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## RESEARCH ARTICLE

Exploring the factors challenging Virtual Internships during the COVID-19 Pandemic: An insight on students' perspective in the United Arab Emirates universities

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## ABSTRACT

The COVID-19 pandemic health restriction for almost two academic years brought considerable conditions to higher education learning methods and shifted to e-learning. Internships course is one of the courses where University students are obliged to shift the course attendance and accomplishment to be virtually or remotely. It still limited study about the factors that influence virtual internships conduction. The study aims to explore from students' perspectives the factors that influence virtual internships' conduction and their impact on students' academic achievement. A total of 214 surveys were distributed to university students in the United Arab Emirates who attended virtual internships during the COVID-19 pandemic. The study reveals that internships' flexibility, knowledge, quality, and collaboration are factors that significantly influence students' academic achievement in internships/training courses during the COVID-19 pandemic.

**Keywords:** virtual internship, Internship/Training course, virtual internship challenges, United Arab Emirates (UAE), undergraduate, COVID-19, pandemic, e-learning

## 1. Introduction

The COVID-19 pandemic obliged universities and college students to adjust their academic life according to the health restriction condition and social distancing to complete their education online or remotely conduct their internships virtually. Due to the COVID-19 crisis, teachers and students find themselves in a situation where they feel compelled to embrace digital academics.<sup>1</sup> An internship or training course, as some universities call it, is a course required by university students as part of their degree requirements. According to Hora et al.<sup>2</sup> internships, a form of work-based learning, are necessary experiences for college students to apply their knowledge, develop their professional networking, and facilitate their entry into the professions. Sykes and Roy<sup>3</sup> agree that an internship, externship, community-based project, or residency is beneficial to the success of students preparing to enter the workforce. Arnold and Cannon<sup>4</sup>, Horowitz<sup>5</sup>, Arts, et al<sup>6</sup> collectively state that educational institutes' students and business recruiters are aware of the importance of internships on the students' job opportunities. Similarly, the internships/ training links what the students' learned theoretically into a practical approach. According to Coco<sup>7</sup> internships as voluntary, temporary work placements, often undertaken by students at the university and college levels, as win-win situations for both employers and

internees. "Practicality of knowledge be determined by on what students already know and how they associate the information they learned to the situations they face in the real world of the work."<sup>8</sup> Research has shown that there is a strong correlation between students' involvement in internship programs and the success of recent graduates when transitioning to a full-time job (Matthew, et al<sup>9</sup>. and Shoenfelt et al.<sup>10</sup>). However, Vittaldas Prabhu and Aditya Kudva<sup>11</sup> mention that the main weaknesses of the success of internship programs are related to the gaps between stakeholders and their insights about internships. Virtual internships occurred in all the higher educational institutions long before the pandemic; however, the closing of physical worksites created virtual opportunities in organizations where they had never existed before. Therefore, during the COVID-19 pandemic and for almost two full academic years, the virtual internship was the only approach possible for university students. Woon et al.<sup>12</sup> state that COVID-19 disrupted internships significantly and caused a reduction in the number of placements offered and pointed out the necessary changes to the internship scope. However, Jeske & Axtell<sup>13</sup> find that the main difference in virtual internships is that "e-internships have been praised for providing excellent opportunities for practicing and enhancing communication skills." Several factors affect virtual internship conduction;

<sup>1</sup> Lederman, D. Will Shift to Remote Teaching Be Boon or Bane for Online Learning. Inside Higher Ed, 1-27; 2020. <https://www.insidehighered.com/digital-learning/article/2020/03/18/most-teaching-going-remote-will-help-or-hurt-online-learning>. Published March 18, 2020. Accessed June 18, 2020.

<sup>2</sup> Hora, M.T. Lee, Ch. Chen, Z. Hernandez, A. EXPLORING ONLINE INTERNSHIPS AMIDST THE COVID-19 PANDEMIC IN 2020–2021: RESULTS FROM A MULTI-SITE CASE STUDY; 2021.. [https://wcer.wisc.edu/docs/working-papers/WCER Working Paper No 2021\\_5\\_4.pdf](https://wcer.wisc.edu/docs/working-papers/WCER_Working_Paper_No_2021_5_4.pdf). Accessed June 19, 2020.

<sup>3</sup> Sykes, D. M., Roy, J. A Review of Internship Opportunities in Online Learning: Building a New Conceptual Framework for a Self-regulated Internship in Hospitality. *International Journal of E-Learning & Distance Education* Vol 32(1); 2017. <https://files.eric.ed.gov/fulltext/EJ1154622.pdf>. Accessed July 20, 2020.

<sup>4</sup> Arnold MJ, Cannon JA. Student expectations of collegiate internship program in business: a 10-year update. *J Educ Bus* 73(4):202–205; 1998. <https://doi.org/10.1080/08832329809601630>. Accessed July 20, 2020.

<sup>5</sup> Horowitz EM. *Chasing the pot of gold: internships on the road to employment*. Iowa State University Library, Ames, IA. (ERIC document reproduction service, no. ED401551); 1996.

<sup>6</sup> Arts JA, Gijsselaers WH, Boshuizen H. *Understanding managerial problem-solving, knowledge use and information processing: investigating stages from school to the workplace*. *Contemp Educ Psychol* 31(4):387–410; 2006.

<sup>7</sup> Coco, M. *Internships: A try before you buy arrangement*. *SAM Advanced Management Journal*, 65, 41-47; 2000.

<sup>8</sup> Ronnestad MN, Skovholt TM. *Supervision of beginning and advanced graduate students of counseling and psychotherapy*. *J Couns Dev* 71:396–405. p. 20–22; 1993.

<https://onlinelibrary.wiley.com/doi/abs/10.1002/j.1556-6676.1993.tb02655.x>. Accessed June 23, 2020.

<sup>9</sup> Matthew, Susan M., et al. *Relationships between Students' Experiences of Learning in an Undergraduate Internship Programme and New Graduates' Experiences of Professional Practice*. *Higher Education*, vol. 64, no. 4, 2012, pp. 529–42. JSTOR. <http://www.jstor.org/stable/23275381>. Accessed August 23, 2020.

<sup>10</sup> Shoenfelt, E. L., Kottke, J. L., & Stone, N. J. *Master's and undergraduate industrial/organizational internships: Databased recommendations for successful experiences*. *Teaching of Psychology*, 39(2), 100-106; 2012. Accessed June 23, 2020.

<sup>11</sup> Vittaldas Prabhu B. Aditya Kudva S. *Success of Student Internship in Engineering Industry: A Faculty Perspective*. *Higher Education for the Future* 3(2); 2016.

[https://www.researchgate.net/publication/304907666\\_Success\\_of\\_Student\\_Internship\\_in\\_Engineering\\_Industry\\_A\\_Faculty\\_Perspective](https://www.researchgate.net/publication/304907666_Success_of_Student_Internship_in_Engineering_Industry_A_Faculty_Perspective). Accessed August 26, 2020.

