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Perceptions of Students Regarding Effectiveness of Online Digital and Traditional Libraries After Covid-19

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Perceptions of Students Regarding Effectiveness of Online Digital and Traditional Libraries After Covid-19

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ABSTRACT

The purpose of this study was to compare online digital and traditional libraries after covid-19 pandemic at undergraduate level. In this descriptive study, survey design was used. The data were collected from the respondents (undergraduate students) through a self-developed questionnaire of 6-Likert scale. As per John Curry's (1984) Sample size rule of Thumb, (n= 250) out of (N= 4547), respondents were selected from university. Stratified and Sample random techniques were used. Validity and reliability of the instrument were insured. The key findings of this study indicated that online digital library was better than a traditional physical library. The respondents highlighted that online digital libraries facilitate learners to get updated knowledge while using the online digital library because the learners have access to use library. The results of the current study revealed that online digital library was free from space and time problems. According to the results of the current study, both digital and physical libraries were found to play a significant role in quality education whereas it was shown that undergraduate students of this modern era were found to take more interest in online digital library by using updated ICTs resources.

Keywords: Students' Perceptions, Physical Library, Digital Library, Undergraduate Level

Introduction

The importance of library users may not be neglected because the library plays a dominant role in getting and sharing knowledge. The use of a library especially at the undergraduate level is very much important and all the facilities provided to students while using the library is the utilization of library

sources and it encourages them to improve their academic career and get more and more updated knowledge while using library (Olajide, 2017). In light of the above stated use of the library for learning purposes improve the learning capabilities of undergraduate students and encourages them for learning. The importance of any academic achievement may not be neglected in light of undergraduate students' performance. It means that the role of undergraduate students is very important (Narad & Abdullah, 2016). Thus the importance of undergraduate students' performance is highlighted here by the researcher. The other important point is that the country's socio-economic development also has a close connection with undergraduate students' performance.

Signh, Malik, and Signh (2016) also claimed that undergraduate academic achievement has a direct impact on a country's socio-economic development. The role of undergraduate students is very much important and may not be neglected because it plays an important role in skill development and knowledge acquisition (Farooq et al, 2011) The role of the university library in the promotion of university academic environment enhancement may not be neglected. The main purpose of the university library is to facilitate students, teachers, and even the university community members to get updated knowledge (Futalib, 2015). Education is the backbone of every society and children are considered a human resource for future development. Pace and quality of development in a country being directly related to the quality of human capital produced by the country. This requires both access to education by the whole population and its quality. Without access to quality education, it is impossible to produce quality human resources for the sustainable development of the country.

The importance of the university library is mentioned that university library is important not only for students but also for teachers and even community members and it plays a dominant role in the promotion of quality education. Because of its unique role in the university system, the library plays a vital part in determining the quality of a university. Lance (2005) also highlighted the role of the library in light of a professionally trained school library and mentioned the way how to use it and also the role of a professionally trained library. The other important point is that ineffective use of the library is also a sort of hindrance due to resources and inappropriate shelving of information resources (Mamo & Amidu, 2016).

Digital or Electronic Library

A Digital or electronic library is also one type of library where books, journals articles, novels, etc. are available online for readers and readers may get help from this book, journals articles, newspapers, and novels while using various electronic devices like laptops, android mobiles phones, tablets, etc. The most important of an online electronic or digital library is that the readers may get help from it any time because in an online electronic library there is no restriction on the time and place the readers may get help from it whether they are at home or an institution

if they have internet facility they can use it may read various books.

Difference between the Digital Library and Physical Library
As it is clear from the names of both of these two types of libraries one is that which is there in our educational institutions in which there is a proper books bookshelf, proper record of books, librarian, and proper set up for readers in which the readers physically go to the library and then they may study there or issue books for their home study for a specific time as per instructions or rules of the said library from which the readers issue books. A physical library consists of Physical Books, Magazines, Newspapers, Monographs, reports, etc. While on the other hand digital online library is one of the latest forms of the library in which the reader read, studies, and even downloads books online from the internet. Most importantly, a digital library should provide means for organizing, storing, and retrieving the contents. E-Library stores the contents at a central location for providing access to multiple devices. A digital library, also called an online library, an internet library, a digital repository, or a digital collection is an online database of digital objects that can include text, still images, audio, video, digital documents, or other digital media formats or a library accessible through the internet.

