



## HIGHER EDUCATION INSTITUTIONS: EDUCATION PROGRAMS TO ACKNOWLEDGE A NEW LEARNING LANDSCAPE

(Review Article)

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### Abstract

There has been a shift in the learning environment for many students from a physical brick-and-mortar setting to one that is either fully virtual or enhanced by way of virtual learning opportunities. The demand for online learning continues to grow as individuals experience benefits associated with virtual learning. Higher education institutions have pioneered the online learning environment and gleaned from this experience best practices for effectively teaching in the virtual arena. The Community of Inquiry model has been identified as a framework for studying best practices in higher education, specific to virtual learning, and there is room to consider ways to translate this to the K-12 learning environment. This paper aims to explore the context of virtual or online learning, draw from the Community of Inquiry framework, discuss promising connections to higher education successes specific to virtual learning, and suggest two best practices for K-12 settings. Virtual learning can be embraced as a choice rather than a necessity and age-appropriate virtual learning opportunities can be integrated with purpose. The study posits that K-12 learning environments can benefit from frameworks of support that have been deemed efficacious in higher education.

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**Keywords:** Virtual learning, online learning, higher education, K-12, community of inquiry

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## **1. Introduction**

The landscape of public education has shifted in recent years from traditional face-to-face, brick-and-mortar classroom settings to include growing numbers of virtual learning environments. In March 2020, COVID-19, a contagious disease caused by the SARS-CoV-2 virus (World Health Organization, 2019), disrupted education at a global level as schools around the world shut down resulting in unprecedented changes in the field. These changes were presented as both areas of opportunity and challenge, demanding higher education institutions with teacher preparation and master's in education programs integrate support for educators regarding a shift toward virtual learning opportunities. All levels of education, elementary, secondary, and post-secondary were impacted as new alternatives for teaching and learning were reimagined. Since the onset of the pandemic, the demand for online learning has remained elevated as many stakeholders have experienced and embraced the comfort, flexibility, and convenience of online learning as is evidenced by the rise in percentage of virtual school offerings from 16% (pre COVID) to 46% in 2021 (Klein, 2021). Virtual learning should be conceived of as mainstream rather than an exception (Shea et al., 2022). In the current paper, a social science, theory-to-practice method was employed whereby a phenomenon was analyzed and potential solutions were suggested (Ivanović & Ho, 2019). The authors will focus on the context of online learning, draw from the Community of Inquiry (CoI) framework, explore the literature and highlight promising tools and techniques associated with higher education successes, and share two best practices for K-12 school settings. Suggestions for future research will be discussed regarding the ongoing continuum between theory and data (Varpio et al., 2020).

## **2. Online Learning**

While the popularity of virtual learning in K-12 public education is a newer phenomenon, it has already been an established reality in many higher education institutions with 97% of four year colleges offering online courses or programs in 2018 according to the National Center for Educational Statistics (NCES, 2021). As a result, higher education institutions were well-positioned to attend to the demand for online learning as an alternative to traditional education. As primary and secondary schools continue to navigate the changing dynamics of education many lessons can be gleaned from higher education, and institutions with online programs are well-positioned to include support for K-12 education professionals at a time when online and virtual learning should be integrated no matter the learning environment. Partnerships between K-12 settings and higher education institutions (HEI) could enhance the learning experience for all students while also inviting opportunities for elevating global connectivity. Global connectedness promotes and affords possibilities for

individuals to gain a deeper understanding of other cultures' languages, customs and traditions by providing educational insight across nations (Akkari & Maleq, 2019).

### **3. Problem Statement**

The Community of Inquiry framework has been established as effective within the context of higher education, specific to best practices for virtual learning. The tenets of the Community of Inquiry framework and successes experienced in higher education can be studied regarding potential applications for K-12 learning environments. Regardless of whether a K-12 classroom is fully online, fully in person, or a mix of both, educators should be aware of research-based ways to get the most out of virtual learning opportunities.

