



## **Digital Instructional Pedagogy Application for Office Management and Technology in Rivers State**

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### **ABSTRACT**

The study investigated the use of innovative technologies for instructional delivery of Office Management and Technology (OMT) in Rivers State Universities. The research adopted descriptive survey design. Four research questions and four null hypotheses guided the study. The population of the study comprised one hundred and five (105) lecturers and students from Rivers State University (45) and Ignatius Ajuru University of Education (60). The entire population was studied due to its manageable size. The census sampling technique was adopted. A structured questionnaire titled “Innovative Technologies for Instructional Delivery of Office Management and Technology Questionnaire (ITIDOMTQ)” was developed on a 4-points rating scale of Highly Utilized HU=4point, Moderately Utilized MU=3point, Fairly Utilized FU=3point and Not Utilized NU=1point, for research questions 1, 2, and 3 while Strongly Agreed (SA)=4point, Agreed (A)=3point, Disagreed (D)=2point and Strongly Disagreed (SD)=1point for research question 4 by the researcher. The instrument was validated by the supervisor and three other experts from Business Education Department and Measurement and Evaluation in Rivers State University. To determine the reliability of the instrument, a test-retest method was adopted and Pearson Product Moment Correlation Coefficient (r) was used to determine the reliability coefficient of 0.78. The questionnaires was administered to the respondents personally by the researcher and duly retrieved. The research questions were answered using Mean and Standard Deviation, while the hypotheses were tested with Z-test statistics at 0.05 level of significance. The results revealed that lecturers and students to a high extent utilized Zoom application and Google classroom platform, but do not utilized Whatsapp platform for instructional delivery of OMT in the institutions. It was also revealed that the use of innovative technologies for instructional delivery of OMT is associated with myriad of challenges in the institutions. Based on the findings of the study, it was recommended among others, that the need to basic technology infrastructures to effectively roll out online instructional delivery with the use of Zoom application, Google classroom and Whatsapp platforms be met and also Lecturers’ and student readiness needs to be fathomed and supported accordingly to avoid technological challenges during instructional delivery of OMT in Rivers State Universities.

**Keywords:** Digital, instructional pedagogy, adaptability, office management technology.

### **INTRODUCTION**

The rapid evolution of technology and the increasing complexity that comes with its exploding potential explains why adoption of digital instruction in education continues to receive special attention. The dawning of the new millennium had witnessed the initial entry of the Net Generation into higher education institutions, which required Office Management and Technology (OMT) to brace themselves for a new lineage of pedagogy with distinctive interests and dispositions. This is because students’ entry in the world was at a time when digitalization of instruction was ubiquitous and widely adopted

throughout the world. In Ali (2018) it was revealed that students tend to have a strong bonding with digital technology that support education.

Digitalization of instruction is the type of teaching that is facilitated by technology or teaching through digital media. Contextually, Holzberger, Philipp and Kunter (2013) regarded digital teaching as delivery with digital forms of media such texts or pictures through the internet in order to enhance teacher's effectiveness or promote personal knowledge and skills. This suggests that digital instruction is meant to enhance teaching and learning by exploring new technologies. Therefore, digital teaching is an instructional practice that ultimately helps teachers through various digital means such as the internet, corporate network, computers, satellite broadcasting, audiotapes, among others (Ming-Hung, Huang-Cheng, & KuangSheng, 2017). These mediums are applied in a broad range of technology-enhanced educational strategies including blended learning, network-based learning, computer-based learning, virtual classrooms, digital cooperation and other strategies that rely on digital tools (Lauren, 2020).

More than a decade ago, various inventions are continually uprising that could enhance teaching and other administrative works (Koko & Okogun, 2020). According to Bao (2020) some universities such as Harvard, MIT, Yale, Oxford, Cambridge, Tsinghua, Peking University, among others are moving into digital pedagogy. Most educational institutions in Nigeria are currently based only on traditional methods of teaching including schools, colleges and universities (Dhawan, 2020). However, some academic units have introduced the use of technology to facilitate academic activities and revamp old procedures. These conspicuous perceptions provided the intrinsic motivation for a change in the instructional pedagogy of Office Management and Technology in Rivers State universities. Instructional pedagogy of Office Management and Technology involves purposeful and meaningful transfer of knowledge, skills, competencies and attitude formation in formal educational set-up. The new era of digital explosion has changed the traditional way of instructional delivery in the classroom to a more innovative, interesting and fascinating one, which is regarded as active, integrative and evaluative in nature.

