

Impact of Online Teaching on Academic Writing: A Comparative Error Analysis study in the Mid Term Exam Papers of Technical Writing II at the University of Technology and Applied Sciences -Al Musanna

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Abstract

The present study examines the impact of online teaching on Academic Writing of Technical Writing-II students at the University of Technology and Applied Sciences, Al-Musanna. The researchers have carried out the comparative error analysis of the online and offline Mid Term Exam papers of the Technical Writing II students by employing a purposive sampling technique. The data has been analyzed using SPSS to find that online and offline teaching modalities present a situation where similar objectives can be achieved. Furthermore, the students' performance demonstrates almost similar accuracy levels and the same magnitude of mistakes which is synchronous with a study conducted by Kang & Zhang (2020). Hence, the researchers suggest that the education system incorporate more online academic teaching, primarily Academic Writing, because there is adequate room for improvement since it has recently been introduced and vastly practiced in the Pandemic.

Introduction

The online education deployment has had exponential growth in the last ten years. Online teaching has shifted significantly from an exponential novelty to a ubiquitous teaching tool. In the present society, 77% of the college institutions across the globe suggest and have attributed offering online courses, with more increased cases of online enrollments and over 31% of the all-higher education students taking online classes for at least one course. The growing demand for online learning in the present and future faculty asserts the need for online teaching on academic writing. Unlike the traditional teaching model, where teachers and students are physically found in a classroom setting, online academic teaching is based on the internet interactions between teachers and students (Clark et al., 2021).

Consequently, the instructors have to redesign their teaching strategies and undergo some training to acquire skills that would allow them to teach students. The instructors must think aloud during the mini-lessons (Daumiller et al., 2021). While teaching online, it is essential to keep the lessons short. The extended online teaching lessons usually bore students, and they may quickly lose focus and start doing other things over the internet since they are not closely supervised. Instructors can also record videos that are usually seen as lifesavers since one can use them in person or remotely and make it easier for absent students and those students who want to repeat the lessons at their convenient time (Dutta, 2020). The teachers should also anticipate some misconceptions from the online teaching to the students. This study aims to probe into the effect of online teaching on the academic writing skills of Post Foundation students with a particular reference to Technical Writing –II students at the University of Technology and Applied Sciences-Al Musanna, UTAS-A.

Study objectives

- To analyze the common errors in writing formal emails
- To recommend ways of overcoming these common errors in teaching academic writing
- To understand the difficulties of students' skills in academic writing

Hypothesis

- Disinterested learning and indifferent attitude intensify these lacunae in academic writing.

Research Questions

Despite having a sound academic writing background from Foundation and Technical Writing I of Post Foundation students, why do students keep making mistakes?

- What are the common mistakes that the students make in their academic writing?
- How does online teaching and learning impact/impair the students’ academic writing skills?
- What are the missing areas of online and offline teaching and learning?

Literature Review

With the changes in students' lifestyles and fast-developing technologies, the universities have significantly increased in offering more flexible learning environments. Technological advancements and innovations have significantly improved the benefits of the online e-learning experience and have seen rapid expansion in the higher education sector (Gamage et al., 2020). In the modern era, higher education has become a part of the student experiences for a significant proportion of university students in various countries. The increased use of online teaching for academic writing has dramatically made students more responsible for their knowledge acquisition (Bailey & Lee, (2020). Unlike the traditional approach, which uses the teacher-centered approach, the lecturer transfers the knowledge with a few students' efforts from amongst the students taught in class. The shift to online teaching is more focused on the students. The students are mandated to undertake more work since lecturers only facilitate and manage the students learning instead of transmitting information (Casey et al., 2018). The approach is more focused on self-directed learning. It is also assumed that online teaching will exponentially grow since it intends to produce more intense depth. Discussions and improve individual quality of learning alongside the benefits of enhancing a more comprehensive approach to students' participation while promoting costs and effectiveness of education compared to traditional face-to-face education (Cimermanová, 2018).

The current study was designed to examine the performance and the perception of online academic teaching experiences. This study compares students' academic performance and qualitative comments on the learning experience between the offline and online teaching methods. In order to control the individual difference and improve the statistical power of the study, the study tested the similar student participants on both online and online tasks instead of using separate groups in each approach.

Methodology

The study used a descriptive, qualitative, as well as quantitative approach to produce an adequate sampling that adheres to the norms of the theoretical framework.

