

# ICT Usage by Physiotherapy Academicians: and its Implications on Teaching and Learning

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**Abstract:** *E-learning plays a critical role in accessing, collecting, analyzing and transferring of information and knowledge across the educational organizations. ICT has been proving a transformative pedagogical approach. This paper discusses internet usage patterns among university academics before advancing to explore how to improve these aspects in the context of education. This descriptive survey collected data from the academicians. Statistical analysis of data revealed that age and experience affects the Internet usage. It throws a light on the problems academicians are facing to use technological aids despite understanding their significance in tomorrow's leadership and country's economic growth. The study recommends a transformation of teaching practice through technology based holistic models that encompass creative and innovative Webogogy and facilitative content delivery for better performance in educational institutions.*

**Keywords:** Internet, E learning, Transformative Pedagogy

## 1. Introduction

Information and communication technology is the largest single source of information that is easily accessible to learners and education globally which can improve bridge the gap between various learning strategies.<sup>1</sup>

Downes (2010) explains that the internet and Web 2.0 has brought in new technologies that if well utilized can transform the current teaching practice. The internet is redefining 'literature' and 'literature search techniques' in academic literature review process.<sup>2</sup> The web-based applications, in which they are offering untraditional ways of learning and teaching techniques, and making the learning process much better. E-learning plays a critical role in accessing, collecting, analyzing and transferring of information and knowledge across the educational organizations.<sup>3</sup> Universities, and other educational organizations, found themselves forced to adapt with this rapid change and have to adopt the new trendy learning technologies so they can compete with others<sup>4</sup>, save staff time and cost and improve the learning management process.<sup>5</sup> Several benefits such as increased productivity, efficiency, accuracy, space economy and reduction in drudgery and routine are derivable from the utilization of ICT<sup>6</sup> but on the other hand it is important to analyze whether our Academicians are changing with this pace or are feeling technostress. Since initial conception of technology has been more for administrative tasks so are the physiotherapy academicians well prepared to use it as an innovative pedagogy, remains a question of importance.

While the benefits of ICTs adoption and utilization are not in doubt, it is also true that the adoption, rapid diffusion and utilization of ICTs in teaching and learning have brought about a number of demands and challenges such as techno stress and job burnout into workplace.

Churches (2009) posits that 21st century pedagogy and learning focuses on moving students from lower order to

higher order thinking skills...from knowledge acquisition through knowledge deepening to knowledge creation.<sup>7</sup>

If Google is replacing physical libraries then definitely the educators need to look into teaching, conducting research and disseminating research findings through a different perspective.

If the internet is causing these changes then internet usage in academic environment becomes a topical issue which should attract attention of researchers. Iffeoma and Olusola (2013)<sup>8</sup> argue that teachers must change their current teaching practices if they are to develop in learners the necessary 21<sup>st</sup> century skills. This is why it is necessary to understand user interactions with social media<sup>9</sup>, search engines, search context and tasks that drive users to search information. A sound understanding of how academics use the internet and e resources informs staff developers on how best academics can help students and themselves get the best out of the internet. That knowledge would also help academics improve the quality of education by improving delivery, students' assignments and their research papers because their search capacity and practice would have been improved.

The overall objective of this study was to investigate internet usage patterns among university academics. The study had two specific research objectives which were to:

- Analyze how academicians access information from the internet
- Establish why or why not university academicians use the internet.

## 2. Methodology

A quantitative research design survey was used to collect the data from physiotherapy academicians in Delhi. Out of total people contacted only 50% responded back. Data was collected through a pilot tested structured questionnaire with Likert type of response format. The instrument was

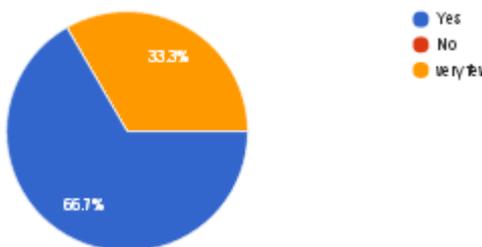
validated using expert opinion and pilot tested for item internal consistency. After instrument validation, the questionnaire was mailed to the sample and time to time reminders were sent. Descriptive methods were used to summarize the results.

### 3. Results

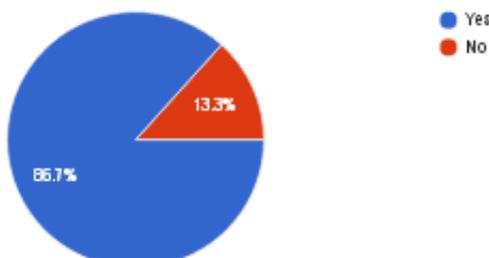
Out of All the post graduate teachers who filled the questionnaire 66.7% were females with 47% of them having more than 10yrs of experience. All of them felt that technology is important in today's world and are using different types of IT tools for teaching, power point being the most preferred (60%) and simulators and video conferencing are used the least. Though 40% teachers believed that It tools are easily available with them but still almost 65% blamed time and lack of training as the reasons for avoiding ICT usage. 40% of the academicians believe that IT methods or social networking sites are mainly used for marketing about conferences or workshops instead of knowledge sharing.