Office Management and Technology (OMT) is a comprehensive term referring to those aspects of the educational process involving general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life. Office Management and Technology programme in Nigeria was designed by the National Board for Technical Education (NBTE), to replace the Secretarial Studies programme offered in Nigerian Universities. Office Management and Technology is now the new name for the former Secretarial Studies. The nomenclature varies depending on the one institution to another, most time used interchangeably. In Rivers State University it is called Office Management and Technology (OMT), Office Information Management (OIM) in Ignatius Ajuru University and Office Technology Management (OMT) etc in other institutions. This was approved in 2004 by NBTE, the supervising body for Universities in Nigeria. This approval was accompanied with a mandatory new curriculum (Atueyi, 2010). The objectives, theoretical and practical contents of the new curriculum are geared towards integrating graduate students of OMT programme into the evolution of digital technology. The digital educational resource Zoom has helped to introduce a number of innovations into instructional delivery. The widespread use of methods, activities and tools of Computer Assisted Learning enabled many teachers all over the world, including Office and Technology Management, to enhance their teaching and maximize learning opportunities for their students. Opportunely, more and more high schools on the one hand and households on the other have computers and internet access to make digital teaching and learning possible. Zoom application is a cloud based service which offers Meetings and Webinars and provides content sharing and video conferencing capability. It helps, for example OMT teachers to bring their students together in a frictionless environment to get more done. Zoom is the leader in modern enterprise video communications, with an easy, reliable cloud platform for video and audio conferencing, collaboration, chat, and webinars across mobile devices, desktops, telephones and room systems. Zoom application grants OMT teachers to present the content of their lessons in various ways. For example Zoom's screen sharing can give teachers a great opportunity to develop students' intercultural skills by sharing engaging materials such as videos and articles, and presentations (Annastashia, 20018).

Another trending digital approach to instructional pedagogy for OMT programme delivery is the use of Google classroom platform. The Google classroom platform serves as a part of a strategy that uses digital tools to facilitate lecturers and students in the teaching process (Ocampo, 2017). Google Classroom platform is an internet-based service provided by Google as an e-learning system (Martínez-Monés, 2017). In Google Classroom, OMT lecturers can provide materials on the subject being taught. The lecturers can post some teaching materials, assign tasks for students, and upload the students' grade, so that they can immediately see the scores obtained in the course. In addition, Google Classroom platform also minimizes the costs incurred due to the use of more affordable stationery and other materials, and can minimize time factor (Pengnate, 2018) by providing all the essential services needed during and after instructional delivery of OMT. Most lecturers across the globe are showing support for increased levels of digitalized teaching such as google classroom, blog, Whatsapp etc in the classroom by providing varieties of teaching support (Linus, 2015).

Based on this lecturer's interest, there is an increase in the number of people joining Whatsapp social networks as an innovative pedagogy in higher institutions. Whatsapp seen as a programme that ease the interaction between individuals and groups, provide various opportunities for social feedback and support the formation of tangled social relations (Boyd, 2013). Therefore, the presence of positive and negative sides of Whatsapp platform does not change the fact that these tools are rapidly becoming popular, gaining an important place in our lives, and starting to take their place in education. According to Koko (2011), every office worker of today is most likely to encounter the use of one office technology gadget or the other in the course of administrative performance, and therefore may be faced with the challenge of carrying out his/her official duties more efficiently as he or she struggle with the new technology. However, in studies on the use of different instant messaging platforms in education, it is also determined that these applications have potential to increase instructional delivery in higher institutions (Smit, 2012), learners' being active in their studies (Cifuentes & Lents, 2010), hence, will serves as an alternative mode for instructional delivery of OMT in Rivers State Universities.