Data Collection

The study is proposed to study at least 15 to 20 students’ samples of MTE drawn from semester 3 of 2020 to 2021 and semester 1 of 2021 to 2022.

Analytical tools

The study will analyze the data using the SPSS data tools. The questionnaires, as well as surveys, will also be utilized.

Results and Analysis

The study compares the online and offline teaching datasets among the students using the SPSS.

Figure 1 comparison summary

Comparison Summary		
Information	Datasets	
	Active	Comparison
Data File	C:\Users\michal\Documents\Untitled2.sav	
Dataset	DataSet1	DataSet0
Filter		
Weight		
Split File		
Cases	55	53

According to figure 1, there are 55 cases for analysis of online and offline teaching methods.
Figure 2 matched cases.

		Datasets	
		Active	Comparison
Results	Statistics		
Cases	Count	55	53
Cases Compared	Count	53	53
	Percent	96.4%	100.0%
Cases Not Compared	Count	2	0
	Percent	3.6%	0.0%

Figure 2 makes a comparison of a total of 53 cases compared for both online as well as offline cases.

Case By Case Comparison

Row		
Active	Compare	VAR00002
1	1	(1) Vague/ S missing (2) Online Exam Errors: 10 Students (A-J)- Complaint Email
3	3	(1) (2) Paper
4	4	(1) (2) A
5	5	(1) (2) 2.
6	6	(1) (2) 2.
7	7	(1) (2) B
8	8	(1) (2) C
9	9	(1) I like forward a regarding the bad quality (2) 2.
10	10	(1) (2) 3.
11	11	(1) (2) 4.
12	12	(1) (2) 5.
13	13	(1) 1. It was with my family to purchase (2) 2.
14	14	(1) 2. And also, don't look nice and it is very high prices. (2) 3.
15	15	(1) 3. In addition, there aren't listen (2) 4.
16	16	(1) 4. That is all need to know (2) 5.
17	17	(1) (2) 6.
18	18	(1) 1. My dissatisfaction to (2)

19	19	(1) 2. I order visited
		(2)
20	20	(1) 3. In addition, not listen to our complaints
		(2) D
21	21	(1) 4. I would therefore like to be they should be more attention
		(2) 2.
22	22	(1) 5. I hope became better
		(2) E
23	23	(1) 6. I forward to hearing
		(2) 2.
24	24	(1) 1. I m writing complaint about the poor of quality...
		(2) 3.
25	25	(1) 2. My main concern is regarding about
		(2) 4.
		(1) 3. To make matters
26	26	(2) 2. So that every one like they Service Al- Pizzaro Fast Food.
27	27	(1) 4. Thir are not polite
		(2) 2.
29	29	(1)
		(2) 2.
30	30	(1)
		(2) 3.
32	32	(1) 1. I am writing to complaint
		(2) F
33	33	(1) 2. I extremely displeased the quality
		(2) 2.

34	34	(1) 3. My main the flour and sugar (2) 3.
35	35	(1) 4. It was very bad because was not fresh (2) 4.
36	36	(1) 5. We can't any people eat hem (2) 5.
37	37	(1) 6. It was high prices (2)
38	38	(1) 7. The finally problem about matter (2) G
39	39	(1) 8. replac the money (2) 2.
40	40	(1) 1. I am writing to complain you (2) H
41	41	(1) 2. The first problem is flour and sugar, and expired, torn packaging (2) 2.
42	42	(1) 3. the staff not polite and not listen to our complaints (2) 3.
43	43	(1) (2) 4.
44	44	(1) (2) 2.
45	45	(1) (2) 2.
46	46	(1) 1. I want to Polo Hypermarket with my mother on November 5, 2021 I wont some groceries for your home. (2) 3.

47	47	(1) 2. I had more time when getting the sugar because don't getting in torn packaging.
48	48	(2) 4. (1) 3. To make matter words
49	49	(2) 5. (1) 4. When my mother was want the vegetables and fruits because very impotion eating
50	50	(2) 6. (1)
51	51	(2) I (1) (2) J
52	52	(1) (2) 2.
53	53	(1) 1. I am writing to complain about your a regular customer At Polo Hypermarket for your home but the extremely disp (2)

(1) is the Active Dataset and (2) is the Comparison Dataset

Figure 3 shows the comparison of case-by-case scenarios. Again, students learning using the online and offline classes demonstrate similar trends in the errors made while writing the emails, which shows that both methods impact the students in almost similar accord

Figure 4 Convergence Information^b

Maximum Number of Iterations	20
Converge Tolerance	.00100
Final Maximum Absolute Difference	9.25203E-6 ^c
Final Maximum Relative Difference	3.07819E-6
Number of Iterations	6

a. Model: Poisson

b. Design: Constant + CasesCompare

c. The iteration converged because the maximum absolute changes of parameter estimates are less than the specified convergence criterion.

