

## UTILIZATION OF DIGITAL LEARNING RESOURCES DURING COVID 19 PANDEMIC BY PHYSIOTHERAPY STUDENTS - A SURVEY

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### Abstract

Before Covid 19 pandemic physiotherapy education was based mostly on face-to-face teaching. During Covid 19 pandemic educators have been compelled to adapt their pedagogical approaches moving to digital education. Pandemic pushed the learners towards the online mode of learning. Digital Learning Resources (DLR) includes websites, YouTube, prerecorded lectures or clinical videos, MOOCs skill-based learning, PDF of books, etc. but is not limited only to these. This survey was designed to explore utilization of DLR by physiotherapy students during pandemic and future prospects for the same. Self made questionnaire was designed and validated with help of experts in the field as well as with pilot study. YouTube content was most preferred DLR for physiotherapy students which followed by PDF of books. Physiotherapy students promise future use of DLR, which indicate hybrid learning in physiotherapy education field is here to stay. This opens door for technologies like machine learning and artificial intelligence in physiotherapy education sector.

**Key words** – *YouTube, PDF books, Physiotherapy education, Digital Learning resources.*

### Introduction

Education sector has been stir up during Covid 19 pandemic. Technology not only touched but transformed education field. Burning desire to learn and to teach opened a door to technology in nursery to higher education. This mass adoption of technology is new challenge for system. To ease teaching learning process artificial intelligence, machine learning, data sciences and many more upcoming technologies will contribute significantly. To build any new platform, it is necessary to know users requirement. This study designed to know use of DLR by physiotherapy students. Results of this survey will help to analyze type of DLR used by physiotherapy students. Survey will give future direction to make technology by examining expectation of physiotherapy students from DLR.

### Methodology

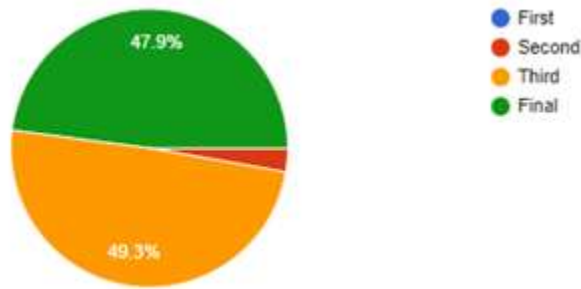
A Survey study was planned to gather physiotherapy student's perception on DLR. For research primary data was generated through Questionnaire. Questionnaire was self made and validated through pilot study and experts from field. The convenient sampling method has been used to collect the Primary data. Questionnaire links were circulated among the student population who had studied at least one academic year during Covid -19 pandemic, at the Physiotherapy College. Students ready to participate for the study filled the forms anonymously. Responses were collected and analyzed with comparison of mean and percentage value. Data from the open-ended responses were used for qualitative analysis.

### Data analysis –

Total of 73 responses were collected from Physiotherapy students who had experienced traditional learning method in past as well as online learning during Covid-19 pandemic.

