

## **Digital Savviness: Does It Matter for Open and Distance Learning?**

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### **ABSTRACT**

The Open and Distance Learning (ODL) approach was adopted in Malaysia for teaching and learning when the COVID-19 pandemic hit the world. The speed at which students shifted from physical lessons to online classes created problems for some, particularly those who were not computer savvy. The ACE website was formed to help those less computer savvy adapt to online learning. ACE is a compilation of freely available tools and applications and step-by-step guidance for using the tools and apps to create attractive and interactive presentations. A study was carried out to explore university students' perceptions of ACE and how helpful the website's content was in assisting them in completing their English course assignments. Non-probability and quota sampling techniques were used to collect pre-and post-responses to ACE using an online questionnaire. The overall sample size was 186 participants who filled out pre-and post-surveys. The data set covers students' perceptions of utilising ACE's various tools and applications to complete their English course assignments. The results show that most respondents claimed that ACE had helped them prepare more attractive and engaging presentations that included embedded video and audio. When recording student presentations, students still prefer to use their cell phone cameras when it is an individual presentation. However, the results show a shift in using ZOOM to record group presentations after adopting ACE. This study comes to the conclusion that the ACE website has helped students make better presentations so that they can teach and learn English more effectively during ODL.

**Keywords:** Digital Savviness, Open and Distance Learning

## INTRODUCTION

Covid-19 initiated an abrupt digital transformation that students had to adopt in order to continue their studies in the Open and Distance Learning (ODL) environment. The transformation in the academic environment, posed several problems for undergraduate students' approach to their studies (Chung, Subramaniam & Dass, 2020; Juhary, 2020). Students were suddenly compelled into a virtual learning environment where they had to be digital savvy to learn remotely from home. Students who were skilled with digital tools transitioned quickly to an online learning mode. Students who were digitally savvy transitioned smoothly to the online learning mode. However, there was a group of students who also needed help using generic digital skills, such as preparing presentations and submitting their work in a more engaging and interactive mode (Shanthi, Jamil, & Lim, 2021). Merely preparing presentations using basic PowerPoint slides was not sufficient. For example, undergraduates needed to learn to embed their voice or video in their presentations. Those with high digital competence followed online learning easily and performed well in Open and Distance Learning (ODL) (Shanthi, Jamil & Lim, 2021; Chung, Subramaniam & Dass, 2020). Digital skills become part of being successful in ODL. Undergraduates who lacked digital skills struggled to cope with online learning, consequently leading to academic burnout, which could eventually lead to the intention of quitting learning (Al-Kumaim et al., 2021; Nalini et al., 2021). Completing assignments in ODL had to be interactive with video and audio included in their presentations, such needs added to the stress of online learning. According to the evidence, children were lagging behind in their academic achievement due to a lack of computer literacy abilities (Jandrić & Hayes, 2020; Fernando, Patriazia & Tiziana, 2020). To help and guide students who lacked the computer literacy skills needed to complete their English coursework, the web "ACE: Apps to Ace Assignments" was developed by a group of lecturers from UiTM Cawangan Negeri Sembilan. This paper will report on students' perceptions of the usefulness of the ACE website.

Specifically, this study aims to answer the following research question:

1. Has students' digital competence improved with ACE to complete presentations required in ODL?

## LITERATURE REVIEW

During the COVID-19 pandemic, academic institutions throughout the world switched to the ODL teaching and learning technique. ODL empowered educators and students to communicate in a virtual classroom from anywhere using technology and the Internet. The belief that digital savviness is mainly among undergraduates who are mainly millennials is widely accepted. University students' digital competency has always been thought of as high since they are exposed to many digital technologies in their social practices. Nonetheless, this viewpoint may apply to millennial undergraduates' use of digital technology for social or personal interests (Hou, Xiong, Jiang, Song & Wang, 2019). However, in reality, many students grapple with producing quality assignments that meet the benchmark set by their lecturers. When digital technologies are actively used for educational purposes, it's a different situation. It requires constant mental and emotional engagement, which may make it less interesting to students than using technology for fun (Maderick, Zhang, Hartley & Marchand, 2016; Hou et al., 2019).