### **Statement of the Problem**

In recent years there has been an increase interest on how technology could best be harnessed to improve the efficiency and effectiveness of instructional delivery at all levels, and in both formal and non-formal settings. Nigerian universities are faced with a number of challenges such as lack of computers, computer laboratories, internet, social medias, teleconferencing devices, digital library, and the problem of digital classroom (zoom, google classroom and whatsapp) among others (Jegede & Owolabi, 2017). The level of digital instructional compliance in the system appears to be low. An examination of studies shows that there is dearth of facilities in the use of digital tools such as Zoom application, Google classroom, and WhatsApp platforms as an instructional resources for the effective innovative pedagogy of Office Management and Technology in higher institutions (Alharbi, 2014, Hartley, 2015)). However, there is a notion that digital environment offers lecturers an improved teaching experience when compared to a more traditional teaching environment, and that student who participates on online learning university courses using digital tools such as Zoom application, Google-Classroom platform, WhatsApp platform, Twitter, Blogs etc, achieves better grades than students who studied in traditional learning settings (Hartley, 2015). While digitalization has been the norm and culture of the developed societies, the application for instructional delivery in the developing countries like Nigeria is still at its emerging stage. Therefore, the study examined the level of adoption and use of digital technologies like Zoom application, Google-Classroom and WhatsApp platforms for instructional delivery of Office Management and Technology in Rivers State Universities.

### **Purpose of the Study**

The purpose of this study was to investigate the extent to which digital technologies are used for instructional delivery of Office Management and Technology (OMT) in Rivers State Universities. Specifically, the study examined the extent;

1. To which Zoom application is used as instructional delivery of OMT in Rivers State Universities.
2. To which Google classroom platform is used as instructional delivery of OMT in Rivers State Universities.

3. To which WhatsApp platform is used as instructional delivery of OMT in Rivers State Universities.

### Research Questions

The following research questions guided the study:

1. What is the extent to which Zoom application is used as instructional delivery of OMT in Rivers State Universities?
2. What is the extent to which Google classroom platform is used as instructional delivery of OMT in Rivers State Universities?
3. What is the extent to which WhatsApp platform is used as instructional delivery of OMT in Rivers State Universities?

### Hypotheses

The following hypotheses were formulated and tested at 0.05 significant level:

- Ho<sub>1</sub>:** There is no significant difference in the mean response of lecturers and students as regards the extent to which Zoom application is used as instructional delivery of OMT in Rivers State Universities.
- Ho<sub>2</sub>:** There is no significant difference in the mean response of lecturers and students as regards the extent to which Google classroom platform is used as instructional delivery of OMT in Rivers State Universities.
- Ho<sub>3</sub>:** There is no significant difference in the mean response of lecturers and students as regards the extent to which WhatsApp platform is used as instructional delivery of OMT in Rivers State Universities.

### METHODOLOGY

The study adopted the descriptive survey design. This study was carried out in Rivers State. The population of the study comprised one hundred and five (105) RSU/ IAUE OMT lecturers and students. Since the population size is manageable the entire population was studied, and the census sampling technique was adopted. The instrument for data collection was a self-constructed questionnaire titled "Digitalization of Instructional Delivery of Office Management and Technology Questionnaire (DIDOMTQ)". The instrument was validated by three experts, two in the Department of Business Education and one in Measurement and Evaluation in Rivers State University. Their suggestions were incorporated into the final design of the instrument which made the questionnaire to have face and content validity. The reliability of the instrument was established through a test re-test and was correlated using Pearson Product Moment Correlation Coefficient (r) and a reliability coefficient 0.78 was obtained. One hundred and five (105) copies of the instrument was administered to the respondents through personal contact and all duly retrieved after filling. The data collected was analyzed using Mean and Standard Deviation for research questions, while the hypotheses were tested using Z-test statistical tool at 0.05 level of significance. Data obtained from the respondents was analyzed using a modified 4-point rating scale of Highly Utilized (HU)=4point, Moderately Utilized (MU)=3point, Fairly Utilized (U)=2point, and Not Utilized (NU)=1point. Any item with a mean value equal to or greater than 2.50 was regarded as utilized by the respondents, while mean values less than 2.50 was regarded as not utilized by the respondents.