The importance of online sources and information communication technologies may not be neglected after the Covid-19 closure because after this period students, as well as teachers, realized the importance of E-Learning sources. Here the most important point is that online sources of learning enable the learners to learn more and more without any resistance to time and space (Khan et al, 2022). Thus in light of the above statement, it is clear that an online digital library is also one of the most important sources of learning. The readers may get updated information and knowledge from online sources because it is easy for them. The importance of information communication technologies in education may not be neglected but rather they play a vital role in it (Collins & Halverson, 2009). The role of these technologies is very vital not only limited to classrooms but the library is also one of the most important areas of learning. A library is a place where the learner may get books of their choice which may increase their updated knowledge. However, an online digital library is important in this sense that it enables learners/readers to get knowledge in such a position where there is the problem of time and space.

Advantages of Digital Library
There are different benefits or advantages of the digital library which may not be neglected in our education system. The details of some important points which highlight the importance of digital libraries are given below:

i.   The first important point is that while using a digital library the reader may not need to go physically to the library but no need for physical presence in the library and the reader may get benefit from the digital library without any restrictions of physical presence.

ii.   The second important point is that there are multiple ways of accessing the library. The readers have multiple ways of access to get updated information while using any digital library for study purposes.

iii. The third important point is that like the traditional library concept the use of digital library use is easy for readers as compared to the traditional library in which the reader may go to the library and get a hard copy of the books required for the reader.

iv. The next important point is that of conservation and preservation in light of the importance and benefits of the digital library.

v. One of the most important points is that while using the digital library there is no limitation of space for readers but rather the readers may have no problem with space which we may see in a traditional library.

vi. However, like the other benefits, one of the most important features of a digital library is time in a traditional library there is a specific time for readers to come and complete their study, and then after the specified the readers may not be allowed to use the library while in the digital library there is no specific time for readers but the readers may use the digital library without any restriction of time but may get benefits from it.

vii. The next important point is that of improvement chance for further improvement. The readers according to their views the library may be improved.
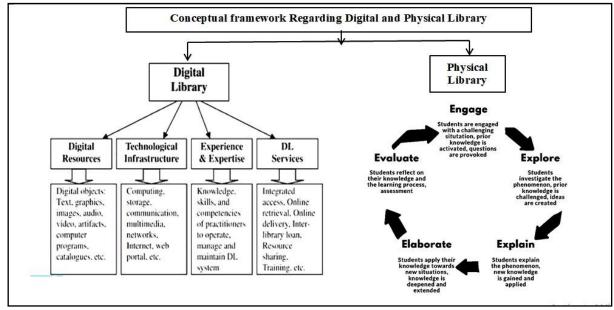

Figure 1: Conceptual Framework

Figure 1 (Conceptual Framework) represents the whole theme of the current study.

Research Methodology

A descriptive survey design was used for this study in light of the objectives of the study. The population of the study was undergraduate students registered with the University of Lakki Marwat Khyber Pakhtunkhwa, Pakistan. Simple random and stratified sampling techniques were used. Self-developed questionnaire on a 6-point Likert scale of options Strongly Agree, Agree, Slightly Agree, Slightly Disagree, Disagree, and Strongly Disagree carrying values 1, 2, 3, 4, 5, and 6 was used to collect data from the respondents. Validity and reliability of the research

instrument were ensured. The research instrument was validated by field experts and for reliability; the 25 copies of the questionnaire were distributed among the respondents. Cronbach's Alpha was applied to calculate the internal consistency of items i.e. 0.984 which was excellent. The collected data were statistically analyzed through SPSS by using Mean, Std. Deviation and t-test. A t-test was used to compare the perceptions of undergraduate level students regarding the online digital and physical libraries. Sample was taken according to John

Curry (1984) sample size rule of thumb as shown below:

John Curry (1984) Sample size rule of Thumb

Population Size	Sample Size
10-100	100 %
101-1000	10 %
1001-5000	5 % (Sample falls in this category)
5001 -10000	3 %
10000 +	1 %

Significance of the Study

The following were the significance of the study for the government, policymakers, students, teachers, and education department, Monitoring Systems at the school level, researchers, and educationists to take insight from this study to bring quality improvement to education system at the Primary school level. The study may be helpful for all stakeholders such as DEOs, DDEOs, SDEOs, ASDEOs,

Objectives of the Study

The objectives of the study were:

1. To find out the views of undergraduate students regarding the effectiveness of online digital libraries at the undergraduate level.
2. To compare the perceptions of undergraduate students regarding digital libraries and traditional libraries at the undergraduate level.
3. To make some valuable suggestions in light of the result of the study.

