

Awareness of Physical Education Lecturers of Academic Colleges about Information Technology Based Teaching Methods

Tejsiha L. Jagdale

Nabira Mahavidyalaya, Katol, India
sanjayjagdale093@gmail.com

Abstract: *Since the beginning of time, people have been fixated on the traditional methods of teaching and learning, that is, in a classroom with a blackboard and books. However, over the years, those books turned into tablets and blackboards turned into smart-boards. Moreover, the pace of this change increased since the outbreak of Covid-19 and students had to take the support of technology to avoid any barriers to their learning. Although learning can happen anywhere and at any time, the modern day technology offers many new technology options for teaching. In addition and largely due to the learning curves introduced by technological advancements the pace of learning has also rapidly increased. Within the educational sphere, teachers are embracing new technological tools and using them within their teaching practice. These tools help contribute to new learning approaches and learning preferences.*

Keywords: Physical Education Lecturers

I. INTRODUCTION

Since the beginning of time, people have been fixated on the traditional methods of teaching and learning, that is, in a classroom with a blackboard and books. However, over the years, those books turned into tablets and blackboards turned into smart-boards. Moreover, the pace of this change increased since the outbreak of Covid-19 and students had to take the support of technology to avoid any barriers to their learning. Although learning can happen anywhere and at any time, the modern day technology offers many new technology options for teaching. In addition and largely due to the learning curves introduced by technological advancements the pace of learning has also rapidly increased. Within the educational sphere, teachers are embracing new technological tools and using them within their teaching practice. These tools help contribute to new learning approaches and learning preferences.

While the increasing number of new tools and technologies may seem overwhelming at first, educators must understand the benefits of instruction led by this new technology. This is because the older teaching traditions are being left behind or supplemented with new teaching practices, allowing students and teachers to become better equipped for the emerging, interconnected, and technologically-influenced world around us. Moreover, some learning approaches are now designed specifically for this new technology, and there are some older approaches that are supported by new technologies, allowing educational institutions and classrooms across the world to reach new heights. In this progressive world that we live in, the boundaries in the technological field has been pushed beyond to reach the growing needs of every individual towards overall development and growth. Thereby with the advancement of technology in almost every aspect in life, it is crucial to understand the importance of technology in the educational sphere as well. There are multiple ways and approaches that have embraced technology-based teaching and learning in all the fields and physical education is not an exception. The teaching methods in physical education subject are also changing with time and the New Education Policy has also presented a new approach for teaching. In view of the above this study has been carried out to determine the awareness of information technology based teaching methods among the physical education lecturers of academic colleges affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur.

II. RESEARCH METHODOLOGY

The present investigation was carried out by using descriptive research design. The primary data was collected from the physical education lecturers working in the academic colleges affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur. The physical education lectures (having more than 10 years of teaching experience) were selected randomly and the total sample size was 90. The primary data was collected by adopting survey method and using Google form. The awareness of information technology based teaching methods among the physical education lecturers of academic colleges was determined using a short questionnaire. The reliability and validity of the questionnaire was determined prior to actual data collection. Reliability of the questionnaire was assessed using the test-retest method. Three different types of validity i.e. content validity, construct and criterion-related validity of the questionnaire were also assessed using standard procedures. The collected data was analyzed using various statistical tests. The data characteristics (descriptive statistics), such as Frequency, Mode, etc. were determined and Chi Square test was used as an inferential statistical test. All the statistical analysis of data was conducted using SPSS 18.0 Software. The significance level was chosen to be 0.05 (or equivalently, 5%).

III. RESULTS AND DISCUSSION

3.1 Awareness of Flipped classroom concept

Table 1: Awareness of Flipped classroom concept (where students study new material independently and practice it in class)

Response	Frequency	Percent
Fully aware	9	10.0
Moderately aware	20	22.2
Not aware	61	67.8
Total	90	100.0

Chi-square: 50.067; df: 2, Table Value: 5.99; $p < 0.05$

Above **Table 1** shows results pertaining to awareness of physical education lecturers about flipped classroom concept (where students study new material independently and practice it in class) of information technology based teaching. Study results show that 10.0% physical education lecturers are fully aware of this concept, 22.2% are moderately aware and further, 67.8% are not aware of this concept.