<sup>12</sup> Woon. C. Teng, C., Tar Lim, R.B Wai, D. Chow, S. Narayanasamy, S. Liow, C.H. and Lee, J. J-M *Internships before and during COVID-19: experiences and perceptions of undergraduate interns and supervisors*.

<https://www.emerald.com/insight/content/doi/10.1108/HESWBL-05-2021-0104/full/pdf>. Accessed August 26, 2020.

<sup>13</sup> Jeske, D., Axtell, C.M. *e-Internships: Prevalence, characteristics, and role of student perspectives*. *Internet Research*, 24(4), 457–473; 2014. <https://www.emerald.com/insight/content/doi/10.1108/IntR-11-2012-0226/full/html>. Accessed August 26, 2020.

Hora et al.<sup>14</sup> believe that internships, as an effective strategy, played an essential role in filling the skills gap that has been continuing in higher education between education and employment. Baker and Fitzpatrick<sup>15</sup> mention Six themes occurred: initial concern about virtual work, the salience of the intern-supervisor relationship, lack of exposure to office dynamics, motivation and time management concerns, perceived benefit of developing work-life balance, and perception of growth/development during the internship. Hora et al.<sup>16</sup> argue that several reasons make virtual internships unlikely to disappear post-pandemic top significance for improvement, equitable access, and quality control in higher education. Sweitzer and King<sup>17</sup> outlined four stages of internship experience that included anticipation, exploration, competence, and culmination. Kaşlı, & İlban,<sup>18</sup> suggested in their study different concept between the internship problems and view of profession, intention to work in the sector and between view of profession and the intention to work in the sector. However, Hora et al.<sup>19</sup> Address Issues of , internships flexibility, Diversity, Equity, and Inclusion. The paper will explore further factors that could affect the students' virtual internship accomplishment during the pandemic. Hence, this study addresses gaps identified in the literature by exploring more evidence about the factors that impact virtual internships' presence during the COVID-19 pandemic for scholars and practitioners. The study suggested factors influencing undergraduate students' virtual internships. The study objectives are to explore further factors challenging students' change to virtual internships and from students'

perspectives the impact of these factors on internship course achievement during the COVID-19. This study seeks to answer two fundamental research questions: What factors challenge students' virtual internship conduction? And what is the impact of these factors on students' academic achievement in this course? The paper proposes internship flexibility, quality, knowledge, and collaboration factors to understand the impact of these factors on students' academic achievement in the internship/ training course. This paper will be structured as follows: The following section presents a literature review on internships and then proposes hypotheses. Then, the research method will be discussed, followed by the data analysis and presentation of the results. Finally, the research's contributions, implications, limitations, and further directions for future research will be provided.

## 2. Literature review

Companies prefer to select employees completing an internship as it permits the links between what the students learn in their universities and what practicing work is. According to Moss et al.<sup>20</sup> companies usually face higher expectations from employers, especially on the quality and length of their internship experiences. Posey et al.<sup>21</sup> agree that for students, internships are an experience of practical work. Vittaldas Prabhu and Aditya Kudva mention that the main impediments to the success of internship programs are related to the gaps between stakeholders and their perceptions about internships. Similarly, Gault et al.<sup>22</sup> agree that academic internships are a bridge to link

<sup>14</sup> Hora, M. T., Wolfgram, M., & Thompson, S. *What do we know about the impacts of internships on student outcomes? Results from a preliminary review of the scholarly and practitioner literatures.* Center for Research on College-Workforce Transitions Research Brief #2. University of Wisconsin–Madison; 2017.

<sup>15</sup> Baker, I. & Fitzpatrick, D. *Student Experiences in Pre-COVID Virtual Internships: Integration, Barriers, Motivation Challenges, Supportive Supervisors, and Intern Growth.* American Journal of Distance Education; 2022. <https://www.tandfonline.com/doi/abs/10.1080/08923647.2022.2034399> Accessed August 26, 2020.

<sup>16</sup> Hora, M.T. Lee, Ch. Chen,Z. Hernandez, A. *EXPLORING ONLINE INTERNSHIPS AMIDST THE COVID-19 PANDEMIC IN 2020–2021: RESULTS FROM A MULTI-SITE CASE STUDY;* 2021. [https://wcer.wisc.edu/docs/working-papers/WCER\\_Working\\_Paper\\_No\\_2021\\_5\\_4.pdf](https://wcer.wisc.edu/docs/working-papers/WCER_Working_Paper_No_2021_5_4.pdf) Accessed August 30, 2020.

<sup>17</sup> Sweitzer, H. F., & King, M. A. *Stages of an internship re-visited: Facilitating learning and development through engagement.* Journal of Human Services, 33(1), 56-72; 2013. [https://family.uoguelph.ca/sites/default/files/page-files/Stages\\_of\\_an\\_internship\\_re-visited\\_2013.pdf](https://family.uoguelph.ca/sites/default/files/page-files/Stages_of_an_internship_re-visited_2013.pdf) Accessed June 30, 2020.

<sup>18</sup> Kaşlı, M., & İlban, M. O. *The relationship between problems faced during internships and interns' view of profession and intention to work in the tourism industry.* Egitim Arastirmalari-Eurasian Journal of

Educational Research, 52, 79-96; 2013. [https://www.researchgate.net/publication/280977175\\_The\\_Influence\\_of\\_Problems\\_Faced\\_During\\_Internships\\_on\\_Interns'\\_Views\\_of\\_Their\\_Profession\\_and\\_Their\\_Intention\\_to\\_Work\\_in\\_the\\_Tourism\\_Industry](https://www.researchgate.net/publication/280977175_The_Influence_of_Problems_Faced_During_Internships_on_Interns'_Views_of_Their_Profession_and_Their_Intention_to_Work_in_the_Tourism_Industry) Accessed September 02, 2020.

<sup>19</sup> Hora, M.T. Lee, Ch. Chen,Z. Hernandez, A. *EXPLORING ONLINE INTERNSHIPS AMIDST THE COVID-19 PANDEMIC IN 2020–2021: RESULTS FROM A MULTI-SITE CASE STUDY;* 2021. [https://wcer.wisc.edu/docs/working-papers/WCER\\_Working\\_Paper\\_No\\_2021\\_5\\_4.pdf](https://wcer.wisc.edu/docs/working-papers/WCER_Working_Paper_No_2021_5_4.pdf) Accessed August 30, 2020.

<sup>20</sup> Moss, D.M., Barry, C.A., MacCleoud, H. *Promoting intercultural learning through an international teaching internship program. Inquiries into literacy learning and cultural competencies in a world of borders.* pp.199-217; 2018.

<sup>21</sup> Posey LO, Carlisle KE, Smellie DC. *An internship study case: how internships can benefit the student, the university and the organization.* Train Dev J 42(2):59; 1998.