Research Questions

1. What are the perceptions of undergraduate students regarding the effectiveness of online digital libraries at the undergraduate level?
2. Is there any difference between the perceptions of undergraduate students regarding digital libraries and traditional libraries at the undergraduate level?
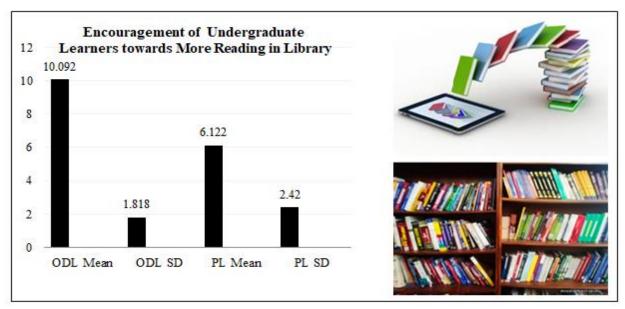
Research Hypothesis of the Study

H_0: There is no significant difference between the perceptions of undergraduate students regarding digital libraries and traditional libraries at the undergraduate level?

	Statement	Online Digital Library		Physical Library		t-test		
		Mean	S.D	Mean	S.D	df	t-value	P-value
1	Encourage Undergraduate Learners to study to read more and more.	10.092	1.818	6.122	2.42	128	21.142	0.000

Results
Table 1: Encouragement of Undergraduate Students towards More Reading in Library

Table 1 indicates the difference between the online digital library and traditional physical library in light of undergraduate students' perceptions because the perceptions of undergraduate students regarding online digital library are 10.092, 1.818, and 6.122, 2.42 here if we see then the difference is clear the online digital library weightage is better than the traditional physical library in this present technological era. Thus the t-value is 21. 142 and P value is $0.000 < 0.05$ (Alpha Value) shows that there is a significant difference between the perception of

undergraduate students regarding online digital libraries and traditional physical libraries. Similarly, on the other side, the value of the traditional physical library is $6.122 < 6.98$. however, in light of the result of the current study the perceptions of students regarding online digital library and traditional physical library shows that both traditional physical library and online digital libraries are important and play a vital role in students' study skills development and

encourage learners towards study but the online digital library role is better as compared to the traditional physical library. According to Nguli, and Judith (2017)), the Cut-off point scale formula is shown below:
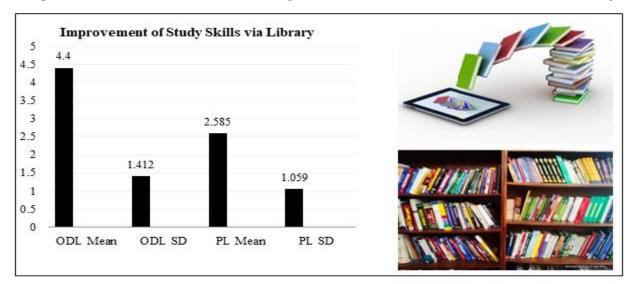
Table 2: Cut-off Point Formula with Scale

Cut-off Point Formula with Scale					
The level of each item is determined by the following formula:					
$\dfrac{\text{Higest point in Likert scale} - \text{lowest point in Likert scale}}{\text{the number of levels used}}$			$= \dfrac{6-1}{6} = 0.83$		
Scale	Upper Limit	Mean value	Scale	Mean	Performance
1	1+ 0.83 = 1.83	1 – 1.83	Extremely Poor	≤3.49	Unsatisfactory
2	1.83 + 0.83 = 2.66	1.84 – 2.66	Very Poorer		
3	2.66 + 0.83 = 3.49	2.67 – 3.49	Poor		
4	3.49 + 0.83 = 4.32	3.50 – 4.32	Good	≥ 3.50	Satisfactory

