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Technical Skills and Attitude Towards Administration as Factors in Content Management amongst Teacher Educators

Dr.Vinita S. Gopalkrishnan
Associate Professor,
Faculty of Education, Banasthali Vidyapith,
Rajasthan.
Email: gopalkrishnanvinita@gmail.com

Shraddha
Researcher,
Faculty of Education, Banasthali Vidyapith.
Rajasthan.
Email: shraddha28021993@gmail.com

Abstract

The National Education Policy 2020 has placed special emphasis on making education digitally and technologically capable. It also recommends bringing online and hybrid learning into the mainstream of education. In this context, Content Management System (CMS) is not merely a technical tool for managing content, but it is also an effective medium for making the teaching-learning process organized, flexible, and participatory, thereby ensuring the digital transformation of education, quality improvement, and inclusivity. For this reason arrangements are made within higher education institutes to provide orientation and further encourage the partakers in engaging in digital content management. Against this backdrop , the present paper responds to the calls for empirical research aimed at understanding the attainment of technical skill and attitude towards administration as factors affecting implementation of content management system.

Regular up-gradation and reform in education system reflects on the successful progress of the nation. The National Education Policy (NEP) 2020 represents a transformative vision aimed at reconfiguring the educational landscape in alignment with the demands of the 21st century. It emphasizes multidisciplinary learning, vocational education, skill enhancement, and equity in higher education. Implementation of NEP 2020 success depends on teachers and educators at colleges and universities are prepared and enthusiastic about its implementation. Since the use of technology, new teaching methods, planning courses and autonomy are key parts of

NEP 2020 in higher education; it has become more important to understand which technical skills teachers adopt in managing the content. According to Bob Boiko (2005), content management system (CMS) is a discipline related to the collection, management, and publication of content, including defined methods and rules, documented workflows, by using appropriate tool and technologies. Technical skills is not limited to only the use of computers and the internet, but it also includes the ability to understand, analyze, and evaluate digital information. This means technical skills refers to the proficiency in digital skills and digital literacy. In this context study of Olusola, M. & Sunde, I. (2013), Setyasingh, B.R. & others (2024) and L. Muadane & others (2025) observed that major determent of management systems are technical skills. However studies of Chama, A. (2023) and Feng, L., & Sumettikoon, P. (2024) results indicate that that teachers' digital literacy is influenced by their experience, frequency of training, and individual technological self-efficacy which in course affect the CMS-based teaching, making it important to study how teachers possessing various levels in technical skill adapt to these changes in academic scenario.

As institutions prepare to update its working practices for teacher educators under NEP 2020, the teacher educators proficient in technical skill will develop high aptitude towards adapting CMI for developing and disseminating the content than the beginners. Other than the faculty members approach towards content management reforms with varying perspectives due to professional factors, the institutional ecosystem characterized by its governance, resources beside administrative structures also may also play a decisive role in shaping attitudes and consequently affect the adoption of content management system. Studies of Al-Mulhem, A. (2020), Kushwaha, P. S., Mahajan, R., Atri, R., & Mishra, R. (2020), and Lavidis, K., Komis, V., & Akriani, E. (2022) indicated positive perspective towards administration and institutional support strengthens teachers' technical acceptance, making effective use of Content Management Systems possible, prior findings have also suggested that many CMS projects fail to reach the expected adoption rates. Jou,Y & Jane Webster (2014) study based on effectively implementing content management systems (CMS) to consolidate multiple information sources into a single, centralized repository found that users' experiences and interactions with CMS often fail to reach the expected adoption rates. This inconstancy in findings about technical skills effect in presence of educators attitude towards content management, paved the way for the following study. Thereby, the present paper responds to the calls for an empirical research aimed at understanding the technical skills and attitude towards administrators as factors in implementing the Content Management System.

HYPOTHESES

1.H01: There is no significant difference in implementation of Content Management System between proficient and basic technical skill able teacher educators.

2.H02: There is no significant difference in implementation of Content Management System between teacher educators possessing favourable from those exhibiting unfavourable attitude towards administrators

3.H03: There is no significant effect of Technical Skills, Attitude towards Administrators and its interaction on Content Management System amongst prospective teachers

POPULATION & SAMPLE

The study adopts a purposive quota sampling to study the technical skills and attitude towards administrators of college and university teachers in implementation of the Content Management System (CMI) in Lucknow (UP), with a focus on the type of institution (government, private). In Lucknow there are around 100 institutes where teacher training programs are functional. Most of these higher education institutes are situated in the central zone, east, west and south zones of Lucknow. The teacher educators employed in these professional institutes are the target population.