<sup>22</sup> Gault J, Leach E, Duey M. *Effects of business internships on job marketability: the employers' perspective.* Educ Train 52(1):76–88; 2010.

theory and practice by taking part in supervised and scheduled work. According to Wampler<sup>23</sup> the first virtual internships in the 1990s, the concept has become more and more common in various fields such as software development, journalism, engineering, and fashion. According to Casey<sup>24</sup> traditional internship is a sort of "geographical self: humans who are not only learning through an educational work experience but are doing though from a specific place, which is an immediate environment of my lived body." According to Kaşlı & İlban<sup>25</sup> internship can be viewed as a complement to students' education; the undergraduates can gain experience supporting their future careers. Agreeing to Knouse et al.,<sup>26</sup> that the positive relationship between business college internships and the college performance and future job opportunities. However, Virtual internship method is increasing along with COVID-19 pandemic restriction and the depending on e-learning technology. According to Bayerlein and Jeske<sup>27</sup> e-internship as an internship mainly mediated by computer technologies. virtual internships provide parallel opportunities using digital platform and e-learning platform, which allows students to practice their technical, academics, and soft skills. Researchers agree that virtual internships, e-internships, computer-mediated internships, and

work-based learning programs are conducted exclusively via digital or online technologies (Jeske & Axtell<sup>28</sup>; Ruggiero & Boehm<sup>29</sup>; Hora et al.<sup>30</sup>). Hora et al.,<sup>31</sup> considered the virtual format more convenient for the interns. Yet, virtually conducting internships the undergraduate students is compulsory as the pandemic exudes, to complete the course requirement and accomplish their degrees during the COVID-19 pandemic. Jose et al.<sup>32</sup> mention that Shifting to a virtual internship may be a successful strategy when an intern cannot complete an ongoing internship in person due to an emergency or other outstanding circumstances. Rillig et al.<sup>33</sup> mention that a virtual work environment can be created using various virtual platforms now available, including virtual meeting spaces, cloud document sharing and storage, and messaging applications. Sykes and Roy<sup>34</sup> state that virtual internships are real-world experiences that can be more critical for online students when they graduate and enter the workforce. Internship course duration varies from one college to another in the United Arab Emirates. Consequently, all students are required to successfully complete 8-12 weeks of internships training, depending on the students' majors, to fulfill their graduation requirements according to their programs. The universities in the UAE have a well-developed internship program for

<sup>23</sup> Wampler, A. Charny, L. DeHaven, C. Banta. *Development of a virtual open house to market a dietetic internship program*. Journal of the American Dietetic Association vol. 111, Issue 9, Supplement, 2011, pp.A78; 2011.

[https://www.researchgate.net/publication/281452464\\_Using\\_Virtual\\_Internships\\_as\\_an\\_Innovative\\_learning\\_technique](https://www.researchgate.net/publication/281452464_Using_Virtual_Internships_as_an_Innovative_learning_technique) Accessed September 11, 2020.

<sup>24</sup> Casey, E. S. *Between geography and philosophy: What does it mean to be in the place-world?* Annals of the Association of American Geographers, 91(4), 683–693. P 86; 2001. <http://www.jstor.org/stable/3651229> Accessed September 02, 2020.

<sup>25</sup> Kaşlı, M., & İlban, M. O. *The relationship between problems faced during internships and interns' view of profession and intention to work in the tourism industry*. Egitim Arastirmalari-Eurasian Journal of Educational Research, 52, 79-96; 2013. [https://www.researchgate.net/publication/280977175\\_The\\_Influence\\_of\\_Problems\\_Faced\\_During\\_Internships\\_on\\_Interns'\\_Views\\_of\\_Their\\_Profession\\_and\\_Their\\_Intention\\_to\\_Work\\_in\\_the\\_Tourism\\_Industry](https://www.researchgate.net/publication/280977175_The_Influence_of_Problems_Faced_During_Internships_on_Interns'_Views_of_Their_Profession_and_Their_Intention_to_Work_in_the_Tourism_Industry) Accessed September 02, 2020.

<sup>26</sup> Knouse, S.B. Tanner, J.R. Harris, E.W. *The Relation of College Internships, College Performance, and Subsequent Job Opportunity*. *Journal of Employment Counseling*. Vol (36). 35-43; 1999. <https://onlinelibrary.wiley.com/doi/abs/10.1002/j.2161-1920.1999.tb01007.x> Published 23 December 2010. Accessed June 21, 2020.

<sup>27</sup> Bayerlein, L. & Jeske, D. *Student learning opportunities in traditional and computer-mediated internships*. *Education & Training*, 60 (1), 27–38; 2018. <https://www.emerald.com/insight/content/doi/10.1108/ET-10-2016-0157/full/html> Accessed June 23, 2020.

<sup>28</sup> Jeske, D. & Axtell, C. M. *E-internship prevalence, characteristics, and research opportunities*. In *Proceedings of the IADIS International Conference on e-Society*, (pp. 201-208); 2013. [https://www.academia.edu/24387103/E\\_internship\\_prevalence\\_characteristics\\_and\\_research\\_opportunities](https://www.academia.edu/24387103/E_internship_prevalence_characteristics_and_research_opportunities) Accessed June 25, 2020.

<sup>29</sup> Ruggiero, D., & Boehm, J. *Design and Development of a Learning Design Virtual Internship Program*. *International Review of Research in Open and Distributed Learning*, 17(4), 105–120; 2016. <https://doi.org/10.19173/irrodl.v17i4.2385>

<sup>30</sup> Hora, M.T. Lee, Ch. Chen, Z. Hernandez, A. *EXPLORING ONLINE INTERNSHIPS AMIDST THE COVID-19 PANDEMIC IN 2020–2021: RESULTS FROM A MULTI-SITE CASE STUDY*; 2021. [https://wcer.wisc.edu/docs/working-papers/WCER\\_Working\\_Paper\\_No\\_2021\\_5\\_4.pdf](https://wcer.wisc.edu/docs/working-papers/WCER_Working_Paper_No_2021_5_4.pdf) Accessed August 30, 2020.

<sup>31</sup> Hora, M.T. Lee, Ch. Chen, Z. Hernandez, A. *EXPLORING ONLINE INTERNSHIPS AMIDST THE COVID-19 PANDEMIC IN 2020–2021: RESULTS FROM A MULTI-SITE CASE STUDY*; 2021. [https://wcer.wisc.edu/docs/working-papers/WCER\\_Working\\_Paper\\_No\\_2021\\_5\\_4.pdf](https://wcer.wisc.edu/docs/working-papers/WCER_Working_Paper_No_2021_5_4.pdf) Accessed August 30, 2020.