While technology was already being utilised in the classroom before the pandemic, having no face-to-face meeting with the lecturer or facilitator was deemed challenging for most students (Krishnan, Ching, Ramalingam & Maruthai, 2020). This is made more difficult as the expectations of assignments and projects have to be carried out without any face-to-face consultation with the

lecturer. This belief is perpetuated by the confidence many millennials demonstrate when using certain mobile apps, the use of which many exhibit significant expertise. Bloom's Taxonomy says that making something requires a higher level of thinking than remembering, understanding, and using (Aheisibwe, 2021). Students learn and remember more information when they utilise different online tools to produce presentations, infographics, animations, or ePortfolios for their assignments. As a result, they can articulate their ideas, findings, and arguments more creatively, often exceeding expectations in classes across all disciplines (Beghetto, 2021). Studies (Harris, Al-Bataineh & Al-Bataineh, 2020; Maderick et al., 2016; López-Meneses, Sirignano, Vasquez-Cano & Ramirez-Hurtado, 2020) have shown that there hasn't been much research on the digital skills of college students for ODL purposes.

## METHODOLOGY

The sample of this study comprised students enrolled in a public university in Malaysia. This study was conducted at the end of the semester when they finished online courses at home using ACE to complete their English course assignments. This quantitative study was conducted using a survey approach to determine students' acceptance of ACE. The data was primarily collected through online questionnaires using the Google Form platform. In week 1, prior to the commencement of the semester, students were asked to complete the pre-ACE questionnaire. Then a three-hour workshop was conducted to teach the students how to use ACE for their classroom activities and assessments at the start of the course. Finally, students took the post-ACE questionnaire in week 14 after completing English course assignments.

The questionnaire was divided into Parts A, B, and C. Part A consisted of the demographic profile items formulated using multiple-choice questions. Part B consisted of ACE items on students' experience in completing their online assignments, especially during ODL, using the seven-point-Likert Scale type of questions. Part C consisted of students' preferences for video editing tools, recording tools, and uploading to a learning platform. The online questionnaire was administered using nonprobability sampling. Students filled out a survey in Google Form, which was then screened and transferred to SPSS version 26 for analysis. The total sample size is 186 respondents based on the online feedback post-survey. The study's results gave summaries and conclusions about the sample, but they can't be used to draw conclusions about the population as a whole.

## RESULTS AND DISCUSSION

### 3.1 Descriptive analysis

A needs analysis was carried out before the students were introduced to the ACE app. An online questionnaire was distributed to students. The result of the needs analysis is portrayed in Table 1.

**Table 1: Tools/apps guidance to prepare a better assignment**

Preference	Preference	Percentage
Do you think you need more guidance/knowledge on using digital tools to enhance your presentation?	Maybe	33.3
	No	5.4
	Yes	<b>61.3</b>
Do you think these tools/apps would help you prepare better assignments?	Maybe	12.9
	No	1.1
	Yes	<b>86.0</b>
	No	28.0

Would you be willing to take a short course (3-4 hours) on using the tools mentioned above?	Yes	<b>72.0</b>
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Students indicated they needed more guidance on preparing a presentation, with 61.3% indicating 'Yes' and only 5.5% saying 'No'. When asked if the tools introduced in the ACE app would help them prepare a better assignment, a significant percentage of 86.0% indicated "Yes," revealing an early indication that the students believed that ACE is a helpful tool to help them prepare assignments for their English courses. Finally, 72.0% of respondents indicated they were willing to take a short course on the tools necessary to prepare presentations for their English courses. Overall, the students were eager to learn and use a variety of digital tools that required different skills to help them learn.

### 3.2 Demographic profile

A pre-test and post-test study were carried out to ensure that this research has directionality; to find out if the knowledge to use the different apps in ACE before and after intervention with the training conducted to use ACE and, after that, the students' use of ACE in learning. The post-test questionnaire was emailed to 361 students who attended and used ACE in class. One hundred eighty-six forms were returned.

**Table 2: Demographic profile analysis**

Demographic		Frequency	Percentage
Gender	Male	30	16.1
	Female	156	83.9
Education level	Diploma	86	46.2
	Degree	100	53.8

Table 2 shows the demographic profile of the respondents of this study. 186 students filled out both the pre-survey and post-survey questionnaires. 46.2% of the students were getting a diploma and 53.8% were getting a degree. Next, descriptive statistics are used to identify the feedback of the ACE. This would be suitable at improving performance and enhancing students' learning experience (Jamil, Ahmad, Ali, Mohamed & Yacob, 2016).