**RESULTS**

**Research Question 1**

*What is the extent to which Zoom application is used as instructional delivery of OMT in Rivers State Universities?*

**Table 1: Analysis of Mean Scores of Lecturers and Students on the Extent to which Zoom Application is Used as Instructional Delivery of OMT.**

S/N	Extent to which Zoom application is used as instructional delivery of OMT.	(N=105)					
		Lecturers(11)		Decision	Students(94)		Decision
		X <sub>1</sub>	SD <sub>1</sub>		X <sub>2</sub>	SD <sub>2</sub>	
1.	Lecturers use Zoom application to present varieties of teaching methods for students' easy comprehension.	2.67	0.62	U	2.58	0.17	U
2.	Students use Zoom to reflect on their lesson by recording video	1.85	0.72	NU	2.26	0.74	NU
3.	The use of Zoom screen sharing gives lecturers a great opportunity to develop students' skill.	2.59	0.18	U	2.92	1.21	U
4.	Zoom features is used to bring students together in a frictionless environment.	3.09	1.02	U	2.53	0.45	U
5.	Zoom application is used to allow students make constructive feedback.	1.44	0.76	NU	2.12	0.89	NU
6.	Zoom application is used for recording lesson and watch them again to assess the students and teachers strength and weakness.	3.39	0.62	U	2.75	0.78	U
<b>Grand Mean/SD</b>		<b>2.50</b>	<b>0.65</b>	<b>U</b>	<b>2.69</b>	<b>0.70</b>	<b>U</b>

**Source:** *Field Survey, 2022.*

Table 1 shows the extent to which Zoom application is use in instructional delivery of Office Management and Technology (OMT) in Rivers State Universities (RSU, IAUE,). The table revealed that out of the 6 Zoom application items listed only two (2) were moderately used while four (4) was of a high extent utilized for instructional delivery of OMT in in Rivers State Universities, with the mean value of 2.50 and 2.69 from RSU and IAUE lectures and students respectively, which are equal or higher than the average mean score of 2.5. This indicates that Zoom applications are highly utilized by lecturers as instructional delivery of OMT in the institutions.

**Research Question 2**

*What is the extent to which Google classroom platform is used as instructional delivery of OMT in Rivers State Universities?*

**Table 2: Analysis of Mean Scores of Lecturers and Students on the Extent to which Google Classroom Platform is Used as Instructional Delivery of OMT.**

S/N	Extent to which Google classroom platform is used as instructional delivery of OMT.	Lecturers(11)		Decision	(N=105) Students(94)		Decision
		X <sub>1</sub>	SD <sub>1</sub>		X <sub>2</sub>	SD <sub>2</sub>	
1.	Google classroom platform is created and used to distribute task to students in a paperless form	3.21	1.25	U	2.84	1.02	U
2.	Google classroom platform is not used as a means of instruction delivery in.	1.56	0.91	NU	2.11	0.76	NU
3.	Lecturers most times use Google classroom platform to get feedback from students in OMT class.	2.92	1.03	U	3.02	0.92	U
4.	Use Google classroom platform as instructional material for recording and illustration of OMT information	3.04	0.67	U	2.61	1.25	U
5.	Google classroom platform is use to make calculations and proofs that encourages students participation and retention.	2.67	0.81	U	2.65	0.82	U
6.	Lecturers use Google classroom platform to encourage active participation in visual class.	3.30	0.87	U	2.87	1.11	U
<b>Grand Mean/SD</b>		<b>2.78</b>	<b>0.92</b>	<b>U</b>	<b>2.68</b>	<b>0.98</b>	<b>U</b>

**Source:** *Field survey, 2022.*

Table 2 shows the extent to which Google classroom platform is used for instructional delivery of Office Management and Technology (OMT) in Rivers State Universities (RSU, IAUE,). The table revealed that out of the 6 Google classroom platform items listed only one (1) was not used while five (5) was of a high extent utilized for instructional delivery of OMT in in Rivers State Universities, with the mean value of 2.78 and 2.68 from RSU and IAUE lectures and students respectively, which are higher than the average mean score of 2.5. This indicates that Google classroom platforms are highly utilized by lecturers as instructional delivery of OMT in the institutions.