	Statement	Digital Library		Physical Library		t-test		
		Mean	S.D	Mean	S.D	df	t-value	P-value
3	Access to Library is important to improve Study Skills	4.400	1.412	2.585	1.059	64	8.292	0.000
5	4.32 + 0.83 = 4.32	4.33 – 5.15		Better				
6	5.15 + 0.83 = 5.15	5.16 – 5.98		Best				

Table 3: Improvement of Study Skills Via Library

Table 3 Reveal that the performance of the digital library is better than the traditional physical library regarding access to a library with Mean and Std. Deviation of digital library and physical library respectively 4.400, 1.412, 2.585, and 1.059 while t-value 8.292 with p-value $0.000 < 0.05$ (Alpha value) which indicates there is a significant difference in said statement. But according

to the cut-off point scale, the performance of the digital library is Satisfactory while the performance of the physical library is unsatisfactory regarding the said statement. Here in the light of the perceptions of undergraduate students, it doesn't mean that a physical library is not good but a traditional physical library is also important and plays a vital role in our education system the one point is that an online digital library is more suitable for learners in access to library point of view because readers may get benefits from the online digital library even from their homes and anywhere online

Table 4: Study Hours for Readers Using Library

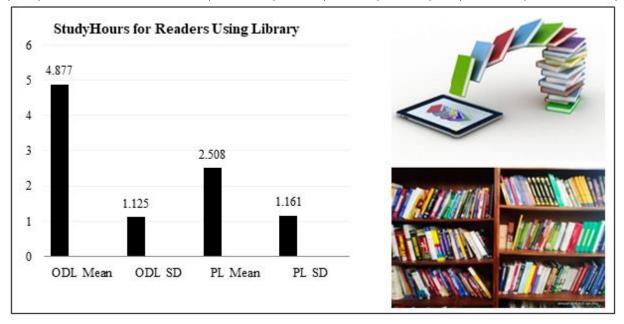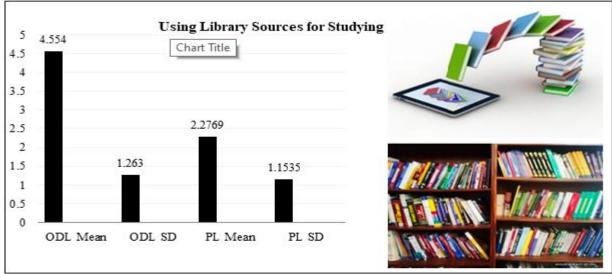|	Statement	Digital Library		Physical Library		t-test		
		Mean	S.D	Mean	S.D	df	t-value	P-value
4	Study hours facility for readers while using the	4.877	1.125	2.508	1.161	64	11.816	0.000

Table 4 and Graph values statistically show that the Mean value of a digital library is 4.877 and the Mean value of the physical library is 2.508 Revealing that the performance of a digital library is better as per cut-points table the Mean value of digital library > 3 and physical library Mean value < 3 which shows the performance of the digital library is satisfactory while the performance of the physical library is unsatisfactory with t-value 11.816 and p-value 0.000 which is less than Alpha value 0.05 indicates there is a significant difference regarding study hours. Here also in light of the perceptions of undergraduate students it doesn't mean that physical library is not good but traditional physical library is important and plays a vital role in our education system the one point is that online digital library is more suitable for learners to give enough time for study and to use the library in the online library there is no timing issue.
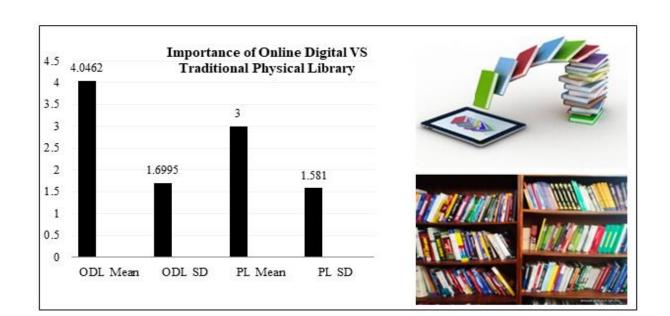
Table 5: Using Library Sources for Studying

Table 5 indicates the performance of the online digital library is better than a traditional physical

	Statement	Digital Library		Physical Library		t-test		
		Mean	S.D	Mean	S.D	df	t-value	P-value
5	As a student, I spare enough time to study							

Using Library Sources for Studying

library with Mean values and Std. Deviation respectively 4.554, 1.263, 2.2769, 1.1535 with a t-value of 10.727 and p-value of 0.000 < 0.05 which statistically shows that there is a significant difference regarding issuance of books. In the online digital library, the students may download/ read several books while in a traditional library students may issue a specific number of books according to approved rules and for a specified time that is why here also the difference is clear between the perceptions of students regarding online digital library traditional physical library.