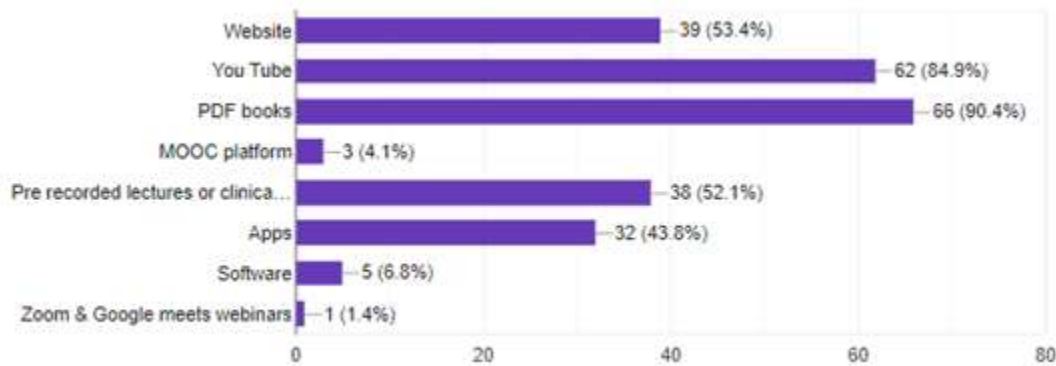
**RESULTS**

**Chart – 1 Academic year of students**



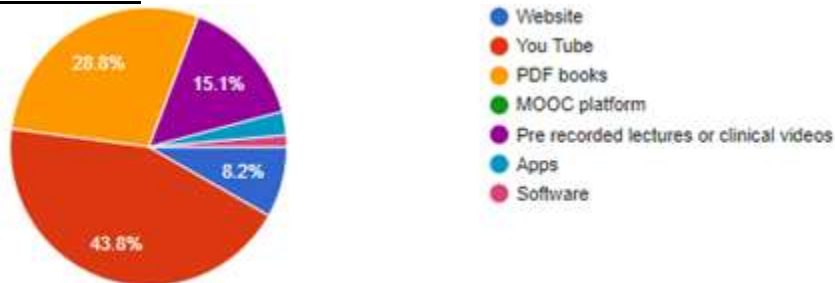
Maximum respondents from final year, which make certain data is homogeneous in nature.

**Chart – 2 Types of DLR in use**



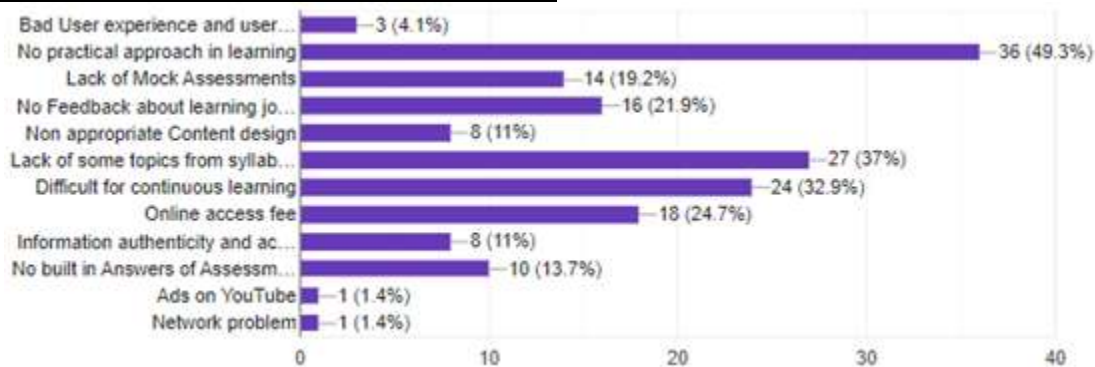
PDF books were most used DLR followed by You Tube.

**Chart – 3 DLR most like**



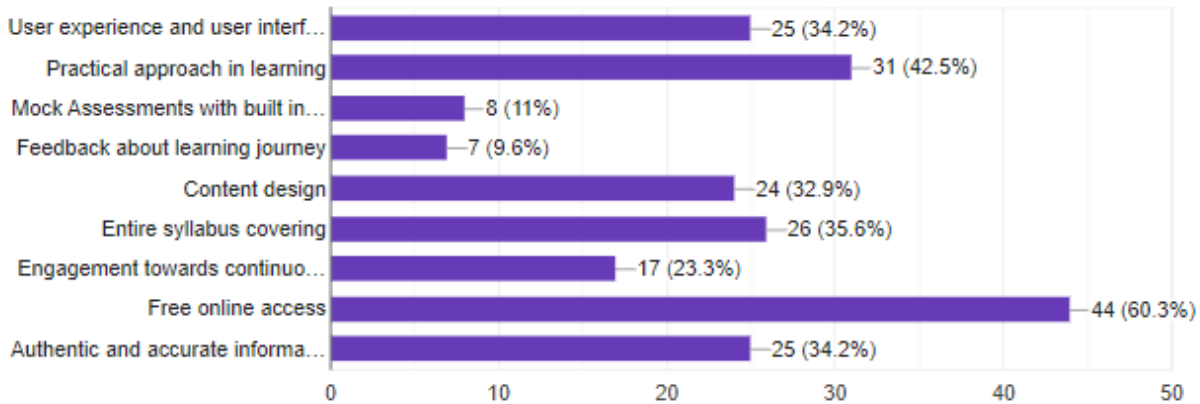
You Tube was most liked DLR followed by PDF books.