<sup>32</sup> Jose, B. Berry, M. & Andrews, L. *Course Format and Student Learning Styles: A Comparison of Political Science Courses*, *American Journal of Distance Education*; 2019. <https://www.tandfonline.com/doi/abs/10.1080/08923647.2019.1643697> Accessed September 19, 2020.

<sup>33</sup> Ruggiero, D., & Boehm, J. *Design and Development of a Learning Design Virtual Internship Program*. *International Review of Research in Open and Distributed Learning*, 17(4), 105–120; 2016. <https://doi.org/10.19173/irrodl.v17i4.2385> Accessed October 11, 2020.

<sup>34</sup> Sykes, D. M., & Roy, J. *A Review of Internship Opportunities in Online Learning: Building a New Conceptual Framework for a Self-regulated Internship in Hospitality*. *International Journal of E-Learning & Distance Education* Vol 32(1); 2017. <https://files.eric.ed.gov/fulltext/EJ1154622.pdf> . Accessed October 15, 2020.

their students during the Pandemic using a digital platform and e-learning systems in the universities. The internship course is generally three credit hours in the student's study plan. However, the students are obliged to complete the internship or training course to fulfill their degree requirements. During the Pandemic, all the universities in the UAE shifted to online or virtual internships, which enables students to work on projects and gain professional work experience without physically working at a company's office. Students work on projects and gain professional work experience without physically working at a company's office.

#### 2.4.1 Virtual Internship Flexibility

The virtual internship program during COVID-19 permits a flexible schedule and working from home. Lansu et al.<sup>35</sup> agree that physical or virtual modes of placement and internships are useful tools in professional learning: they bring students into open contact with the professional field and fulfill the needs for professional development and work experience. Internship flexibility facilitates a flexible working schedule, flexible starting hours, flexible meeting time and duration, and no direct monitoring from the supervisor. Cord & Clements,<sup>36</sup> state that virtual internships conducted using online modes will never need to stress over being late to work or requesting days off; no hand-holding; all tasks are done with the interns' care. Kowalski et al.<sup>37</sup> state that students prefer online courses for greater convenience and flexibility. Zacharis<sup>38</sup> noted an unintended consequence of virtual courses' extensive image of flexibility and convenience. Therefore, the following hypothesis is developed. H1: Virtual internship flexibility effect positively students' course achievement.

#### 2.4.1 Virtual Internship Quality

The quality of internships is a much-debated subject in education research. A significant number of studies identified different predictors of the quality of internships like adequate design and good organization. According to Hora et al.<sup>39</sup> virtual internship quality is the degree to which a student intern considers their experience to be developmentally productive with respect to their academic and career goals. By being associated with the virtual internship, students are still required to accomplish and acquire significant internship quality. Technical support is vital to confirm the internship quality, according to Thompson<sup>40</sup> providing virtual resources for students and employee is necessary to ensure engagement, socialization, supervision, and mentoring of interns, in addition to the distribution and training in technology required for remote work. Similarly, Bayerlein & Jeske,<sup>41</sup> agree that virtual internships "likely propensity for computer-mediated graduate work environments," specifically, "being able to present ideas, concepts, and work products in a computer-mediated environment." However, virtual internship design and timetable is a major factor in your days and guarantee that you can in any case set aside a few minutes for the things you need to complete. Vriens et al.<sup>42</sup> suggested that an effective virtual internship needs operative information technologies, should include a face-to-face component and must be well organized and planned. Virtual internship adequate timetable and well tasks assignment are significant to the interns. Correspondingly, Hardie, et al.<sup>43</sup> agree that the strongest correlation is between host organization design of internship opportunities where they assign work tasks, which enable students to acquire job skills, and skills gained by students. Students being in a virtual environment can be difficult to participate in physical activities, living in the offices

<sup>35</sup> Lnasu, A. Löhrr, A. van Dorp, K.J. ( 2008) PROFESSIONAL DEVELOPMENT BY E-LEARNING: EXAMPLES OF EFFECTIVE REMOTE INTERNSHIP MODELS. Retrieved from [https://www.researchgate.net/publication/242488591\\_Professional\\_Development\\_by\\_e-learning\\_examples\\_of\\_effective\\_remote\\_internship\\_models](https://www.researchgate.net/publication/242488591_Professional_Development_by_e-learning_examples_of_effective_remote_internship_models)

<sup>36</sup> Cord, B. & Clements, M. (2010). Pathway for student self-development: A learning oriented internship approach. *Australian Journal of Adult Learning*, 50 (2). 287- 307.

<sup>37</sup> Kowalski, T. J., Dolph, D. A., & Young, I. P. (2014). Student motives for taking online courses in educational administration. *Educational Research Quarterly*, 38(1), 27–42

<sup>38</sup> Zacharis, N. Z. (2011). The effect of learning style on preference for web-based courses and learning outcomes. *British Journal of Educational Technology*, 42(5), 790–800. doi:10.1111/bjjet.2011.42.issue-5

<sup>39</sup> Hora, M.T. Lee, Ch. Chen,Z. Hernandez, A. *EXPLORING ONLINE INTERNSHIPS AMIDST THE COVID-19 PANDEMIC IN 2020–2021: RESULTS FROM A MULTI-SITE CASE STUDY*; 2021.

[https://wcer.wisc.edu/docs/working-papers/WCER\\_Working\\_Paper\\_No\\_2021\\_5\\_4.pdf](https://wcer.wisc.edu/docs/working-papers/WCER_Working_Paper_No_2021_5_4.pdf) Accessed August 30, 2020.

<sup>40</sup> Thompson, D. *Lincoln financial group conducts virtual internships*. TD: Talent Development. August 74 (8), p.3; 2013.

<sup>41</sup> Bayerlein, L. & Jeske, D. *Student learning opportunities in traditional and computer-mediated internships*. *Education & Training*, 60 (1), 27–38. P. 31; 2018. <https://doi.org/10.1108/ET10-2016-0157> Accessed August 30, 2020.

<sup>42</sup> Vriens, M. Op de Beek, I. De Guyter, J. Van Petegem, W. *Virtual Placement: Improving The International Work Experience of Students" in Edulearn*. 2<sup>nd</sup> Conference on Education and New Learning Technologies, pp 1175-1183; 2010.

<sup>43</sup> Hardie, G. Almeida, S. Ross, P. *Value of industry mentoring and resource commitment to the success of an undergraduate internship program: A case study from an Australian university Industry*. *International Journal of Work-Integrated Learning*, 19(2), 155-168; 2018. <https://files.eric.ed.gov/fulltext/EJ1182117.pdf> Accessed October 17, 2020.

and company actual physical environments, missing the knowledge of the culture of the company the students wishing to understand that “students doing internship had “more confidence, improved class discussions and better opportunities for employment upon graduation”<sup>44</sup>. However, Weible & McClure<sup>45</sup> state that student also bears responsibility for completing all the academic components of the course and the task components of the internship. Therefore, the following hypothesis is developed H2: Virtual Internship quality effect positively student academic performance.