### **4. Promising Online Framework**

In an attempt to address the problem of practice an updated approach toward teaching and learning must be envisioned. Historically, numerous learning theories and models have been studied and analyzed in relation to traditional teaching and learning such as behaviorism (frequently associated with Pavlov and Skinner), cognitivism (most often connected to Chomsky), and social constructivism (typically kindred to Vygotsky, Dewey and Piaget) when examining best practices for educating students (Picciano, 2021). Over time, learning theories and models may morph or overlap resulting in the creation of a unique framework or extending an existing one to better consider a new reality. The Community of Inquiry (CoI) model is an example of such a framework in support of online learning within higher education (Garrison et al., 2000). This framework has gained popularity as a result of demonstrated success in connection to teaching and learning in the virtual arena (Diep et al., 2019).

### **5. Community of Inquiry**

Community of Inquiry is a framework containing three unique presences: teacher presence, social presence, and cognitive presence (Garrison et al., 2000). According to Picciano (2021) “presence is a social phenomenon and manifests itself through interactions among students and instructors” (p. 87). In short, teacher presence allows for instructors to present themselves as authentic and relatable thereby fostering a connection between the learner and the teacher (i.e. pre-recorded instructor videos, synchronous direct instruction, individualized support). Social presence nurtures the relationship between and among learners

resulting in communal goals and achievement (i.e. welcome messages, collaborative group work, discussion boards, established classroom norms). Cognitive presence establishes an association between the learner and the content whereby genuine learning can transpire (i.e. direct application of content, self-reflection, student choice) (Fiock, 2020). As course designers and classroom teachers continue to traverse the development of virtual K-12 education, much consideration should be given to established best practices related to enhanced learning environments. CoI is a well-established framework for studying effectiveness in the higher education virtual setting; however, more work is needed to understand the application of CoI within K-12 domains (Castellanos-Reyes, 2020). This may very well be where opportunity awaits higher education institutions with programs for training and supporting K-12 education professionals.

## **6. Connections to the Literature**

Prior to the COVID-19 related school shutdowns researchers were predicting a rise in demand for virtual learning educational offerings (Change, 2017). This prediction came to fruition when the pandemic amplified the desire for online learning exponentially and, as a result, the anticipated dollars invested in online learning, especially within the global context, is expected to grow from 7,984 million USD in 2021 to 12,930 million USD in 2028 according to market projections (Valuates Reports, 2019). To harness the momentum for online learning, higher education institutions have capitalized on the growing interest in online and virtual learning as a mainstream expectation (Shea et al., 2022). The CoI Framework lends itself as a best practice for online institutions seeking effective ways to design promising learning communities in a virtual setting (Diep et al., 2019). Colleges and universities have pioneered the online learning environment and found CoI to be a reliable foundation for designing and delivering quality instruction to online learners. K-12 educational professionals should be made aware and trained on ways to provide authentic online and virtual opportunities for all learners based on ways all three presences interact with providing an educational experience no matter the learning space (Martin et al., 2022). A deliberate effort to train the current and future teacher workforce using forward thinking tools and techniques, believed to be effective in escalating the educational experience for all, is worthy of consideration.

## **7. Best Practices**

Two best practices, based on the context of virtual learning, the Community of Inquiry model, and connections to literature regarding successes in higher education, emerged.

Educators should focus on virtual learning from the stance of choice rather than necessity in order to facilitate the best attitude and mindset for integration in the learning space. Secondly, educators should consider age-appropriate ways for virtual learning to enhance the learning process.