Table 6: Importance of Online Digital Library VS Traditional Physical Library

Importance of Online Digital VS Traditional Physical Library

	Statement	Digital Library		Physical Library		t-test		
		Mean	S.D	Mean	S.D	df	t-value	P-value
6	I may get enough help from the library in respect of getting updated knowledge.	4.0462	1.6995	3.000	1.581	64	3.633	0.001

Table 6 reveals that the Mean value, Std. Deviation of Online digital library and traditional physical library are 4.0462, 1.6995, 3.000, and 1581 with t-value 3.633, p-value 0.001 < 0.05 (Alpha value). The values show that the role of the Online digital library is better than the traditional physical library as well as there is a significant difference regarding the importance of library both digital and traditional physical library from a study point of view. According to the cut-off point table, the Mean values of both types of libraries lie in the satisfactory category.

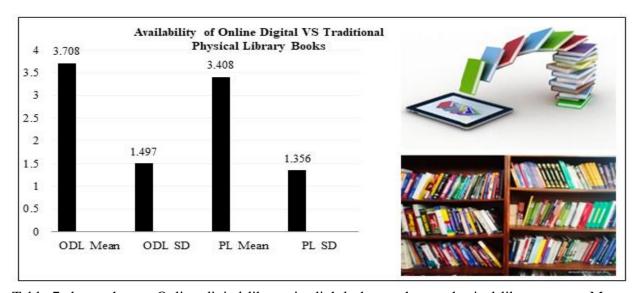**Table 7: Availability of Online Digital VS Traditional Physical Library Books**

Table 7 shows that an Online digital library is slightly better than a physical library as per Mean
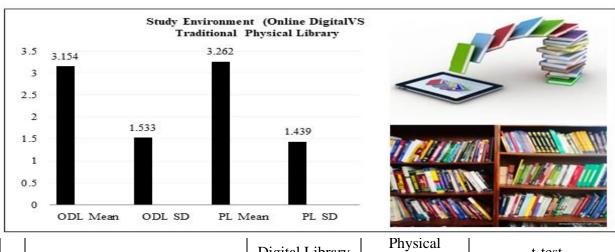
	Statement	Digital Library		Physical Library		t-test		
		Mean	S.D	Mean	S.D	df	t-value	P-value
7	Books are available in the library for study and we may read books of our choice.	3.708	1.497	3.408	1.356	64	1.228	0.222

values 3.708, 3.408 with t-value 1.228 and p-value 0.222 > 0.05 (Alpha value) which reveals that there is no significant difference between the view of respondents about availability of books at the library for readings purpose. Therefore, according to the cut-off point scale, both online digital

library and physical library lie in the satisfactory category because the Mean value of both types of the library is > 3. Here the important point is that books are available in the online digital library as well as in the traditional physical library which is why slight difference is there but the overall response of the respondents is the same.

Table No 8: Study Environment (Online Digital VS Traditional Physical Library)

Table 8 reveals that the view of respondents regarding the study environment's traditional physical library environment is slightly better than an online digital library. The Mean value of online digital libraries and the traditional physical library is 3.154, 3.262 with a t-value of 0.413, while the p-value of 0.680 which is greater than the Alpha value (0.05) which indicates that there
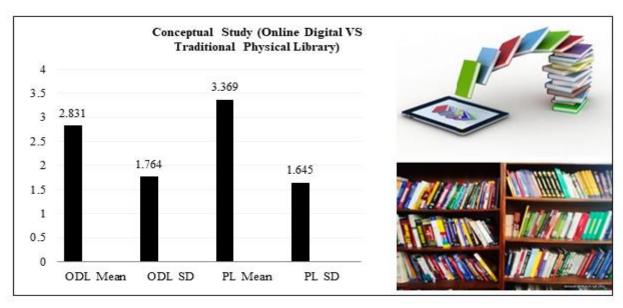

