Original Paper

Online Preparation for the Remote Global Workforce

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Abstract

The purpose of researching how much online learning in a university setting influences the students' preparedness for remote work in the global labor force is to prove the following: without the essential opportunity to learn in the virtual classroom, students might finish their degrees completely without knowledge of how to cope and function in a job position which requires partial or total online work. Being able to telecommute or work from a remote location and all that this sort of work entails will be a given within 10-20 years when new hires are being considered for employment. Universities play a key role in getting the next generation of workers ready for remote professional opportunities which would otherwise require additional training and acclimatization in order for entry level candidates to experience a seamless initialization into companies already moving steadily towards a more remote work-based model.

Keywords

remote work, online learning, virtual classroom, school-work transition, professor support, technology-based learning environment, student connections, internet-based communication

1. Introduction

In recent times, it has become increasingly apparent that more and more students are being offered the chance to take classes online and they are taking advantage of the opportunity to learn outside the environs of the traditional classroom. At the same time, employers everywhere are realizing that they can save time and money by offering their employees the opportunity to fulfill work requirements and hours via a virtual or remote job format. Both of these trends are on the rise, and educators are becoming increasingly aware that their students must be prepared to enter the global remote workforce. In order to make the School-Work Transition (SWT) a smooth one, universities have begun enlisting the aid of professors and other member of faculty to assist students in maximizing their virtual classroom experience. How well does this process of preparation at the university level help ready the students to enter a work-a-day world where they are expected to transition seamlessly into a system of partially or totally remote work? The survey conducted at a university in November of 2019 aims to quantify key factors which will conclusively determine whether or not the supposition that academic training online is effective preparation for the remote working world is true.

2. Method

2.1 Survey

A survey was conducted in order to determine general trends in online classes among 192 undergraduate and graduate students. The setup for this experiment involved the voluntary participation of both undergraduate and graduate students. Ten questions were asked including questions covering various aspects of the online experience such as the number of online classes taken, support offered by the professor, the use of technology such as hardware/devices, online job experience, and how the student felt that taking online classes had been effective preparation or not. The purpose of gauging their experience with online education and remote work preparation was to determine how the School-Work Transition (SWT) had been facilitated by the process.

2.2 Variables

Studentage: **Age**

#Onlineclass: **Number of online classes taken**

Professorhelp: **Level of professor help**

Videoaudio: **Webcam/microphone use**

Inpersonmtg: **In person professor meeting**

Remote: **Level of preparedness for remote jobs**

Onlineinterviewcomfort: **Level of comfort with online job interview**

Onlineinterviewexperience: **Remote job search experience**

Onlinejobexperience: **100% online job position experience**

3. Result

The first part of this study was aimed at assessing "Online Preparation for the Remote Global Workforce" in order to determine what effect the experience of online classes had on students' ability to be ready for worldwide remote work. The collection of survey data from both graduate and undergraduate students at a university in the fall of 2019 and focuses on 3 different aspects:

1) The number of online classes (not credit hours) taken by the students.

2) How well did the online classes prepare students for the remote work opportunities?

3) Did communication with your professor help students with the online class work?

Table 1. Stastics

		Online Class	Remote	Professor Help
Statistics				
No.	Valid	192	192	192
	Missing	0	0	0
Mean		2.69	2.94	3.40
Median		1.00	3.00	4.00
Std. Deviation		2.489	1.407	1.451
Variance		6.195	1.981	2.105
Minimum		1	1	1
Maximum		13	5	5

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Summary:

There were 192 students participating in this survey. The average (mean) number of classes taken online was 2.69. Although the median, the most frequently occurring, was 1 online class. The most online classes taken was 13. The average rating for how much the online classes prepared students for the remote work opportunities was 2.94, with the median of 3 in the range of 1-5. That is above the average. Where: 1 is defined as "not at all", and 5 is defined as "extremely". Communication with the professor helped students with online class work significantly. Although the mean was 3.4, the most frequent response was 4 (80th percentile), which is well above average. The range was also 1-5. Where: 1 is defined as "not at all", and 5 is defined as "extremely".