#### 2.4.1 virtual Internship knowledge

Internship, studies also reported that one significant benefit of students’ participation in internships is the improvement of their knowledge and various skills which are essential to career success (Hora et al.<sup>46</sup>; Dean & Clements<sup>47</sup>). Lansu, et al.<sup>48</sup> agree that being in physical or virtual modes of placement, internships are useful instruments in professional learning: they bring students into open contact with the professional field and fulfill the needs of professional development and work experience. Students must face several aspects when they enroll in working and practical life. They must change themselves corresponding to the skilled environment by applying their theoretical knowledge in the latest world of jobs. Generally, industry undergraduates use their abilities and academic business knowledge in their first jobs (Arts, et al.<sup>49</sup>) Through participating in theoretical knowledge and training through virtual internship programs, undergraduates can be enabled to improved contrivance at the workplace<sup>50</sup>. According to Gault et al.<sup>51</sup> internships are improving the interns’

knowledge and build Interruption Bridge to connect the theory and training with getting role in controlled and planned work. These internship programs not just enhance undergraduates’ individual skills but also clean their career progress and knowledge. For students, internships are experience of practical work, as firms prefer those graduates who have essential abilities and useful knowledge.<sup>52</sup> Therefore, the following hypothesis is developed.

H3: Virtual internship knowledge effect positively student academic performance.

#### 2.4.1 Internship communication

Zoom meeting and Team has replaced face-to-face meeting, video/phone calls, text messaging and emails have become standard modes of communication and collaboration in a virtual internship, and supervisors are more accessible to interns. Sykes and Roy<sup>53</sup> agree that virtual internships are useful to developing student confidence, building relationships, and reflecting their real-life experience in the workplace. According to Li and Craig<sup>54</sup> who identified three levels of collaboration self-regulated, employability, and soft skills factors that contributed to an effective e-internship program, including organizational level, organizational level, and instructor level. Companies prefer those business Internship as it permit the associations between what the students learn in their universities, and what practicing work is. Clearly the interaction is important as firms’ job to make sure all their interns are perfectly notified regarding strategies for the future, yet if those strategies are changing

<sup>44</sup> Weible, R. McClure, R. *An Exploration of the Benefits of Student Internships to Marketing Departments*. Marketing Education Review 21(3) 229-240; 2010. <https://www.tandfonline.com/doi/abs/10.2753/MER1052-8008210303> Accessed October 20, 2020.

<sup>45</sup> Weible, R. McClure, R. *An Exploration of the Benefits of Student Internships to Marketing Departments*. Marketing Education Review 21(3) 229-240; 2010. <https://www.tandfonline.com/doi/abs/10.2753/MER1052-8008210303> Accessed October 20, 2020.

<sup>46</sup> Hora, M. T., Wolfgram, M., & Thompson, S. *What do we know about the impacts of internships on student outcomes? Results from a preliminary review of the scholarly and practitioner literatures*. Center for Research on College-Workforce Transitions Research Brief #2. University of Wisconsin–Madison; 2017.

<sup>47</sup> Dean, B. A., & Clements, M. D. *Pathway for student self-development: A learning orientated internship approach*. Australian Journal of Adult Learning, 50(2), 287–307; 2010.

<sup>48</sup> Lnasu, A. Löhrr, A. van Dorp, K.J. *PROFESSIONAL DEVELOPMENT BY E-LEARNING: EXAMPLES OF EFFECTIVE REMOTE INTERNSHIP MODELS*; 2009. <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.996.9688&rep=rep1&type=pdf> Accessed November 15, 2020.

<sup>49</sup> Arts JA, Gijsselaers WH, Boshuizen H *Understanding managerial problem-solving, knowledge use and information processing:*

*investigating stages from school to the workplace*. Contemp Educ Psychol 31(4):387–410; 2006.

<sup>50</sup> Tynjälä, P. *Perspective into learning in the workplace*. Educational Research Review 3(2):130-154; 2008. [https://www.researchgate.net/publication/222825255\\_Perspective\\_into\\_learning\\_in\\_the\\_workplace](https://www.researchgate.net/publication/222825255_Perspective_into_learning_in_the_workplace) Accessed November 16, 2020.

<sup>51</sup> Gault J, Leach E, Duey M. *Effects of business internships on job marketability: the employers’ perspective*. Educ Train 52(1):76–88; 2010.

<sup>52</sup> McDonald, J., Birch, C., Hitchman, A., Fox, P., & Lido, C. *Developing graduate employability through internships: New evidence from a UK university*. <https://files.eric.ed.gov/fulltext/EJ1182117.pdf> Accessed November 23, 2020.

<sup>53</sup> Sykes, D. M., & Roy, J. *A Review of Internship Opportunities in Online Learning: Building a New Conceptual Framework for a Self-regulated Internship in Hospitality*. International Journal of E-Learning & Distance Education Vol 32(1); 2017. <https://files.eric.ed.gov/fulltext/EJ1154622.pdf> Accessed November 24, 2020.

<sup>54</sup> Li, S. Craig, S. D. *Why do we adopt e-internships in eLearning curriculum development? A Model of Career-oriented Learning Experiences, Motivation, and Self-Regulated Learning*. Innovate Learning Summit 2020 - November 3-5; 2020.

in a quickly moving condition. After a distance internship, there is less opportunity to be visible and have face-to-face interactions with supervisors, colleagues, and clients as you would in a typical work setting. However, the virtual internships open global opportunities to the students to collocate and learn experiences beyond their geographical location Casey<sup>55</sup> mention that virtual internship “given locale is linked to every other place in global space, pre-eminently by the Internet”. Therefore, the following hypothesis is developed.

H4: internship communication effect positively student academic performance

### Internship course in the United Arab Emirates' universities

Internships in UAE universities for two academic years were conducted virtually during the COVID-19 pandemic. Therefore, universities tried to prepare a well-developed internship program for their students. All students in different majors are required to complete 8-16 weeks of internships/training, depending on the students' majors, to fulfill their program's graduation requirements. The internship course is generally three credit hours in the undergraduate student's study plan. A field supervisor at the training site in coordination with an academic supervisor from the college or the students' departments supervises the intern. (AU<sup>56</sup>, AUS<sup>57</sup>, UOS<sup>58</sup>)

### 3. Methodology

This study is quantitatively based on self-report, online survey data that resulted in a total of 214 surveys. They were distributed to university students in the United Arab Emirates who attended virtual internships during the COVID-19 pandemic. The data was collected from three universities in the UAE (Ajman University, American University of Sharjah, and the University of Sharjah). The

universities were located in the Emirate of Ajman and Sharjah. The non-probability sample was adopted, which is commonly used in the educational field (e.g., Bokolo Jr et al.<sup>59</sup>; Moore et al.<sup>60</sup>; Zainab et al.<sup>61</sup>). The online surveys were sent to the participants using Google Forms online. This study extends the hypotheses based on previous studies using a simple conceptual framework that enables the testing of specific predecessors and challenging factors that may contribute to particular student academic achievement in the internship course (Alhamdi, 2022<sup>62</sup>; Hora et al. 2021<sup>63</sup>). SPSS version 28 was used to analyze the data was used to analyze the collected data.