## **8. Choice Rather Than Necessity**

Yildirim & Seferoglu (2021) wrote about student satisfaction and academic success as two factors with direct correlations with elements supported by the CoI framework. The study looked specifically at online program effectiveness highlighting opportunities for providing training and support for instructors as a proactive way to avoid sliding back to pre-COVID blinders concerning virtual learning. Even though most K-12 schools have reopened and most learning environments are described as traditional and on-campus, the best of online learning can be embraced by choice rather than necessity. This inherently provides a protective barrier should learning ever need to go fully virtual, but it also celebrates an aspect of good that came out of a challenging situation. In a post-Covid study conducted to evaluate learning, authenticity and collaboration were determined instrumental in the area of learning facilitation (Yates et al., 2021). These are not factors specific only to online learning, yet they can and must be employed regardless of the learning environment. For example, Tan (2021) found that teacher presence was crucial for helping students recover from disruptions to learning and continue the learning process even while experiencing changes in the learning modality.

## **9. Age-Appropriate Classroom Implications**

Higher education directors and curriculum developers should be having the conversation on what transfers and what must be redesigned in order to equip and train educators regarding best practices. Better yet, these factors can be combined and K-12 classrooms can be places where authenticity exists on campus and virtually. Collaboration can happen in the classroom and online, and teacher training and graduate programs can integrate these aspects into the curriculum with purpose. One example of a learning opportunity that combines the best of in-person learning with the benefits of a virtual environment is the advanced level of networking that can happen between students (Yates et al., 2021). In younger grades, class books can be created through apps like Book Creator. Students can work collaboratively in class and then continue with the project at home due to remote and online access. Middle school learners can enjoy opportunities to connect with students across the globe using PenPal Schools. As technology continues to advance, global citizenship models are being discussed as something schools and administrators should care about and consider

(Akkari & Maleq, 2019). High school students can and should be learning about presentation etiquette in person and online as more careers require an aptitude for both. Authenticity and collaboration should be factors on professional development agendas as administrators draw support from learning theories that are gradually blurring the lines between on-campus versus online learning. In line with the Community of Inquiry model, social presence can and should be integrated in such a way that virtual communities are embraced as spaces where learning takes place. This requires a shift in thinking about virtual learning as strictly individualistic and treating it instead as ripe for the benefits associated with social learning.

## **10. Conclusions**

The public education landscape is not what it was just a few short years ago, yet this need not be seen as a negative. Online and virtual learning spaces have exploded and the K-12 education process must reflect a world where virtual learning is treated as a reality, not a futuristic concept or strictly a pandemic necessity. While much of the growth in online learning currently exists in higher education, this is reason enough to integrate online learning opportunities in the K-12 setting so learners are better equipped for a range of higher education options. Education theories have been primarily studied regarding specific tenets of traditional versus virtual and frameworks such as Community of Inquiry are being used to cross that divide. Higher education institutions with teacher preparation and master's in education programs should provide training and support for education professionals so that factors such as authenticity and collaboration are fostered in both learning environments. Rather than wish for an education landscape that used to exist as clearly on-campus or online, K-12 educators can be encouraged and trained to actively study and enthusiastically embrace the best aspects of both.

## **11. Suggestions for Future Research**

The Community of Inquiry model has been applied as a theoretical foundation for studying virtual learning in higher education and there is room for ongoing studies focused on ways to transfer findings to K-12 education settings. Sanders and Lokey-Vega (2020) confirmed that all teachers, regardless of the learning environment, think about strategies to foster a positive learning environment for students. One suggestion for future research would be to conduct interviews and or focus groups to analyze perceptions of online and on-campus teachers regarding the importance placed on each of three categories of the CoI framework: teacher presence, cognitive presence, and social presence. Correlations might be studied among populations of higher education and K-12 professionals regarding online teaching

variables. Quantitative, empirical data can be collected and analyzed for correlations between the three CoI presences and other learning theories such as transformative learning theory, theory of self-efficacy, social learning theory, and experiential learning theory. A causal comparative research study could examine differences in CoI and other theoretical frameworks between education populations such as online higher education and online K-12 professionals. The current article established theoretical relevance regarding ways to apply higher education virtual learning frameworks in support of K-12 education. The pathways to collecting data are many and varied making this theory-to-practice article the first step toward adding to the body of knowledge on virtual learning strategies that span the divide between student populations and learning environments.

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