### 3.3 Students' experience in completing their online assignments using PowerPoint, Canva and Flipbook.

This section briefly focuses on the shifting trends in students' experiences completing their English online assignments, especially during ODL using Microsoft PowerPoint, Canva, and Flipping Book. Students' self-reported data from the pre-and post-survey provided a critical outlook on how ACE has helped them complete the English course presentations. Additionally, this test allowed us to assess students' emerging proficiency before and after using ACE. Overall, the results showed that students fared better during the post-test.

**Table 3: Skills in Microsoft PowerPoint**

PowerPoint	Rate	Percentage	
		Pre	Post
Ability to prepare a presentation	EP	<b>0.0</b>	<b>0.0</b>
	VP	<b>2.2</b>	<b>0.0</b>
	P	<b>0.0</b>	<b>0.0</b>
	A	<b>22.6</b>	<b>10.8</b>
	G	43.0	47.4

	VG	23.7		35.5	
	E	8.6		6.5	
Ability to prepare a presentation combining slides with audio	EP	<b>0.0</b>	<b>30.1</b>	<b>0.0</b>	<b>22.6</b>
	VP	<b>1.1</b>		<b>1.1</b>	
	P	<b>11.8</b>		<b>4.3</b>	
	A	<b>17.2</b>		<b>17.2</b>	
	G	36.6		31.2	
	VG	24.7		34.4	
	E	8.6		11.8	
Ability to prepare presentation combining slides and video	EP	<b>0.0</b>	<b>33.4</b>	<b>0.0</b>	<b>23.7</b>
	VP	<b>3.2</b>		<b>6.5</b>	
	P	<b>6.5</b>		<b>11.8</b>	
	A	<b>23.7</b>		<b>5.4</b>	
	G	31.2		29.0	
	VG	28.0		36.6	
	E	7.5		10.8	
Ability to convert PowerPoint presentations to MP4 format	EP	<b>3.2</b>	<b>43</b>	<b>1.1</b>	<b>20.4</b>
	VP	<b>3.2</b>		<b>0.0</b>	
	P	<b>15.1</b>		<b>3.2</b>	
	A	<b>21.5</b>		<b>16.1</b>	
	G	23.7		37.6	
	VG	18.3		25.8	
	E	15.1		16.1	

EP: Extremely poor, VP: Very poor, P: Poor, A: Average, G: Good, VG: Very good, E: Excellent

Table 3 presents students' ability to use PowerPoint for presentations. The results indicate an improvement as the percentage of students who rated themselves as average from poor (extremely poor, very poor and poor) for preparing PowerPoint presentations reduced from 24.8% (pre-test) to 10.8 % (post-test). The same pattern of improvement can be seen in students' ability to prepare PowerPoint slides embedded with audio, as average from poor (extremely poor, very poor and poor) (pre-test 30.1%, post-test 22.6%) and ability to prepare presentations combining slides and video (pre-test 33.4%, post-test 23.7%).

Table 3 also indicates a shift in the students' ability from 'Good' to 'Very good' to prepare a presentation combining slides with audio embedded and a shift from 'Good' to 'Very good' to prepare a presentation combining slides and video. Finally, the highest rate of improvement can be seen in their ability to convert PowerPoint presentations to MP4 format (pre-test 43.0%, post-test 20.4%). Although results of students' ability to convert PowerPoint presentations into MP4 format remained in the 'Good' category, the percentage has increased from 23.7% in the pre-test and 37.6% in the post-test. Therefore, it can be seen from descriptive statistics that after using the ACE app, students were able to prepare better presentations using PowerPoint.

