

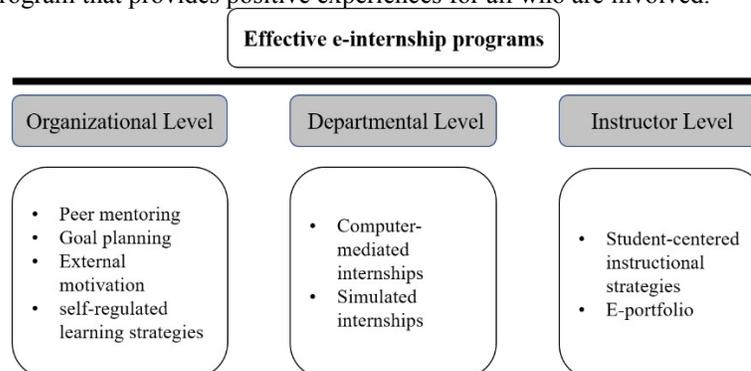


Figure 2. Three levels of collaboration of the effective e-internship programs

First of all, the facilitator role of the organization should be effectively utilized. For example, career services at universities should take the lead in not only promoting e-internship opportunities and hosting virtual career fair (Kraft et al., 2019), but also supporting students throughout their entire e-internship experiences (Roy & Sykes, 2017). Examples of such support including (a) peer mentoring; (b) help students to make their internship plans; (c) providing external motivations for the participation of e-internships (e.g., scholarship, travel funding, or extra credits. etc.), and (d) developing self-regulated learning strategies during internships (e.g., self-monitoring, self-evaluation, and self-reflection; Roy & Sykes, 2017).

Second, various e-internship modalities should be initiated within departments. Despite the discrete interpretation of e-internships, there are two major formats of e-internships discussed in the literature (Bayerlein & Jeske, 2018), including (a) *computer-mediated internships* (Jeske, & Axtell, 2019) which are the online version of traditional internships where interns work remotely for employers, and (b) *simulated internships* which students are placed in the immersive virtual internship environments, not in the real-world employer organizations (Bayerlein, 2015). According to Bayerlein and Jeske (2018), each of these two formats has its strengths and weaknesses in terms of cognitive, skill-based, and affective learning. Specifically, both formats are found to be successful in developing students' cognitive learning outcomes. Simulated internships are more successful in supporting skill-based learning outcomes compared to computer-mediated internships. However, simulated internships had minimal success in increasing students' affective learning outcomes because such internships usually involve scripted interactions based on specific learning objectives. Given this reason, students cannot experience the informal/accidental learning opportunities that happen in the real-life workplace.

And finally, student-centered instructional strategies should be implemented (Goldsmith & Martin, 2009) Such strategies contain writing reflective journals, modeling best practices, providing scaffolding, and creating e-portfolios, etc. Especially, substantial evidence has indicated that e-portfolio is a useful tool for enhancing students' employability by demonstrating their competencies and skills (Kopers et al., 2008; Halstead & Sutherland, 2006; Ferns & Comfort, 2014). Moreover, Dean and Clements (2010) successfully used daily e-logs to measure students' self-awareness, self-assurance, and self-improvement in their soft-skills development.

To conclude, the collaborative efforts of these three levels mentioned above are the key ingredients to develop effective e-internships. For example, organization support in helping students plan their career goals would be beneficial to the adoption of student-centered instructional strategies such as providing feedback for self-monitoring and writing reflective journals for self-reflection. This reciprocally beneficial relationship results in students' self-regulated learning. Additionally, the e-portfolios increase students' intrinsic and extrinsic motivation by showcasing their learning outcomes to themselves and employers.

## Conclusions

The benefits of e-internships are evident and manifold. However, there is a concern that an overly focus on early workplace learning experiences might run the risk of excessive vocational curriculum design so that the 'higher' education aspect (e.g., critical thinking and other higher-order thinking skills) was cast off (Trede &

McEwen, 2015). Thus, an integrated eLearning curriculum development should foster 'full-stack' students who possess the necessary skills for academic and professional success. To do so, e-internships should be properly incorporated into eLearning curriculum development. Well-designed e-internships will not only help students make a smooth transition from school to work by improving their employability skills, but also increasing their motivation to learn by allowing them to 'test drive' careers before committing. Although the impact of e-internships on professional and personal development might vary across individuals, the three-level collaborations could provide a useful perspective on how to improve the effectiveness of e-internships and students' career readiness in digital environments.

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**14. ABSTRACT**  
A conceptual paper proposed an integrated eLearning curriculum development model that emphasized the valuable role of career-oriented learning experiences in improving students' motivation and self-regulated learning. The career-oriented learning experiences can be gained through effective e-internship programs that involve three levels of collaboration, including organizational level, departmental level, and instructor level. Notably, an overly focus on early workplace learning experiences might run the risk of excessive vocational curriculum design so that the 'higher' education aspect was cast off. Therefore, an integrated eLearning curriculum development should consider fostering 'full-stack' students who possess the necessary skills for academic and professional success. In essence, technical training should complement academic education to create an integrated and comprehensive e-learning curriculum.

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