3.2 Awareness of Inquiry-based learning

Table 2: Awareness of Inquiry-based learning (where students create real-world connections through questioning and exploration)

Response	Frequency	Percent
Fully aware	12	13.3
Moderately aware	59	65.6
Not aware	19	21.1
Total	90	100.0

Chi-square: 42.867; df: 2, Table Value: 5.99; $p < 0.05$

Above **Table 2** shows results pertaining to awareness of physical education lecturers about inquiry-based learning (where students create real-world connections through questioning and exploration) of information technology based teaching. Study results show that 13.3% physical education lecturers are fully aware of this concept, 65.6% are moderately aware and further, 21.1% are not aware of this concept.

3.3 Awareness of Project-based learning

Table 3: Awareness of project-based learning (where students work together to use technology to solve problems)

Response	Frequency	Percent
Fully aware	11	12.2
Moderately aware	29	32.2
Not aware	50	55.6
Total	90	100.0

Chi-square: 25.4; df: 2, Table Value: 5.99; $p < 0.05$

Above **Table 3** shows results pertaining to awareness of physical education lecturers about project-based learning (where students work together to use technology to solve problems) of information technology based teaching. Study results show that 12.2% physical education lecturers are fully aware of this concept, 32.2% are moderately aware and further, 55.6% are not aware of this concept.

3.4 Awareness of Cooperative learning

Table 4: Awareness of Cooperative learning (where students work in small groups with a teacher to complete a shared learning objective)

Response	Frequency	Percent
Fully aware	23	25.6
Moderately aware	55	61.1
Not aware	12	13.3
Total	90	100.0

Chi-square: 33.267; df: 2, Table Value: 5.99; $p < 0.05$

Above **Table 4** shows results pertaining to awareness of physical education lecturers about cooperative learning (where students work in small groups with a teacher to complete a shared learning objective) of information technology based teaching. Study results show that 25.6% physical education lecturers are fully aware of this concept, 61.1% are moderately aware and further, 13.3% are not aware of this concept.

3.5 Awareness of Personalized learning

Table 5: Awareness of Personalized learning (where lessons and concepts are customized for each student)

Response	Frequency	Percent
Fully aware	63	70.0
Moderately aware	27	30.0
Not aware	0	0.0
Total	90	100.0

Chi-square: 66.6; df: 2, Table Value: 5.99; $p < 0.05$

Above **Table 5** shows results pertaining to awareness of physical education lecturers about personalized learning (where lessons and concepts are customized for each student) of information technology based teaching. Study results show that 70.0% physical education lecturers are fully aware of this concept, 30.0% are moderately aware of this concept.

3.6 Awareness of Active learning

Table 6: Awareness of Active learning (where students collaborate and communicate using social media and interactive whiteboards)

Response	Frequency	Percent
Fully aware	19	21.1

Moderately aware	47	52.2
Not aware	24	26.7
Total	90	100.0

Chi-square: 14.867; df: 2, Table Value: 5.99; $p < 0.05$

Above **Table 6** shows results pertaining to awareness of physical education lecturers about active learning (where students collaborate and communicate using social media and interactive whiteboards) of information technology based teaching. Study results show that 21.1% physical education lecturers are fully aware of this concept, 52.2% are moderately aware and further, 26.7% are not aware of this concept.

IV. CONCLUSION

4.1 Awareness of Flipped classroom concept

On the basis of the study results it is evident that significantly ($p < 0.05$) high percentage of physical education lecturers of academic colleges are not aware of the flipped classroom concept of the information technology based teaching.

4.2 Awareness of Inquiry-based learning

On the basis of the study results it is evident that significantly ($p < 0.05$) high percentage of physical education lecturers of academic colleges are moderately aware of the inquiry-based learning concept of the information technology based teaching.

4.3 Awareness of Project-based learning

On the basis of the study results it is evident that significantly ($p < 0.05$) high percentage of physical education lecturers of academic colleges are not aware of the project-based learning concept of the information technology based teaching.

4.4 Awareness of Cooperative learning

On the basis of the study results it is evident that significantly ($p < 0.05$) high percentage of physical education lecturers of academic colleges are moderately aware of the cooperative learning concept of the information technology based teaching.

4.5 Awareness of Personalized learning

On the basis of the study results it is evident that significantly ($p < 0.05$) high percentage of physical education lecturers of academic colleges are fully aware of the personalized learning concept of the information technology based teaching.

4.6 Awareness of Active learning

On the basis of the study results it is evident that significantly ($p < 0.05$) high percentage of physical education lecturers of academic colleges are moderately aware of the active learning concept of the information technology based teaching.

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