### 3.1 Data Collection

The main objective of this study was to explore the factors; Virtual Internship flexibility (VIF), virtual Internship quality (VIQ), virtual internship Knowledge (VIK), and Internship collaboration (VIC) that challenge the undergraduate students' virtual internships and their impact on students' course achievement. The study design was conducted on undergraduate students. Participants were surveyed using questionnaires developed based on the established instrument in the field of the study to measure the variable of the current study. The data were collected from internships students who experienced virtual internships in different organizations online at three universities in the UAE (Ajman University, American University of Sharjah, and the University of Sharjah). The universities were in Ajman and Sharjah Emirates. All students were given a brief introduction about the purpose of the study.

### 3.2 Measures

The study used three items for each construct, virtual internships flexibility (VIF), virtual internship quality (VIQ), Virtual knowledge (VIK), and virtual

<sup>55</sup>Casey, E. S. *Between geography and philosophy: What does it mean to be in the place-world?* Annals of the Association of American Geographers, 91(4), 683–693. P.864; 2011. <https://www.tandfonline.com/doi/pdf/10.1111/0004-5608.00266> Accessed November 24, 2020.

<sup>56</sup> Ajman University. [www.ajman.ae](http://www.ajman.ae) . Accessed November 16, 2020.

<sup>57</sup> American University of Sharjah. [www.aus.edu](http://www.aus.edu) Accessed November 16, 2020.

<sup>58</sup> University of Sharjah. [www.sharjah.ac.ae](http://www.sharjah.ac.ae) . Accessed November 16, 2020.

<sup>59</sup> Bokolo Jr, A., Kamaludin, A., Romli, A., Mat Raffei, A.F., A/L Eh Phon, D.N., Abdullah, A., Leong Ming, G., A. Shukor, N., Shukri Nordin, M. and Baba, S. *A managerial perspective on institutions' administration readiness to diffuse blended learning in higher education: Concept and evidence.* Journal of Research on Technology in Education, 52(1), pp.37-64; 2010.

<sup>60</sup> Moore, J.L. Dickson-Deane, C. Galyen, K. E-Learning, online learning, and distance learning environments: Are they the same? *The*

*Internet and Higher Education*. Volume 14, Issue 2, March 2011, Pages 129-135; 2011.

<https://www.sciencedirect.com/science/article/abs/pii/S109675161000886#> Accessed December 30, 2020.

<sup>61</sup> Zainab, B., Awais Bhatti, M., & Alshagawi, M. Factors affecting e-training adoption: An examination of perceived cost, computer self-efficacy and the technology acceptance model. *Behaviour and Information Technology*, 36(12), 1261–1273; 2017.

<sup>62</sup> AlGhamdi, R.A. Virtual internship during the COVID-19 pandemic: exploring IT students' satisfaction. *Education + Training journal*; 2022. <https://www.emerald.com/insight/content/doi/10.1108/ET-12-2020-0363/full/html?skipTracking=true> Accessed December 30, 2020.

<sup>63</sup> Hora, M.T. Lee, Ch. Chen, Z. Hernandez, A. *exploring online internships amidst the covid-19 pandemic in 2020–2021: results from a multi-site case study*; 2021. [https://wcer.wisc.edu/docs/working-papers/WCER\\_Working\\_Paper\\_No\\_2021\\_5\\_4.pdf](https://wcer.wisc.edu/docs/working-papers/WCER_Working_Paper_No_2021_5_4.pdf) Accessed August 30, 2020.

internships collaboration (VIC) using (Hora et al.<sup>64</sup>; Li and Craig,<sup>65</sup>; Lansu, et al.<sup>66</sup>; Kaşlı, and İlban,<sup>67</sup>; Hardie et al.<sup>68</sup>). All the participants were attending virtual internships conducted online during the COVID-19 pandemic. SPSS statistical Software version 27 was used to analyze the data. The questionnaires included demographic information and five sections of 15 items measuring the five constructs in the proposed model of this study. All these items were phrased as questions and were adapted from other studies. The study used a 5-point Likert scale to measure the study construct.

Anchor rage from 1-5 (strongly disagree to agree strongly).

#### 4. Data Analysis

##### 4.1 Participants

A total of 214 undergraduate students were selected from the three universities. The sample included 105 male students (49.1%) and 109 female students (50.9%). 43.9% were students at Ajman University (AU), 21% from the American University of Sharjah (AUS), and 35% from the University of Sharjah. Table. 1 presenting the demographic analysis. Table.1

**Table. 1** Demographic data:

Variables	Frequency	Percentage
<b>Gender</b>		
Male	105	49.1
Female	109	50.9
<b>Age</b>		
20-22Years	98	45.8
23-25Years	84	39.3
26-28Years	32	15.
<b>University</b>		
Ajman University	94	43.9
American University of Sharjah	45	21.0
University of Sharjah	75	35.0
<b>Major/College</b>		
Business Administration	78	36.4
Information Technology	39	18.2
Engineering	31	14.5
Mass Communication	17	7.9
Pharmacy	16	7.5
Humanities	11	5.1
Dentistry	11	5.1
Law	11	5.1

##### 4.2 Reliability Analysis

The reliability analysis for all items in the proposed model was performed using Cronbach's alpha value, as shown in table 2 for the (3 items). This indicates that the variables are extremely reliable since the calculated alpha value is greater than 0.7.

The calculated Cronbach's value was accepted: Internship Flexibility (0.875), Internship Quality (.904), Internship Knowledge (.866), Internship communication (.855), and students' achievement (.866).

<sup>64</sup> Hora, M.T. Lee, Ch. Chen,Z. Hernandez, A. *exploring online internships amidst the covid-19 pandemic in 2020–2021: results from a multi-site case study*; 2021. [https://wcer.wisc.edu/docs/working-papers/WCER\\_Working\\_Paper\\_No\\_2021\\_5\\_4.pdf](https://wcer.wisc.edu/docs/working-papers/WCER_Working_Paper_No_2021_5_4.pdf) Accessed August 30, 2020.

<sup>65</sup> Li, S. Craig, S. D. *Why do we adopt e-internships in eLearning curriculum development? A Model of Career-oriented Learning Experiences, Motivation, and Self-Regulated Learning*. Innovate Learning Summit 2020 - November 3-5; 2020.