Table 2. Online Class

		Frequency	Percent	Valid Percent	Cumulative Percent
	Online Class				
Valid	1	108	56.3%	56.3%	56.3%
	2	12	6.3%	6.3%	62.5%
	3	17	8.9%	8.9%	71.4%
	4	19	9.9%	9.9%	81.3%
	5	8	4.2%	4.2%	85.4%
	6	8	4.2%	4.2%	89.6%
	7	4	2.1%	2.1%	91.7%
	8	11	5.7%	5.7%	97.4%
	10	4	2.1%	2.1%	99.5%
	13	1	.5%	.5%	100.0%
	Total	192	100.0%	100.0%	

Summary:

Most of the students, 108 which is 56.3 % of total, took only one class online. The second highest was 19 students having taken 4 classes online, 9.9 % of total. There were 11 students who took 8 classes online, 5.7 % of total, and even 1 student who took 13 classes online, 0.5 % of total.

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Table 3. Remote

		Frequency	Percent	Valid Percent	Cumulative Percent
	Remote				
Valid	1	46	24.0%	24.0%	24.0%
	2	25	13.0%	13.0%	37.0%
	3	47	24.5%	24.5%	61.5%
	4	42	21.9%	21.9%	83.3%
	5	32	16.7%	16.7%	100.0%
	Total	192	100.0%	100.0%	

Summary:

The most frequent response was 3, of 47 students, 24.5 % of total. Results are almost evenly distributed in all ranges 1-5. 46 students, 24.0 % of total, selected 1. Perhaps these students were not looking yet for remote work opportunities or used other means to gauge their response.

Table 4. Professor Help

		Frequency	Percent	Valid Percent	Cumulative Percent
	Professor Help				
Valid	1	38	19.8%	19.8%	19.8%
	2	9	4.7%	4.7%	24.5%
	3	38	19.8%	19.8%	44.3%
	4	52	27.1%	27.1%	71.4%
	5	55	28.6%	28.6%	100.0%
	Total	192	100.0%	100.0%	

Summary:

Results reflected a very positive response regarding assistance from professors. Most students, 55 (28.6% of total) selected 5. The second highest was 4, selected by 52 students (27.1% of total) while the third highest was 3, selected by 38 students (19.8% of total).
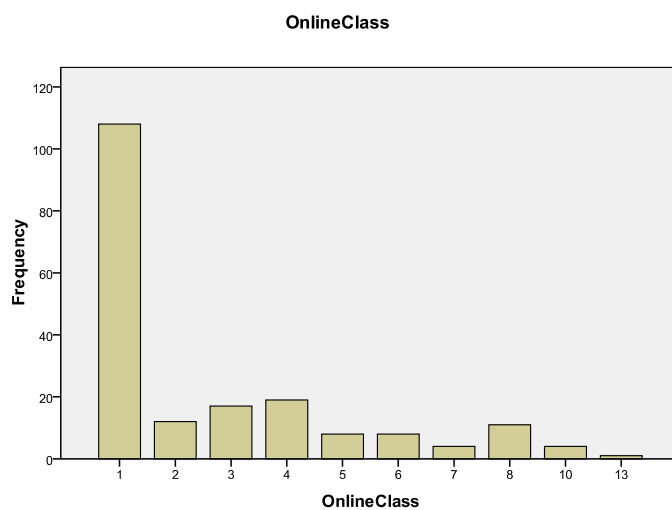
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OnlineClass

Figure 1. Online Class

Summary:

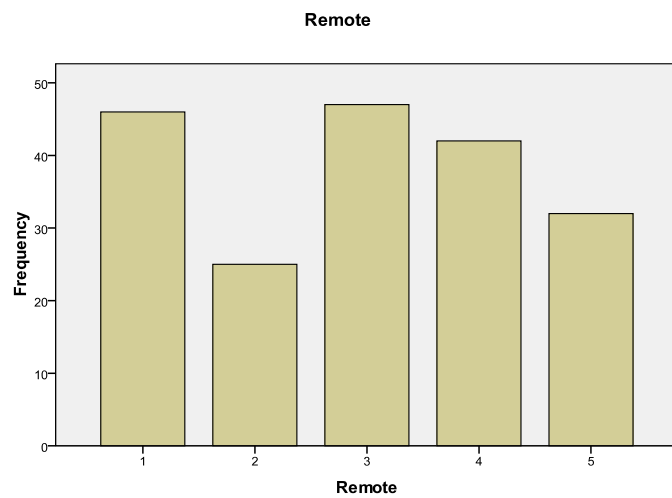The most classes taken online by an individual student was 1, followed distantly by 4, 3, 2, 8, etc.