**Research Question 3**

*What is the extent to which WhatsApp platform is used as instructional delivery of OMT in Rivers State Universities?*

**Table 3: Analysis of Mean Scores of Lecturers and Students on the Extent to which WhatsApp Platform is used as Instructional Delivery of OMT.**

S/N	Extent to which WhatsApp platform is used as instructional delivery of OMT.	Lecturers(11)		Decision	Students(94)		Decision
		X <sub>1</sub>	SD <sub>1</sub>		X <sub>2</sub>	SD <sub>2</sub>	
1.	WhatsApp platform is used as an effective application for presenting an instructional programme that will enhance academic performance of OMT students.	1.78	0.82	NU	2.26	0.45	NU
2.	Used as instructional delivery to improve the quality of teaching and enhance students' active participation.	2.17	0.96	NU	1.85	0.57	NU
3.	Educators view the use of WhatsApp in OMT as a means of discouraging students' hard work.	1.47	0.88	NU	1.55	0.70	NU
4.	Whatsapp platform is used to create the sense of belonging in instructional delivery of OMT	2.12	0.89	NU	1.83	0.75	NU
5.	Whatsapp platform is used to increase social interaction among students in course related topic.	2.00	0.91	NU	2.03	0.89	NU
6.	Whatsapp platform used to enhance students motivation and eliminate environmental barrier in instructional delivery of OMT	2.78	0.13	U	1.83	0.99	NU
<b>Grand Mean/Std</b>		<b>2.05</b>	<b>0.76</b>	NU	<b>1.89</b>	<b>0.72</b>	NU

**Source:** *Field survey, 2022.*

Table 3 shows the extent to which WhatsApp platform is use as instructional delivery of Office Management and Technology (OMT) in Rivers State Universities (RSU, IAUE,). The table revealed that all the 6 WhatsApp platform items listed were of low extent used in the instructional delivery of OMT in in Rivers State Universities, with the mean value of 2.05 and 1.89 from RSU and IAUE lectures and students respectively, which are lower than the average mean score of 2.5. This indicates that WhatsApp platform is not utilized by lecturers as instructional delivery of OMT in Rivers State Universities.

**Hypotheses 1**

**H<sub>01</sub>:** There is no significant difference in the mean response of lecturers and students as regards the extent to which Zoom application is used as instructional delivery of OMT in Rivers State Universities.

**Table 4: Z-test Analysis of Lecturers and Students on the Extent to which Zoom Application is Used as Instructional Delivery of OMT.**

Groups	N	Mean	SD	DF	P	Z <sub>cal</sub>	Z <sub>crit</sub>	Decision
LECTURERS	11	2.50	0.65	103	0.05	1.12	1.96	Accepted
STUDENTS	94	2.69	0.70					

**Source:** Field survey, 2022.

Table 4 shows that the calculated z-value was 1.12 which was less than the critical or table t-value of 1.96 at 0.05 level of significance and at 103 degree of freedom (df). Therefore, the null hypothesis of no significant difference between the mean response of lecturers and students in OMT on the extent to which Zoom application is used as instructional delivery of OMT in Rivers State universities was accepted. As such from the analysis, it can be concluded that the views of lecturers and students of OMT in Rivers State Universities are the same.

### Hypothesis 2

**H<sub>02</sub>:** There is no significant difference in the mean response of lecturers and Students as regards the extent to which Google classroom platform is used as instructional delivery of OMT in Rivers State Universities.

**Table 5: Z-test Analysis of Lecturers and Students on the Extent to which Google Classroom Platform is Used as Instructional Delivery of OMT.**

Groups	N	Mean	SD	DF	P	Z <sub>Cal</sub>	Z <sub>Crit</sub>	Decision
LECTURERS	11	2.78	0.92	103	0.05	1.10	1.96	Accepted
STUDENTS	94	2.68	0.98					

**Source:** Field survey, 2022.

Table 5 shows that the calculated z-value was 1.10 which was less than the critical or table t-value of 1.96 at 0.05 level of significance and at 103 degree of freedom (df). Therefore, the null hypothesis of no significant difference between the mean response of lecturers and students in OMT on the extent to which Google classroom platform is used as instructional delivery of OMT in Rivers State universities was accepted. As such from the analysis, it can be concluded that the views of lecturers and students of OMT in Rivers State Universities are the same.

### Hypothesis 3

**H<sub>03</sub>:** There is no significant difference in the mean response of lecturers and students as regards the extent to which WhatsApp platform is used as instructional delivery of OMT in Rivers State Universities.