**Table 4: Skills in CANVA**

Canva	Rate	Percentage		
		Pre	Post	
Ability to prepare a presentation	EP	<b>2.2</b>	<b>1.1</b>	<b>40.9</b>
	VP	<b>9.7</b>	<b>8.6</b>	
	P	<b>11.8</b>	<b>15.1</b>	
	A	<b>22.6</b>	<b>16.1</b>	

	G	30.1		26.9	
	VG	17.2		25.8	
	E	6.5		6.5	
Ability to prepare presentation combining slides with audio embedded	EP	<b>3.2</b>	<b>61.2</b>	<b>1.1</b>	<b>42</b>
	VP	<b>11.8</b>		<b>9.7</b>	
	P	<b>17.2</b>		<b>17.2</b>	
	A	<b>29.0</b>		<b>14.0</b>	
	G	19.4	24.7		
	VG	15.1	26.9		
	E	4.3		6.5	
Ability to prepare presentation combining slides and video	EP	<b>4.3</b>	<b>60.2</b>	<b>2.2</b>	<b>43.1</b>
	VP	<b>14.0</b>		<b>8.6</b>	
	P	<b>17.2</b>		<b>19.4</b>	
	A	<b>24.7</b>		<b>12.9</b>	
	G	18.3	26.9		
	VG	16.1	24.7		
	E	5.4		5.4	

EP: Extremely poor, VP: Very poor, P: Poor, A: Average, G: Good, VG: Very good, E: Excellent

Table 4 presents students' ability to use Canva for presentations. The results indicate an improvement, as the percentage of students who rated themselves as average to poor (extremely poor, very poor, and poor) for preparing the Canva slide presentation reduced from 46.3% (pre-test) to 40.9% (post-test). The same pattern of improvement can be seen in students' ability to prepare Canva slides embedded with audio (pre-test 61.2%, post-test 42.0%), as well as the ability to prepare presentations combining slides and video (pre-test 60.2%, post-test 43.1%). So, it's safe to say that after using the ACE app, students would be able to use Canva to make better presentations.

Tables 3 and 4 show that students can prepare slides using PowerPoint and Canva but lack the skills to embed the slides with audio and video in the presentation. Comparing the data in Tables 3 and 4 shows that ACE has improved students' ability to prepare interactive slides using PowerPoint compared to Canva.

Table 5 shows students' ability to prepare Flipbook presentations. Digital flipbooks are a great way to show interactive digital portfolios, which are sometimes required for schoolwork.

**Table 5: Skills in Flipping Book**

Flipping Book	Rate	Percentage	
		Pre	Post
How do you rate your ability to prepare a presentation using Flipbook?	EP	19.4	8.6
	VP	23.7	14.0
	P	<b>26.9</b>	<b>31.2</b>
	A	21.5	22.6
	G	6.5	18.3
	VG	1.1	3.2
	E	1.1	2.2

EP: Extremely poor, VP: Very poor, P: Poor, A: Average, G: Good, VG: Very good, E: Excellent

Table 5 shows students' ability to prepare Flipbook presentations. Though the data shows that before and after using the ACE app, students remained in the 'Poor' category, the percentage has increased from 26.9 % (Pre-test) to 31.2 % (Post-test). Also, the number of students rating their ability to prepare a Flipbook presentation as average to excellent improved from 30.2% (pre-test) to 47.3% (post-test). This shows that the ACE app has helped students learn how to use Flipbook to make presentations for class.

### 3.4 Students' preference for video editing tools.

This section discusses the student's digital skills in editing video and audio. Sometimes it's necessary to edit the recorded video by cutting out parts that aren't needed. This makes the audio or video clip usable and lets them put it in their slide presentations.

**Table 6: Video editing tools**

Tools	Percentage	
	Pre	Post
Apple iMovie	7.5	6.4
Filmora	<b>25.8</b>	<b>15.1</b>
InShot	<b>32.3</b>	33.3
VN editing video	<b>26.9</b>	<b>35.5</b>
Windows Movie Maker	7.5	9.7

Students were given a chance to work on a few video editing tools in the ACE app, as shown in Table 6. The three most preferred video editing tools before using ACE were InShot (32.3%), VN Editing Video (26.9%) and Filmora (25.8%). However, after using the tools for the classwork, there is a shift to the VN editing tool (35.5%), and a considerable reduction in the students' preference for Filmora (15.1%).

### 3.5 Students prefer recording presentations and uploading them to a learning platform.

In ODL, students must also create and share group or individual presentations with their lecturers. This section follows a discussion of the student's preference for recording and uploading a presentation on a learning platform.