**Chart – 4 Unpleasant experience of DLR**



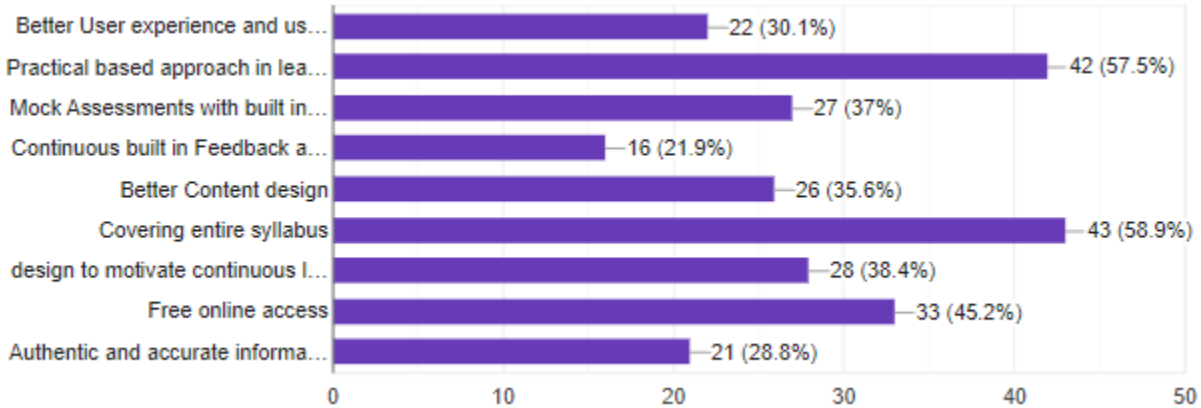
Lack of practical approach was most noted unpleasant experience while using DLR.

**Chart – 5 Motivation to use DLR repeatedly**



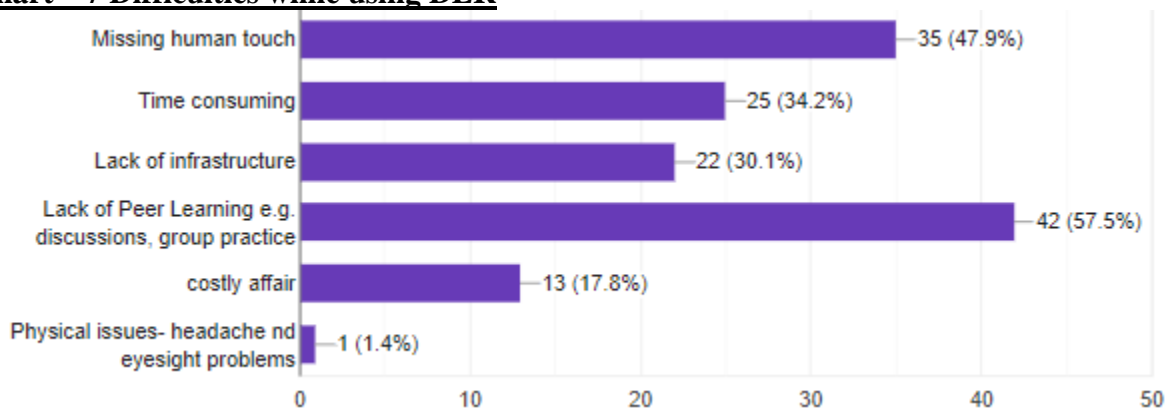
Free online access is must have characteristic for DLR.

**Chart – 6 Future proposal for DLR**



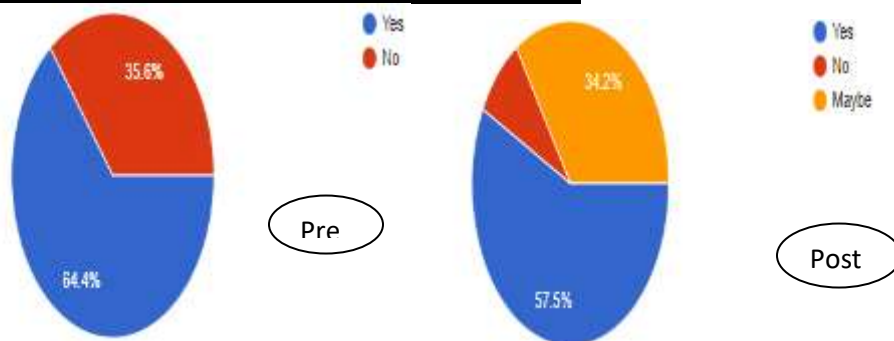
Entire syllabus coverage and a practical based approach in future DLR