**Table 6: Z-test Analysis of Lecturers and Students on the Extent to which WhatsApp Platform is Use as Instructional Delivery of OMT.**

Groups	N	Mean	SD	DF	P	Z <sub>cal</sub>	Z <sub>crit</sub>	Decision
LECTURERS	11	2.55	0.71	103	0.05	1.16	1.96	Accepted
STUDENTS	94	2.54	0.73					

**Source:** Field survey, 2022.

Table 6 shows that the calculated z-value was 1.16 which was less than the critical or table t-value of 1.96 at 0.05 level of significance and at 103 degree of freedom (df). Therefore, the null hypothesis of no significant difference between the mean response of lecturers and students in OMT on the extent to which Whasapp platform is used as instructional delivery of OMT in Rivers State universities was accepted. As

such from the analysis, it can be concluded that the views of lecturers and students of OMT in Rivers State Universities are the same.

### **DISCUSSION OF FINDINGS**

In the course of this study, the researchers investigated the use of digital technology as instructional delivery of Office Technology and Management (OMT) in Rivers State Universities. The findings of this study are discussed as follows:

The extent to which Zoom application is used as digital instructional delivery of OMT in Rivers State Universities. Based on the results of this study, it was revealed that OMT lecturers and student in both universities (RSU and IAUE) to a high extent utilize Zoom digital application in the instructional delivery of OMT in Rivers State Universities. It was also discovered that no significance difference existed in the mean ratings of lecturers and students on the extent to which they use Zoom application as instructional delivery of OMT in Rivers State Universities. This finding is not alone but in line with the result of Hamid, (2015) who observed that Zoom application is a good instructional resource, that OMT lecturers can adopt for effective instructional delivery of OMT programme in higher institutions, hence should be integrated in the instructional delivery process.

Extent to which Google classroom platform is used as instructional delivery of OMT in Rivers State Universities. Based on the findings of this study, the study revealed that OMT lecturers and student in both universities (RSU and IAUE) to a high extent use Google classroom platform in the instructional delivery of OMT in Rivers State Universities. It was also discovered that no significance difference existed in the mean ratings of lecturers and students on the extent to which Google classroom platform is used in the instructional delivery of OMT in Rivers State Universities. This finding is not alone but in consonance with the result of Liu and Chuang, (2016) who observed that Google classroom platform is an innovative and effective instructional resource that OMT lecturers can adopt to enhance instructional delivery of OMT programme in higher institutions.

The extent to which WhatsApp platform is used as instructional delivery of OMT in Rivers State Universities. Based on the results of this study, it was revealed that OMT lecturers and student in both universities (RSU and IAUE) do not utilize WhatsApp platform in the instructional delivery of OMT programme in Rivers State Universities. It was also discovered that no significance difference existed in the mean ratings of lecturers and students on the extent to which WhatsApp platform is used as instructional delivery of OMT in Rivers State Universities. This finding is at variance with the result of Boyed, (2013) who observed that WhatsApp platform is a good innovative tool for instructional delivery in higher institutions of learning which lecturers can use in effective instructional delivery process.

### **CONCLUSION**

There is no doubt that massive digital technological in the world demand a paradigm shift in way we approach our educational goals and aspirations. Many universities and educational institutions in Nigeria have adopted digital instructional methods with the use of zoom application, Google classroom platform, Whatsapp, twitter, myspace, etc including Office Management and Technology to keep abreast the running of education system. Digitalization of instructional delivery of Office Management and Technology (OMT) have great positive impact on instructional delivery of (OMT) profession. Many global issues have call for the increased emphasis on the adoption and use of digital innovative technologies as instructional delivery of OMT in higher institutions. Hence, several digital tools have been provided for effective instructional delivery of OMT in the institutions. Based on the findings of the study, it was concluded that OMT lecturers and students in Rivers State Universities should carry out their instructional delivery process with the use of modern digital instructional technologies like zoom application, Google classroom platform Whatsapp platforms as they stand to promote efficiency and effectiveness.

## RECOMMENDATIONS

Based on the findings of this study, the following recommendations are made:

1. Nigerian Universities need to have basic technology infrastructures to effectively roll out online instructional delivery with the use of Zoom application.
2. Students need technological tools to be able to have access to applications and learning platforms via the use of Google classroom.
3. Educators also need to have the capacity to use the WhatsApp platform tools effectively to offer lessons in such an interesting mode.
4. Lecturers' and student readiness needs to be fathomed and supported accordingly to avoid technological challenges.

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