<sup>66</sup> Lnasu, A. Löhr, A. van Dorp, K.J. *professional development by e-learning: examples of effective remote internship models*, 2008. <https://www.researchgate.net/publication/242488591> Professional Development by e-learning examples of effective remote internship models

<sup>67</sup> Kaşlı, M., & İlban, M. O. *The relationship between problems faced during internships and interns' view of profession and intention to work in the tourism industry*. Egitim Arastirmalari-Eurasian Journal of Educational Research, 52, 79-96; 2013.

<https://files.eric.ed.gov/fulltext/EJ1060369.pdf> Accessed December 31, 2020.

<sup>68</sup> Hardie, G. Almeida, S. Ross, P. *Value of industry mentoring and resource commitment to the success of an undergraduate internship program: A case study from an Australian university Industry*. International Journal of Work-Integrated Learning, 2018, 19(2), 155-168. <https://files.eric.ed.gov/fulltext/EJ1182117.pdf> Accessed December 31, 2020.



**Table 2.** Reliability Statistics

Constructs	Cronbach's alpha value	N of items
Internship Flexibility	.875	3
Internship Quality	.904	3
Internship Knowledge	.866	3
Internship communication	.855	3
Students' achievement	.866	3

### 4.3 Regression analysis

The hypotheses were tested by the statistical package of social sciences (SPSS) software. Regarding H1. Table 3 below showing virtual internship flexibility has significantly influenced students' course achievement. Hypothesis H2 in the result table showed that Internship quality substantially influences students' course

achievement. As shown in the table that H3 also shows that internship knowledge significantly affects students' course achievement. Regarding Hypothesis H4, the regression analysis shows that virtual internship collaboration effect positively students' course achievement. The result summarized in table 4 is that all the hypotheses had been accepted with  $p < 0.01$

**Table 3** represent the regression.

	t-statistic	p-value	b-beta	R square
H1	0.94	0.000	.100	.667
H2	-1110	0.000	-.118	.667
H3	.302	0.000	.311	.667
H4	.530	0.000	.553	.667

### Conclusion

The study objectives were to explore further factors challenging students' virtual internships and the impact of these factors on students' internship course achievement. The study results indicate that virtual internship is an effective alternative approach that can replace conventional internships to develop students' professional competencies and support their academic achievement. Firstly, the study result is consistent with Baker and Fitzpatrick<sup>69</sup> indication that virtual internships could greatly benefit students. AlGhamdi,<sup>70</sup> study agrees that virtual internships offer students opportunities to be trained online and offer independent, innovative, creative work with actual companies accomplishing

essential work tasks and fulfilling the requirements of the internship. Teng et al.<sup>71</sup> agree in Singapore that supervisors and e-interns reported high levels of satisfaction and documented learning gains, such as developing technical and soft skills unique to remote work. Accordingly, Medeiros et al.<sup>72</sup> in their study, agree that European students observe virtual internships as an important and innovative approach. Similarly, in their study, Cecilia et al.<sup>73</sup> agree that virtual e- internship experience has been confident for interns and supervisors, as gathered from multiple sources. Equally, Lnasu et al.<sup>74</sup> study in the Netherland, agree that internship assignments enhanced the student's understanding of the subject and their ability to relate theory to the workplace.

<sup>69</sup> Baker, I. & Fitzpatrick, D. *Student Experiences in Pre-COVID Virtual Internships: Integration, Barriers, Motivation Challenges, Supportive Supervisors, and Intern Growth*, American Journal of Distance Education, 2022.  
<https://www.tandfonline.com/doi/abs/10.1080/08923647.2022.2034399?journalCode=hajd20> Accessed January 10, 2021.

<sup>70</sup> AlGhamdi, R.A. *Virtual internship during the COVID-19 pandemic: exploring IT students satisfaction*. Education + Training journal. 2022. <https://www.emerald.com/insight/content/doi/10.1108/ET-12-2020-0363/full/html?skipTracking=true> Accessed January 10, 2021.

<sup>71</sup> Teng, C.W.C. Tar Lim, R.B Shin Chow D.W. Liow, S. N. C.H. Lee, j. j. M *Internships before and during COVID-19: experiences and perceptions of undergraduate interns and supervisors*. Higher Education, Skills and Work-Based Learning, 2022. ISSN: 2042-3896  
<https://www.emerald.com/insight/content/doi/10.1108/HESWBL-05-2021-0104/full/html> Accessed January 03, 2021.

<sup>72</sup> Medeiros, A.R. Icen, D. Alessandro Morciano, E.A Cortesão, M. *Using Virtual Internships as an Innovative learning technique*. DOI: 10.13140/RG.2.1.3306.9286; 2015. Conference: 2015 IEEE

Global Engineering Education Conference (EDUCON) Project: EDUCON 2015.

[https://www.researchgate.net/publication/281452464\\_Using\\_Virtual\\_Internships\\_as\\_an\\_Innovative\\_learning\\_technique](https://www.researchgate.net/publication/281452464_Using_Virtual_Internships_as_an_Innovative_learning_technique) Accessed January 08, 2021.

<sup>73</sup> Cecilia Woon Chien Teng, C.W. Raymond Boon Tar Lim, Dana Wai Shin Chow, Suganthi Narayanasamy, Chee Hsiang Liow and Jeannette Jen-Mai Lee (2022) *Internships before and during COVID-19: experiences and perceptions of undergraduate interns and supervisors Higher Education, Skills and Work-Based Learning* Vol. 12 No. 3, 2022 pp. 459-474 Emerald Publishing Limited 2042-3896 DOI 10.1108/HESWBL-05-2021-0104  
<https://www.emerald.com/insight/content/doi/10.1108/HESWBL-05-2021-0104/full/pdf>

<sup>74</sup> Lnasu, A. Lühr, A. van Dorp, K.J. *professional development by e-learning: examples of effective remote internship models*, 2008. [https://www.researchgate.net/publication/242488591\\_Professional\\_Development\\_by\\_e-learning\\_examples\\_of\\_effective\\_remote\\_internship\\_models](https://www.researchgate.net/publication/242488591_Professional_Development_by_e-learning_examples_of_effective_remote_internship_models) Accessed January 11, 2021.