Remote

Figure 2. Remote

Summary: Most frequent were 3 classes and 1 class, followed closely by 4 classes.
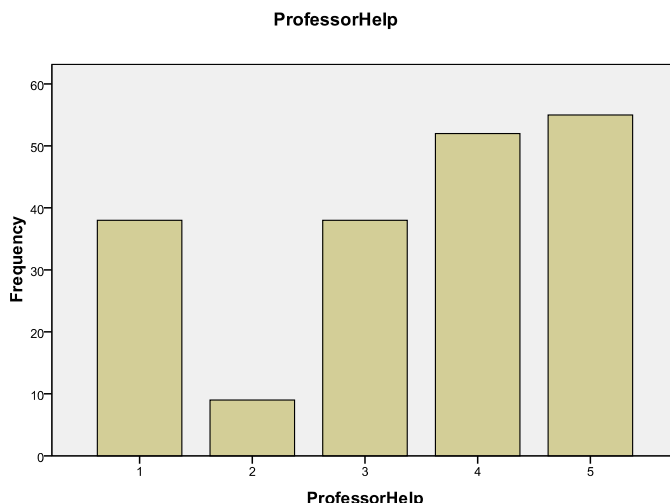
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Figure 3. Professor Help

Summary:

Most frequent were 5, 4, 3 & 1, then 2. Professors are doing a great job helping students.

4. Discussion and Comparative Research

This research proves how students can learn in an online class format and, by doing so, be prepared for remote jobs. Magnier-Watanabe uses a virtual team connection from two graduate programs to contact students from France and Japan to work on the team assignments (Magnier-Watanabe, 2017, pp. 267-285). My study shows the experience students have using technology and building personal connections with their professor. Students have internet access to get connected with online classes, students online, and other internet users of which there are more than 3.5 billion from around the world. Employees that provide a link for a job interview know from practical experience that it will be easy for any users to follow the link. Magnier-Watanabe outlines the way in which globalization and elimination of national borders is on the rise due to ever increasing numbers of virtual workers (Magnier-Watanabe, 2017, pp. 267-285). Students from outside the US who are taking classes online have an opportunity to learn about cultural and business practices in the US.

My study proved that the greater the number of online programs, higher the rate of students who become prepared to work remotely in the professional world. Skills acquired in taking a class online are simple to transfer to remote work opportunities and positions; this can be referred to as the "School-Work Transition" (SWT). As Hertel et al. show in 2005, the learning experience is, "predominantly based on electronic information and communication tools" (qtd. in Magnier-Watanabe, 2017, pp. 267-285). Students who completed assignments, quizzes, team projects, exams, and online class discussion are prepared for remote job communication with both supervisors and employees.

When considering hiring an employee who took some classes online, management trusts that scheduling that employee to work from home is a reasonable choice for management to make and one for which the candidate is well-prepared. Students who took classes online know how important it is to follow up with the weekly class schedule posted by the professor and meet deadlines for the completion their school assignments. Forecasts predict a steady increase in the number of students who taking online classes in the future. Using online communication for the purpose of communicating with the

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faculty members enables students to understand how important communication is with managers in the workforce. Professors running online programs are familiar with the various types of communication through technological devices used in providing lectures for students. Students engaged in class discussion forums are learning how to respond to classmates inside a digital framework.

Employees working directly from home use a similar system to that of online university programs. A manager's expectation is to log in weekly to meetings online, inform employees about weekly tasks, monitors schedules/schedule changes, and ask employees electronically to present their projects.