**Chart – 7 Difficulties while using DLR**

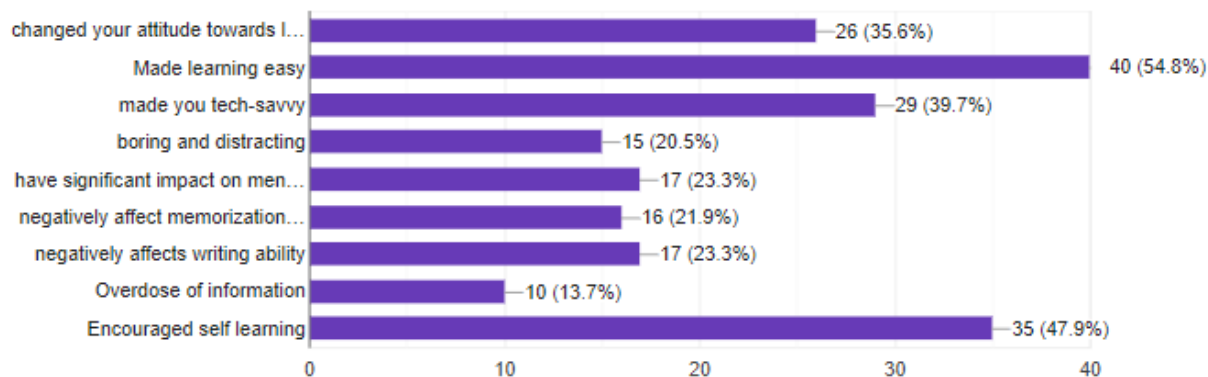


Missing Human interaction came out as drawback of present DLR

**Chart – 8 Use of DLR Pre and Post pandemic**



**Chart –9 Effects of DLR**



Ease of learning was noted with DLR

### Discussion

This research is the part of a project, aims to study Covid-19 pandemic effect on different stake holders of education sector. In Lokmanya Medical College of Physiotherapy, Kharghar, we incubated research project which will provide future direction for technology in education field. Studies on online examinations<sup>1, 2, 3, 4</sup> of students and teachers perspective gave suggestions to develop best platform of online examination for future. Online learning methods studied in various aspects like flipped classroom<sup>5</sup>, blended learning<sup>6</sup>, pre recorded lectures versus live streaming<sup>7</sup>. Overall student's perspective analyzed for online learning.<sup>8,9</sup> These all studies ensure positive future for technology use in education field.

In this study we tried to analyze use of various DLR and preference of students for the same. Let see findings one by one, Data was homogeneous in nature as seen in chart no. 1, maximum students from third and final year of Physiotherapy undergraduate curriculum. This ensures that feedback from students who had balance experience of studying physiotherapy online and offline mode.

PDF books were most preferred type of DLR, travel restriction leading to less access to physical library can be a reason behind this finding. Thus need of digital library for all kind of institutes is emphasized. Technologically for our country we need to have affordable version of digital library which can be easily accessed from mobile as well.

You tube was top in list of preference, in our institute we have our own You Tube channel which gave us better control on content. It is quite affordable solution for both students and institutes. Easy and free accessibility, multiple time use are may be some factors to make it most preferred.

When we asked student for their unpleasant experience while using DLR , miss of human interaction was highlighted. Thus in future when we are developing technology use of real-time learning with feedback methods, and personalized instructions should be incorporated in DLR.

Free online access was greatest motivator for use, should be kept in mind whoever developing new DLR. Success of tool depends on affordability.

Physiotherapy students were very specific about future; they need DLR which will cover entire syllabus with practical based approach in learning. This will be true for all professional courses in medical field. Virtual labs, robotics need to be on large scale with good accessibility for each student.

Most of the students had pre exposure to DLR. And most of them sure of continuous use in future as well. This highlights demand for DLR in future. Thus Artificial intelligence, virtual reality and all other technologies have brilliant future prospects in education field.

Further studies should be planned including other stream students, which will clear future construction of DLR.

### Conclusion

As more and more technology is adopted by education sector, specific need of each field should be catered. Tailor made solution for Physiotherapy students is must which will cover entire syllabus and adopt practical based approach.

Ease of learning and self learning encouragement was positive changes inculcated through DLR.

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#### **ACKNOWLEDGEMENT**

The authors thank all the participating students for giving their consent and participate in the study. We will like to acknowledge **Honorable Dr. Deepak Tilak**, President, Tilak Maharashtra Vidyapeeth, Pune for his encouragement and positive support. Authors acknowledge the immense help received from the scholars whose articles are cited and included in references of this manuscript. The authors are also grateful to authors/editors/publishers of all those articles, journals and books from where the literature for this article has been reviewed and discussed.