Similarly, Pittenger<sup>75</sup> mentions that in the post-pandemic environment, virtual internships are likely to become mainstream and acceptable even if not all users retain them. However, the study finding is inconsistent with the finding of Hruska et al.<sup>76</sup> stating that virtual or hybrid internship opportunities cannot and should not replace in-person opportunities or projects. Similarly, Bayır's<sup>77</sup> study demonstrates that most of the interns who participated in the program preferred a face-to-face internship. Kraft, et al.<sup>78</sup> study in Australian universities approved that majority of students and supervisors were unfamiliar with virtual internships, and the supervisors shared concerns about what kind of learning and mentoring opportunities such as computer-mediated internships may provide to their students. Secondly, the study finding reveals that students were satisfied with the virtual internships' quality, flexibility, knowledge, and communications. This result is consistent with several previous studies Li and Craig's<sup>79</sup> finding that well-designed e-internships will improve their employability skills and increase their motivation to learn. Similarly, Bayerlein<sup>80</sup> argues that internship designers should take a backward design approach for virtual internships, where desired skills are explained, and then intern tasks and assessments are identified. Furthermore, the study results show that virtual internships definitely affect students' communications and collaborations, Li and Craig<sup>81</sup>

agree that internship collaborations could provide a helpful perspective on improving the effectiveness of e-internships and students' career readiness in digital environments. Similarly, Cord & Clements<sup>82</sup> agree that an internship creates productive relationships between the partners and the students besides enables a smooth training process and involvement with the industry. They add that Experiential learning programs can offer students the opportunity to develop these skills and practice discipline knowledge. AlGhamdi<sup>84</sup> agrees that information and knowledge, work experience, live interaction, the comfort of achieving tasks, and soft skills offered students opportunities to accomplish real work tasks and emphasized the importance of a strong alliance with the industry to provide useful virtual internship opportunities. Hora et al.<sup>85</sup>; Bayerlein & Jeske,<sup>86</sup> their studies consistent with the study results that virtual internship quality enhances students' experiences, computer skills, and productivity developing with respect to their academic and career goals. Likewise, Roy & Sykes<sup>87</sup> agree that increasing virtual internships in the academic field can help develop student confidence and build relationships and networking opportunities where Interns could develop their knowledge and skills when they attend their training virtually and achieve the course objectives and requirements significantly.

<sup>75</sup> Pittenger, K.S.K. *Virtual Internships – A New Reality. Developments in Business Simulation and Experiential Learning*, Volume 48; 2021.

<sup>76</sup> Hruska, A.M. Cawood, A. Pagenkopp Lohan, K. M. Ogburn, M. B. Komatsu, K. J. *Going remote: Recommendations for normalizing virtual internships*. *Ecosphere Journal* March; 2022. <https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/ecs2.396> Accessed January 03, 2021.

<sup>77</sup> Bayır, D. *Impacts of the COVID-19 Pandemic on Experiential Learning: Development of a Community-Grounded Online Internship Program*. *Journal of Education for Library and Information Science*; 2021. <https://utpjournals.press/doi/abs/10.3138/jelis.2020-0108>

<sup>78</sup> Kraft, C. Jeske, D. Bayerlein, L. *Seeking diversity? Consider virtual internships*. *Strategic HR Review*. ISSN: 1475-4398 Article publication date: 22 May 2019.

<https://www.emerald.com/insight/content/doi/10.1108/SHR-12-2018-0100/full/html> Accessed January 08, 2021.

<sup>79</sup> Li, S. Craig, S. D. *Why do we adopt e-internships in eLearning curriculum development? A Model of Career-oriented Learning Experiences, Motivation, and Self-Regulated Learning*. *Innovate Learning Summit 2020 - November 3-5, 2020*.

<https://adlnet.gov/assets/uploads/2020%20-%20Why%20do%20we%20adopt%20e-internships%20in%20eLearning%20curriculum%20development.pdf>

<sup>80</sup> Bayerlein, L. *Curriculum innovation in undergraduate accounting programmes through "Virtual Internships."* *Education + Training*, 57(6), 673–684; 2014. Accessed January 08, 2021.

<sup>81</sup> Craig, S. D. *Why do we adopt e-internships in eLearning curriculum development? A Model of Career-oriented Learning Experiences, Motivation, and Self-Regulated Learning*. *Innovate Learning Summit 2020 - November 3-5, 2020*.

<https://adlnet.gov/assets/uploads/2020%20-%20Why%20do%20we%20adopt%20e-internships%20in%20eLearning%20curriculum%20development.pdf>

[internships%20in%20eLearning%20curriculum%20development.pdf](#) Accessed January 04, 2021.

<sup>82</sup> Cord, B. & Clements, M. *Pathway for student self-development: A learning-oriented internship approach*. *Australian Journal of Adult Learning*, 50 (2). 287- 307; 2010.

<sup>83</sup> Cord, B., & Clements, M. *Managing the transition from the classroom to the workplace: Beyond the duty of care*. *Australian Journal of Adult Learning*; 2010.

<sup>84</sup> AlGhamdi, R.A. *Virtual internship during the COVID-19 pandemic: exploring IT students' satisfaction*. *Education + Training journal*; 2022.

<https://www.emerald.com/insight/content/doi/10.1108/ET-12-2020-0363/full/html?skipTracking=true> Accessed December 30, 2020.

<sup>85</sup> Hora, M.T. Lee, Ch. Chen,Z. Hernandez, A. *exploring online internships amidst the covid-19 pandemic in 2020–2021: results from a multi-site case study*; 2021. [https://wcer.wisc.edu/docs/working-papers/WCER\\_Working\\_Paper\\_No\\_2021\\_5\\_4.pdf](https://wcer.wisc.edu/docs/working-papers/WCER_Working_Paper_No_2021_5_4.pdf) Accessed August 30, 2020.

<sup>86</sup> Bayerlein, L. & Jeske, D. *Student learning opportunities in traditional and computer-mediated internships*. *Education & Training*, 60 (1), 27–38. P. 31; 2018. <https://doi.org/10.1108/ET10-2016-0157> Accessed June 14, 2020.

<sup>87</sup> Sykes, D. M., & Roy, J. *A Review of Internship Opportunities in Online Learning: Building a New Conceptual Framework for a Self-regulated Internship in Hospitality*. *International Journal of E-Learning & Distance Education* Vol 32(1); 2017.

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**Implications for practice and recommendations**

This COVID-19 pandemic forces university students to conduct internships/ training courses virtually similar to other courses during COVID-19. No doubt that virtual Internship programs link classroom knowledge with workplace realities and provide a valuable experiment to the students/interns. This study practically explored the students' perceptions of the virtual internship experiences during the COVID-19 pandemic in the UAE and the impact of virtual internship conduction on students' achievement in this course. To improve e-internship/ virtual internships the academic supervisors need technical training and support services to accomplish their given tasks. Besides the study recommends course designers, educators, and decision-makers in the universities continuously reviewing to the virtual internship/training course designed when they are planning to pursue the virtual internship in the future and ensure the assessment process is based on the

capabilities of each intern. Similarly, the IT department needs to provide the students and internship supervisors with all the technical resources for ensuring the students' involvement and facilitating the supervisor mentoring of interns.

**Virtual Internships/Training for the Future**

It would be defective, and it is early to frame the question of whether virtual internships are an acceptable substitute for internship/training students for future jobs that take place within an office despite that recent data showing that conducting virtual internships will be a successful alternative approach from students' perspective. However, virtual internship flexibility, quality, knowledge, and collaboration are factors supporting the students' internship course academic achievement. However, further researchers are required to investigate the factors that may shape virtual internship conductions deeply.

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