In fact, Jones (2011) states, student are able to interact in a virtual setting so that they can create and participate more directly and seamlessly with the given subject matter (qtd. in Christopoulos, 2018, pp. 353–369). Students enrolled in online programs have an opportunity to meet others from around the world for social and professional interaction. When a professor supervising an online program uses a discussion forum for the purpose of introducing the class to a project concept and sets up a timeline for a team class project, online students have many opportunities to make a connection. Students write in the discussion forum about their hometown and home country, share their educational goals, and discuss their professional aspirations. Jones in 2011 further elaborates that online communication in an academic environment is actually an improvement over the traditional model because class participants enjoy the experience and are more focused (qtd. in Christopoulos, 2018, pp. 353-369). Students participating in online programs have an opportunity to learn from students who live and study outside the US. They are engaged in same online study programs, but their previous education backgrounds differ. The student's team in their online group projects has the opportunity to learn directly about the individual culture, intellectual passion, and specific focus/area of study of each member through communicating with one other in a flexible, fluid, virtual environment (Christopoulos, 2018, pp. 353-369).

Balsmeier conducted a survey in Switzerland reflecting higher outlay in digital development tends to lead to a greater proportion of highly skilled workers versus a lower proportion of low or unskilled ones (Balsmeier, 2019). This study has shown that online students have a significantly greater chance of finding remote global employment for highly skilled candidates with a better education. The study conducted in both undergraduate and graduate programs has shown according to students that professors prepared them effectively for remote employment possibilities.

The amount of time spent in higher education is changing as the frequency of digital technology use changes. Digital technology offers students the ability to study anytime and anywhere, and companies are investing more time and money to make job descriptions and applications more available and readily accessible. In 2013 Rifkin brings to light, "This gives machine-based digital technologies their disruptive power, and it is these technologies in particular that are supposed to drive the current industrial revolution" (qtd. in Balsmeier, 2019).

This study makes clear the level of power that technology has when used by online programs and remote jobs, and it reinforces the critical importance of that advantage for the students. Ever greater investment in online education will give students more opportunities to find remote jobs and better prepare them for virtual communication in the workplace.

Students choose to take classes online due the convenience of schedule flexibility. People with jobs, families, and other commitments which might have precluded the possibility of furthering their education in earlier times, can now enroll in online programs which gives them the opportunity to augment or complete their education. This can improve their career potential at times in their lives when almost no one would have considered such an endeavor, just a few decades ago.

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Students registered for one online class per semester have a weekly academic work schedule similar to the one used by remote employees. They need to follow up with management's expectations to keep their work assignments up-to-date and keep track of scheduled hours. Kowalski and Swanson (2005) consider multiple reasons important to successful teleworking. Among them managers and supervisors, formal policies, manager training, and appropriate use of communication (qtd. in Grant, 2013, 527-546). Grant goes on, "For some individuals remote working has provided a release from the restrictions of office-based hours" (Grant, 2013, pp. 527-546).

Video lectures which utilize webcams and headsets allow students to engage with the information in a meaningful way so that they begin to think of this learning/work style as routine. This is exactly what the next generation employee must be compelled to do in order to be ready to jump into remote work. I took advantage of these learning tools to teach my students more effectively.

No matter how people feel about online learning, it is on the rise. Many like Dimeo seek to discredit of devalue the process, but constant improvements are being made in order to ensure high standards are maintained. Dimeo in 2017 does acknowledge the growth of the trend saying, "…the number of new programs year to year as well as the trend of millennials growing up with technology at their fingertips and being exposed to online learning in their degree studies…" (qtd. in Willett, 2019).

My findings have proved that students are happy with their professor's communication, web camera/audio devices, and discussion forums. Future research should aim to update online programs with voice-activated technology.

Willett contradicts my findings saying, "… more research is needed at the industry level to ascertain if employers connect poor employee performance to online learning or if an online degree is viewed as inferior when reviewing a candidate's credentials and qualifications" (Willett, 2019). This is evidence showing that not all are on board with and confident in the quality of online learning.

