

Educator Adaptability as it Relates to Transition to Online Education from the Face-to-Face Environment

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Introduction

Colleges across Ontario have responded to the need for social distancing and closure of non-essential businesses by transitioning face-to-face classes to the online environment where possible. This study is exploratory in nature and investigated factors that influence educator adaptability in transitioning from face-to-face to online learning.



Methods/Analysis

Likert Scale Questionnaire
Data Collection

- Circulated among 15 Ontario Colleges to part time and full time faculty teaching between March 2020 and March 2021

Identify Independent and Dependent variables
Independent Variables

1. Years of teaching experience
2. Number of online courses taught previously
3. Highest level of education achieved
4. Number of online courses taken previously
5. I have abundant access to technological resources and tools at home
6. I have strong understanding of how to use technological hardware (computers, tablets, cellphones, etc.).
7. I have strong understanding of how to use technological software (apps, websites, online polling tools, video capture software, etc.).
8. Estimated number of hours spent utilizing College related supports in the transitioning to online education

Dependent variables

1. I would rate the courses I previously taught online as high-quality
2. I feel confident when I use technological hardware (computers, tablets, cellphones)
3. I can easily troubleshoot and overcome problems as they arise with technological hardware (computers, tablets, cellphones).
4. I feel confident when I use technological software (apps, websites, online polling tools, video capture software).
5. I can easily troubleshoot and overcome problems as they arise with technological software (apps, websites, online polling tools, video capture software).
6. I felt confident that my course could be transitioned to online delivery prior to the COVID-19 pandemic.
7. I felt comfortable changing the planned order of instruction in the transition to online delivery.
8. I felt comfortable omitting planned activities or assignments in the transition to online delivery.

Chi Square Test

Results

Table 1. Years of teaching experience	
Dependent Variable	P Value
Rate courses previously taught as high quality	0.1062
Confidence in using technological hardware	0.3811
Easily troubleshoot problems with technological hardware	0.0599
Confidence in using technological software	0.03
Easily troubleshoot problems with technological software	0.001
Confident course could transition online pre-COVID	0.06
Comfortable changing planned order of instruction in the transition to online delivery	0.04
Comfortable omitting planned activities or assignments in the transition to online delivery	0.056

Table 2. Number of online courses previously taught	
Dependent Variable	P Value
Rate courses previously taught as high quality	2.20E-16
Confidence in using technological hardware	0.2857
Easily troubleshoot problems with technological hardware	0.91
Confidence in using technological software	0.1201
Easily troubleshoot problems with technological software	0.149
Confident course could transition online pre-COVID	0.2475
Comfortable changing planned order of instruction in the transition to online delivery	0.61
Comfortable omitting planned activities or assignments in the transition to online delivery	0.62

Table 3. Highest level of education achieved	
Dependent Variable	P Value
Rate courses previously taught as high quality	0.4089
Confidence in using technological hardware	0.00037
Easily troubleshoot problems with technological hardware	0.1432
Confidence in using technological software	2.96E-06
Easily troubleshoot problems with technological software	0.0001243
Confident course could transition online pre-COVID	0.4862
Comfortable changing planned order of instruction in the transition to online delivery	0.5195
Comfortable omitting planned activities or assignments in the transition to online delivery	0.9956

Table 4. Number of online courses taken previously	
Dependent Variable	P Value
Rate courses previously taught as high quality	0.0003528
Confidence in using technological hardware	0.1576
Easily troubleshoot problems with technological hardware	0.01189
Confidence in using technological software	0.07117
Easily troubleshoot problems with technological software	0.05459
Confident course could transition online pre-COVID	0.2159
Comfortable changing planned order of instruction in the transition to online delivery	0.9374
Comfortable omitting planned activities or assignments in the transition to online delivery	0.5418

Table 5. Abundant access to technology at home	
Dependent Variable	P Value
Rate courses previously taught as high quality	0.5003
Confidence in using technological hardware	2.20E-16
Easily troubleshoot problems with technological hardware	2.20E-16
Confidence in using technological software	2.20E-16
Easily troubleshoot problems with technological software	2.20E-16
Confident course could transition online pre-COVID	0.00123
Comfortable changing planned order of instruction in the transition to online delivery	0.008755
Comfortable omitting planned activities or assignments in the transition to online delivery	0.0006057

Table 6. Strong Understanding of using technological hardware	
Dependent Variable	P Value
Rate courses previously taught as high quality	0.01214
Confidence in using technological hardware	2.20E-16
Easily troubleshoot problems with technological hardware	2.20E-16
Confidence in using technological software	2.20E-16
Easily troubleshoot problems with technological software	2.20E-16
Confident course could transition online pre-COVID	0.04679
Comfortable changing planned order of instruction in the transition to online delivery	2.62E-05
Comfortable omitting planned activities or assignments in the transition to online delivery	0.0002805

Table 7. Strong Understanding of using technological software	
Dependent Variable	P Value
Rate courses previously taught as high quality	0.06812
Confidence in using technological hardware	2.20E-16
Easily troubleshoot problems with technological hardware	2.20E-16
Confidence in using technological software	2.20E-16
Easily troubleshoot problems with technological software	2.20E-16
Confident course could transition online pre-COVID	0.0007502
Comfortable changing planned order of instruction in the transition to online delivery	2.33E-08
Comfortable omitting planned activities or assignments in the transition to online delivery	0.0007645

Table 8. Estimated number of hours spent using College related supports to transition to online	
Dependent Variable	P Value
Rate courses previously taught as high quality	0.07585
Confidence in using technological hardware	0.2145
Easily troubleshoot problems with technological hardware	0.08707
Confidence in using technological software	0.5004
Easily troubleshoot problems with technological software	0.1754
Confident course could transition online pre-COVID	0.6459
Comfortable changing planned order of instruction in the transition to online delivery	0.3434
Comfortable omitting planned activities or assignments in the transition to online delivery	0.6779

Conclusions

Teaching Experience

- More experience increased confidence with using technology, troubleshooting and changing order of instruction
 - **Previous research found newer faculty more comfortable with technology
 - ***Our findings suggest in the context of adaptability, more teaching experience made the transition to the online environment easier

Highest Level of Education

- Increased confidence in using and troubleshooting technological hardware/software
 - **Consistent with current research

Access to technological resources at home

- Increased confidence in using and troubleshooting technological hardware/software and comfort in eliminating or rearranging course content
 - ** Consistent with current research
 - ** Improves ability and confidence to integrate and use technology in teaching

Understanding of technological hardware/software

- A strong understanding of both increased confidence in using and troubleshooting technological hardware/software and comfort in eliminating or rearranging course content
 - **Consistent with current research
 - ** As perceived understanding and skills in software and hardware increase, so does the ability to transition and teach a course online



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