Statement		Digital Library		Physical Library		t-test		
		Mean	S.D	Mean	S.D	df	t-value	P-value
8	Library Environment for Study is suitable and we can get benefit from it.	3.154	1.533	3.262	1.439	64	0.413	0.680

is no significant difference between the view of respondents regarding study environment with slightly different. However, it is important to mention here that in the traditional physical library there is a proper study environment for readers where they may study properly while in an online digital library there is no proper place for learners to study there, but the online digital library using the learners may sit in a suitable place according to his/her choice. That is why according to the cut-off point scale table both monitoring system lies in the satisfactory category.

Table 9: Conceptual Study (Online Digital VS Traditional physical Library)

Table 9 indicates that the Mean value of the traditional physical library is 3.369 greater than the Mean value of the online digital library 2.831 which shows the importance of the physical library is better. While the t-value is 1.800 and the p-value 0.074 > the Alpha value of 0.05 which show there is no significant difference between the view of respondents regarding Officially High Light Primary Schools with Low Performance. But according to the cut-off

point table, the Mean value of the online digital library is < 3 which indicates the performance of the online digital library is unsatisfactory while the Mean value of the traditional physical library is> 3 which lies in the category of satisfactory.

Discussion

The current study regarding students' attendants at the primary school level in District Bannu concerning internal monitoring and external monitoring systems indicate that the officials of external monitoring systems were more careful and sincere about ensuring students' attendance including (monitoring students' attendance, improving students attendance due to routine monitoring, routine monitoring, priority based check-up, and pointing out of students absentees) at primary school level as compared to the official of internal monitoring system while the officials of internal monitoring system were found quite sensitive and conscious regarding emphasizing school staff to encourage the regular students with proper awards. According to the previous study by Muhmood (2015) revealed in his thesis title "Comparative Effectiveness of Internal and External Monitoring Systems in Punjab Education Department" that internal monitoring systems perform better than external monitoring systems regarding students attendance. Jatoi (2010) found in his study "Non-Functional schools in Pakistan: Does Monitoring System have an Impact?" that student enrolment is positively associated with regular attendance.

Conclusions

In the light of the result of the current study and previous research studies which are mentioned in the review part of this article highlighted the importance of online digital libraries. Previous researchers also gave weightage to the online digital library as compared to physical libraries which are there in colleges and universities. The results of the study revealed that an online digital library is the need of time because in the online library no time and space issue is why learners may get benefit from it. several books in soft form PDF format are available which may be downloaded and then the readers may read them. The main point is that after the Covid-19 pandemic the students as well as realized the importance of online sources like online google classroom classes, WebEx, zoom, webinar sessions and so many other soft wares which are successfully used for online teaching and online sessions or meetings. Therefore, in the present study also the views of the respondents highlighted the importance of online digital libraries. The physical library is also important and plays a dominant role but here the result of the study highlighted that online digital libraries facilitate learners as compared to the digital library because in the online digital library there is no issue of time, space, and access that is why the learners give preference to it.

Limitations of the Study

The current study was limited to the on-campus students of the BS program. The main reason for this limitation was to conduct the most suitable study and get proper data through questionnaires from the respondents (students).

Recommendations

The following recommendations were drawn in the light of objectives and results of the study::
1. Training may be provided to the students of undergrad level to learn the proper use of the digital library and may get benefit from it and important links may be shared with students so that they may get benefit from it.
2. In light of the result of the present, it may be recommended that teachers may encourage their students to use digital libraries and get benefits from them.

Suggestions for Future Studies

The following suggestions may be presented for future researchers:
1. The study was delimited to on-campus students. It may be extended to all Private and Public Sector Universities of Pakistan.
2. In this study, the researcher has used descriptive survey type research however; a qualitative study or experimental study may be conducted in the same area of research.
3. The current study was conducted by the researcher at an undergraduate level however; it may be suggested for future researchers to conduct the same nature of the study at M. Phil and Ph.D. levels

Ethical Statement

All respondents were informed of the aim of the survey, the voluntary nature of their participation, and the confidentiality and anonymity of records.

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