**Table 7: Record presentation and upload to a learning platform**

Recording/ Upload	Percentage	
	Pre	Post
Google meet	29.0	23.7
Handphone camera	<b>57.0</b>	<b>58.1</b>
Laptop camera	12.9	5.4
Webex	0.0	1.0
Zoom	1.1	11.8

Table 7 shows students' preferred tool to record their presentation before uploading it to the learning platform for their lecturer to evaluate. The results show that the most preferred choice was recording using the handphones before using ACE, at 57%, while after using ACE, it was 58.1%. There is a significant increase in the number of students opting for Zoom (11.8%) as a recording tool after using ACE and a decline in the percentage of students using laptops to record their presentations (pre 12.9%, post 5.4%).

### 3.6 Pre and Post analysis

The following sections will discuss the pre and post-test to assess the change in students' self-reported ability scores after using the ACE. The Shapiro-Wilk test is more appropriate for small sample sizes of less than 50 but can also handle sizes as large as 2000. For this reason, this study uses the Shapiro-Wilk test for assessing normality.

**Table 8: Normality test**

	Shapiro-Wilk		
	Statistic	df	p-value
Pre	.984	186	.032
Post	.964	186	.000

The distribution of pre-test score  $SW(186) = 0.984$ ,  $p = 0.032$ , and post-test score  $SW(186) = 0.964$ ,  $p = 0.000$ , are significantly not normally distributed. A nonparametric Wilcoxon test was used since both groups' data were not normally distributed. Next, the Ranks table (Table 9) provides some interesting data on the comparison of students' ability scores before (Pre) and after (Post) use of ACE.

**Table 9. Ranks**

Ranks		n = 186	Explanation
Positive Ranks	Post > Pre	130	Improve
Negative Ranks	Post < Pre	50	Not improve
Ties	Post = Pre	6	No change

$Z = -5.295$ ,  $p = 0.000$

The results indicate that 130 students had a higher ability score after using ACE. This suggests an improvement in the students' abilities after using the ACE, as most of them completed their English assessments. The negative rank for 50 students indicates that the pre-test score is greater than the post-test. However, there were no changes in scores for six students after using ACE. A Wilcoxon signed rank test showed that a 14-week ACE elicited a statistically significant difference between pre-and post-test ( $Z = -5.295$ ,  $p = 0.000$ ). This shows that the ACE app works well and can help and guide students as they work on their English homework.

## CONCLUSION

Despite the difficulties that came along with ODL, the ACE app provided students with the ability to cope with online learning. The findings suggest that undergraduates perceived favourably the ACE apps' ability to aid them in accomplishing presentations, assignments, and classwork for their English courses during ODL. Students' digital abilities were developed while utilising the ACE app to create films, digital portfolios, and digital presentations. PowerPoint, Canva, Flipbook, and editing tools like Snapshot, VL, and VLLO are among the tools and apps used by students for these activities. These are the basic digital technologies that students must use to create appealing and engaging digital presentations. Based on the results, it can be concluded that ACE has achieved the objective of providing a platform that can be a reference point for students, especially those who lack computer literacy. More students rated themselves better after using ACE to embed video and audio into slide presentations. Even though the post-test revealed that students have become better at preparing presentations using PowerPoint and Canva, PowerPoint was preferred more than Canva. Many students seem to have shifted to the VN video editing app from previously using Filmora. Where recording student presentations is concerned, students still prefer to record using their handphone cameras, but after using ACE, there is a shift to using ZOOM meetings to record.



To conclude, the outcomes of this study show that the ACE is a useful tool through which students have learned to use new digital tools to assist and guide them in producing engaging and interactive presentations. ACE's success could be attributed to the fact that it is a comprehensive guide that provides an easy-to-follow step-by-step guide starting from downloading attractive slides, preparing presentations, and uploading them to the teaching and learning platforms commonly used by its lecturers, such as Microsoft Teams and Google Classrooms. Aside from assisting students in gaining confidence in coming up with great assignments, the ACE website and applications are a highly useful learning tool in preparing students for the workforce by equipping them with digital skills. As mentioned by research such as (Beghetto, 2021; Shanthi, Adnan, Jamil, Nadira & Sharminnie, 2021; Aheisibwe, 2021), the academic world entails students possessing both academic literacies as well as creativity and critical thinking skills. This is also in line with the National Education policy IR 5.0, where humans and technology are integrated, thus enabling the creation of new knowledge, and learning in education. As such, ACE is seen as an enabler towards achieving this goal.

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