Online programs are also ideal for older students because they offer a higher chance to get hired remotely, since Schehl's study proves that they are still updated with the latest technology usage. Classes online follow a set schedule and yet allow students to study independently. Most jobs require online training. For most adults with the experience of having taken at least one class online, a sense comfort accompanies them when they are required to take online training with a new employer. Schehl says, "Higher education may also increase older adults' mental resources for Internet use by allowing them to obtain professions and jobs that are more often characterized by frequent IT use" (Schehl, 2019, pp. 222-230).

Many businesses have offered 24-hour per day access to their services for several years already; one such industry is banking. Chuwa points out the well-known advantage enjoyed by customers of online banking allowing, "… provides other advantages including cost savings, value added services, and freedom to bank from any place…" according to Chuwa (2015); Pikkarainen et al. (2004) (qtd. in Christopoulos, 2018, pp. 353-369). Similarly, online access to academic programs means they are open to students from around the world on a perpetual and constant basis.

Technology has been a constant influencer on work and education for centuries, and as the persistent nature of changes in technology usher in modifications to the ways in which we all work and learn, we must adapt in sometimes drastic ways. It means employers are compelled to give people, "the option of working from home or some other remote location…" (Ryder, 2019, pp. 23-35). On the flip side, the inevitable dissolution of the physical workplace looms on the horizon. This obviously leads to the eventual requirement to work outside the office since eventually there will be to office to go to.

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"The Future of Work is not an unavoidable consequence of technological progress, it is a matter of choice" (Ryder, 2019, pp. 23-35). We are free to value the progress these changes bring without losing sight of the value brought by, "the contribution of work to individual and societal well-being" (Ryder, 2019, pp. 23-35).

The all day, everyday availability of doing one's job is only possible because of digital networking technology, a fact seen by a large proportion of a great advantage to flexibility of working hours and a way to accommodate different lifestyles and family situations. This means that workers who need to devote more time to the needs of the family, especially during daylight hours, can do so. Oftentimes women stand to benefit more from this than do men, simply attributing to family care needs, where working from home is hugely beneficial. Additionally, Rubery highlights, "New technologies are expected to allow for more flexible work locations because of remote working on platforms or as high-skilled workers gain greater autonomy in the organization of their working lives" (Rubery, 2019, pp. 91-105).

Faculty members in universities are always on a path to keep up with current trends in technology and the ways in which their students are affected by them. An essential part of the instructor's job is to create opportunities for students to have virtual team interaction and collaboration in the classroom. The research I have conducted has shown that network interactions prepared students for online interviews. Students said that the time they spent interacting with their professors helped them with their online studies.

"Just as small-group interactions provide opportunities for student-centered learning in a face-to-face class, small-group activities in a web-conferencing environment provide alternatives to lectures and allow students to work together and think critically" (Rao, 2011, pp. 22-27).

A key feature of the new digital world will be the fluidity with which most workers will shift positions and work in multiple part-time positions. Even in 2019, most workers over the age of 30 cannot imagine a dynamic and hyperflexible working world such as this but as Scarpetta points out, "Moreover, most people in the future will also have more than one job at a time, or be changing from one job to another with higher frequency". Employers will feel more pressure to increase the efficiency of the processes which power human resource management in order to keep up with this ever changing and transformative trend (Scarpetta, 2018, pp. 51-56).

Interviews are an essential initial phase of the hiring process. Candidates looking for work should be prepared for first job interviews to be online as a probable prerequisite to an in person interview. The online video-audio interview will replace the traditional phone interview in very short order. "Many recruiting organisations are using this technology to reduce costs and it is often easier to organise than interviewing in person. If you are seeking a job, you are likely to be invited for a remote interview before long" (Higgins, 2014, p. 63). Few employers will miss this shift in hiring best practices, and over the next decade, we can expect to see a clear and overwhelming majority of employers following this method.

Organizational learning/training at the corporate level has undergone a complete overhaul with managers dealing with global information and technology concerns in their day-to-day training practices. Lau points out a shift, "Recently, global knowledge managers have been shifting their organizational learning strategies from a conventional in-house training program to an online learning community, even in virtual reality… technology is currently bringing thousands of possibilities for reshaping the conventional in-house training programs to new and creative ways of providing employees with a distributed learning experience in immersive virtual environments" (Lau, 2015, pp.