Though almost all of them accepted that technology is a boon for students and should be taught as a part of undergraduate syllabi and hence would help them in their upgradation but only 46.7% of them have found ways to use computer in the classroom and 53% of them assign daily or weekly computer-related tasks that support the curriculum.

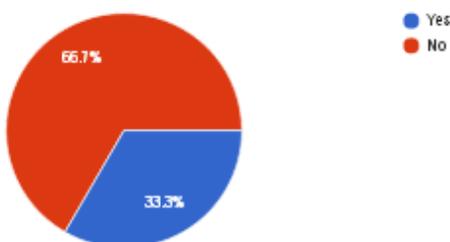
Do you think physiotherapy teachers are using IT tools for teaching?



Are currently pursuing student's need IT tools for their academic up gradation?

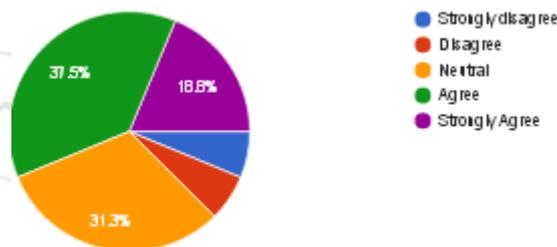


Are academicians trained enough in using IT Tools?



40% of teachers alter their instructional use of the classroom computer(s) as they gain new knowledge of software applications and research on teaching and learning and seek professional development that maximizes the use of the computers and technology available to students. 50% feel an immediate need for more professional development in order to design student-centered, integrated curriculum units that use the classroom computer(s) in a seamless fashion. 71.4% use student's interests, experiences, and desires to solve authentic problems when planning computer-related activities in the classroom. 53% of teachers are proficient with basic software applications and also actively participate in online collaboration opportunities.

I use integrated curriculum units that place heavy emphasis on complex thinking skills, computer use, and student relevancy to the real world.



### 4. Discussion

The aims of this paper were to determine the degree to which academic staff in the field of physiotherapy is using technology for teaching.

The higher education (HE) sector is facing the challenge of delivering high quality education at a time of financial constraint and increased emphasis on the student as a consumer. Therefore teachers need to accommodate different learners' needs, so that they can make learning more student-centered and independent.<sup>10</sup>

In our study we have seen that teachers are using various technological tools for pedagogy and are acting as catalysts to promote essential changes which are in accordance to various studies that say that online technologies (i.e., websites and discussion boards) have many benefits to offer for physiotherapy teaching and learning. Videos, blogging, simulation etc are helpful in various ways.<sup>11-13</sup>

There are many obstacles in the application of technology besides teachers realization of its importance like lack of time, training and knowledge and our study too prorogated these as challenges.<sup>14</sup>

We have seen in our research that academicians are trying to use computers in their classrooms by different means like making assignments, publishing, communicating, and researching to solve authentic problems which indicates that teachers are well aware of the need of the students and hence trying to inculcate it as an important instructional medium which supports the shift in learning paradigm.

Teachers feel that social media is mainly being used for marketing and less for knowledge sharing therefore there should be increased focus on this student favorite tool to be used in academic activities. A small number of studies on academic use of Twitter have been published. One researcher qualitatively analyzed tweets from 45 scholars and found that they used Twitter to share resources, information and media with each other, discuss their teaching and students, request assistance from and offered advice to others, engage in social commentary, construct professional personal, network with others and highlight their participation in other online networks (Veletsianos 2012)<sup>15</sup>. Fransman's (2013) findings from a study on British academics' use of Twitter found that it was used by a less than a third of her sample group, and that those who did use it were using other digital media as well. She found that the non-users were largely ignorant of the value of Twitter for academic purposes or lacked proficiency and thus did not venture to try it.<sup>16</sup>

But for all such activities our teachers need to be professionally upgraded and best part is that they all our very positive to alter their instructional use of the classroom computer(s) as they gain new knowledge of software applications and research on teaching and learning. They seek professional development that maximizes the use of the computers and technology available to their students.

Based on the results we can recommend and suggest Technology based teaching practice in physiotherapy Institutions.

## 5. Conclusion

Physiotherapy academicians are using innovative technological tools for student centered learning and seeking professional development for the same.

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