The Poisson test is used to compute the power or sample size used to test whether the difference between the two Poisson rates has significant variation from zero. It measures whether the statement concerning a population

parameter is correct. Hypothesis testing predicts the amount of variation from a known average of happenings within a specified time.

Figure 5 demonstrates that on a case-by-case comparison of values, there is a mismatch of 89.4 between the online and offline teaching methods. The expected comparison also demonstrates similar results, which account for

Figure 5 Cell Counts and Residuals^b

Case By Case Comparison of Values	Observed		Expected		Residual	Standardized Residual	Adjusted Residual	Deviance
	Count	%	Count	%				
Unmatched	2.500	4.4%	2.500	4.4%	.000	.000	.000	.000
Match	3.500	6.2%	3.500	6.2%	.000	.000	.000	.000
Mismatch	50.500	89.4%	50.500	89.4%	.000	.000	.000	.000

a. Model: Poisson

b. Design: Constant + Cases Compare

89.4%. This demonstrates there are significant variations of the expected data.

Figure 5 Univariate Statistics

Univariate Statistics

	N	Mean	Std. Deviation	Missing		No. of Extremes ^b	
				Count	Percent	Low	High
CasesCompare	55	.87	.433	0	.0	.	.
RES_1	55	.0000	.00000	0	.0	.	.
ZRE_1	55	.0000	.00000	0	.0	.	.
PRE_1	Fib55	46.1909	13.75294	0	.0	.	.
VAR00001	55			0	.0	.	.
VAR00002	55			0	.0	.	.
VAR00004	55			0	.0	.	.
VAR00003	55			0	.0	.	.
VAR00005	55			0	.0	.	.
VAR00006	55			0	.0	.	.
VAR00007	55			0	.0	.	.
VAR00008	55			0	.0	.	.
VAR00009	55			0	.0	.	.

a. several cases outside the range (Q1 - 1.5*IQR, Q3 + 1.5*IQR).

b. indicates that the inter-quartile range (IQR) is zero.

According to figure 5, the univariate mean for the data is 46.19, while the standard deviation is 13.75 for the data compared to using SPSS for online and offline teaching among students. --In standard deviation is used to measure the amount of variation and dispersion of a given value set. A low standard deviation implies that values are often close to the mean of the data set and a high standard deviation illustrates that values are spread in a broader scope. The results indicate that the standard deviation is 13.75, which is high and spread across the broader range.

Discussion

The online academic teaching introduction to education is widely gaining momentum. However, the students can still make similar errors while writing emails that demonstrate there is no relatively large deviation from the offline teaching approach to teaching the students with the online approach (Daumiller et al., 2021). The online approach enables students to understand more of their work than the offline mode, where a significant role is vested in the teachers.

The studies affirm that online and offline teaching modalities present a situation where similar objectives are likely to be achieved when teaching students. The student's performance demonstrates almost similar accuracy levels and the same magnitude of mistakes (Kang & Zhang, 2020). Consequently, the education system should incorporate more online academic teaching because there is adequate room for improvement since it was recently introduced. Still, results suggest almost at par performance-wise among students. The traditional approach has been there for an extended period; hence, it should have fewer errors students make mistakes. However, this is not the case; hence it might be viewed as a failure (Zboun & Farrah, 2021). Therefore, there is a vast potential for the growth of the online teaching modalities instead of the offline model.

Limitations

The study is limited because it uses different students with divergent thinking skills and attributes, so the results might not be accurate since they point out different individuals with different skill sets and knowledge. The TW- II students must be examined in a similar semester and tested on similar tests to ensure accuracy.

The study is also limited because the students' MTE papers used for testing differ; to achieve the accuracy of the results, the studies must ensure that the students are exposed to the same MTE papers to test the accuracy of the results.

The study is also restricted to email writing only and does not allow any gap-filling exercises to be considered. The email writing is intended to test the students' communication skills; hence, the students have to be accurate enough to pass the intended message. Since there is no gap-filling exercise, the study results might prove bias and inaccurate to some extent.

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