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289-303).

In Rheingold's view, virtual community is a forum for the transfer of similar interests and concepts which people may have in common, and "it creates social benefits and business values through the network" (qtd. in Feng, 2014, pp. 231-242). "In a virtual community of work, members who can help solve problems of other members can be placed at central positions in the social network structure". In this way natural leadership can be fostered thus reinforcing and bolstering the benefits we can achieve through the use of technology via, "virtual community".

With online interaction quickly replacing most in person contact, the impact on the old style of learning, working, and living is distinct. This amazing a sweeping difference in the way the modern world exists is, "… generating an unprecedented proliferation of virtual communities around the world", according to Andersen in 2005 (qtd. in Chou, 2016, pp. 60-72).

Those who log in to virtual communities are looking for more than just information and solutions to meet their specific needs; they are driven by a deeper desire to "… to meet other people, gain support, stay connected with friends, have fun, and attain a sense of belongingness" as brought up by Chiu et al. in 2006 (qtd. in Chou, 2016, pp. 60-72). Being a part of such a community spans beyond a mere need to belong; it also necessarily means that valuable "co-creation" behavior will be exhibited by a member of the group. Otherwise it is seen as one-sided and likely not sustainable in the long term. Eventually the give and take of this relationship will allow for a member to become an influence and feel truly encompassed by and immersed in the community.

A revolution is taking place in human existence. Billions across the globe are now a part of the world's economy and system of information exchange in ways never seen before the 21st century. In the words of Karakas, "Employees drive performance by collaborating with peers across organizational boundaries, creating what we call a 'wiki workplace'" (Karakas, 2012, pp. 1-2). We are on the precipice of the most globally collaborative international workplace in the history of our existence. Karakas also brings to light a tertiary change, "… global connectivity; which can be defined as the ability to link or connect to the internet—the global brain-providing access to worldwide online information resources…". This heretofore unfathomable reality is happening now, and, "… just by sitting in front of and clicking on your computer, laptop, or mobile device", anyone with access to this worldwide technological intelligence can be a part of the bold new world of virtuality (Karakas, 2012, pp. 712-731).

5. Conclusion

The surveyed sample indicates most of the students took only a single online class, with an average of 2.69 per student.

However, 76% of students reported that online classes prepared students for remote work opportunities, while for 24% it purportedly did not help at all. For 63% of the students, it helped moderately to extremely [range 3-5].

Finally, 80.2% of students reported that professors helped students with the online class work opportunities. 28.6% of students gave the highest rating of *extremely* and for 75.5% of the students it helped moderately to extremely [range 3-5].

In conclusion, online classes helped very significantly to prepare students for remote work opportunities. The "what" matters; in other words, the course subject matter is an influencing factor when considering the level of future potential remote work benefit. Another survey should potentially be conducted in order to determine which online classes students took and how they helped. The

content of the online class matters as far as specific exposure to which topics and in what fields and disciplines it helps students obtain remote work opportunities.

Professors' communication with students helped them greatly; students should be made aware of this fact and take more online classes in order to maximize the benefit it will likely bring to them in terms of future career opportunities. As the global workforce shifts more and more towards a remote-style work format, the truth of this fact will become increasingly important to all students. In the near future, it will be very hard to find university students who have never used the system of online learning to accrue credit hours in the pursuit of their degrees.

The general consensus among academic peers seems to that the wave of virtual learning, training, and working is absolutely unstoppable. Although some dissenters expressed doubt as to the quality of instruction and the reliability of class choices, most academics agree that online classes are the future and the conventional classroom will soon become the past. One thing is certain, however, and that is the undeniable truth of increased exposure and experience for students in the virtual world does translate to readiness for remote work around the globe. The School-Work Transition (SWT) is not hindered, but help markedly by preparation in the non-traditional, digital class experience. My research proves that this shift for students from education to the labor force has been improved by technology.

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