From this population of 2150 teacher educators in Lucknow, a sample of 520 teacher educators is selected using purposive quota sampling to ensure proportional (almost 50 %) representation of zones (central north, east, west and south) and institution types (government, private). By this means, Zone wise representation is 131 teacher educators from teacher training institutes situated in central north, 129 teacher educators from south zone, 127 from east zone and 133 from west zone. These teacher educators are full-time or contractual basis from the colleges and universities (government, private) who teach a wide range of subjects in graduate and post graduate teacher training classes.

METHODOLOGY

The study adopts a descriptive survey design to examine the technical skills and attitudes of college and university teachers toward the implementation of the Content Management System (CMI) in Lucknow (UP), with a focus on the type of institution (government, private). The researcher used a structured survey to check teachers' competency in digital skills and attitude towards administrator as factors in application of content management system. Results from the data are examined using statistics and comparisons to discover differences in digital skill competency between proficient and beginners, as well as between supportive and unfavourable attitude towards administrators for application of CMS. The conclusions are meant to support policymakers, administrators and higher education stakeholders in solving problems

and boosting the implementation of Content Management System in Lucknow's higher education system.

TOOLS

The study includes the following tools.

1. Content Management System Scale: A structured scale is developed to assess the implementation of content management system. The scale inclusive of total 86 items spread in four dimensions i.e; Prudent, Pertinent, Reliable, and Purposive where the response is on 5 point Likert scale. The validity is .75 and item validity raged from 1.76 to 6.27,whereas the split half reliability r is .89 (based on scores from 100 teacher educators of Rajasthan)

2. Technical Skill Inventory: The inventory developed to assess the competency in technical skills includes total 50 items related to Digital Skills (experience in Digital Media, Image Information and Video Editing, Excel, Copyright) and Digital Literacy (having Literacy of Digital Media, Literacy of Image Information and Video Editing, Excel, Copyright) having 7 point Likert scale. TSI validity is .75 and item validity range from 1.76 to 4.48 (on response of100 teacher educators of Rajasthan) and reliability is .86

3. Attitude towards Educational Administration Scale: To measure the educators' attitude towards administrators, Attitude towards Educational Administration Scale developed by T.R. Sharma (2011) is used. The scale comprises of 20 items related to favourable attitude and unfavourable attitude dimensions. It is assessed on 5 point scale. For standardization content validity, item validity is considered which is between 1.76 to 11.1 levels and reliability is .91

DATA ANALYSES TECHNIQUES

1.To examine the difference in implementation of Content Management System between proficient and basic technical skill able teacher educators Factor analysis is used

2.Factor analyses is used to assess the difference in implementation of Content Management System between teacher educators possessing favourable attitude towards administrators from those exhibiting unfavourable attitude

3.For studying the effectiveness of Technical Skill, Attitude towards Administrators and their interaction on Content Management System of teacher educators two way ANOVA is used

RESULT & INTERPRETATION

In line with the stated objectives mentioned earlier the implementation of content management system has been measured. Similarly the independent factors Technical Skills and Attitude towards the administrators is assessed. Standardized "Content Management System Scale" is administered to measure the implementation of Content

Management System and the competency in technical skills and attitude towards administrators are assessed through 'Technical Skills Inventory' and 'Attitude towards Educational Administration Scale, respectively. The procured data related to Technical Skills are divided sequentially into proficient and basic levels, and Attitude towards Administrators is divided into favourable administrative attitude and unfavourable administrative attitude. The analysis of data related to the effect of technical skills, attitude towards administrators, and their interaction on the Content Management System of teacher educators is carried out with the help of Two-Way ANOVA.

Table 1. Effect of Technical Skills, Attitude towards Administrators, and their Interaction on the Content Management System amongst Teacher Educators N=520

Source of Variance	df	SS a.b	MSS a.b	F a.b
Technical Skills (a)	1	359.114	359.114	3.642*
Attitude towards Administrators (b)	1	365.788	365.788	3.921**
Interaction (a × b)	1	375.334	375.334	4.032**
Error	516	457	79.465	
Total	520	365		

Objective1. Effect of Technical Skills on the Content Management System of Teacher Educators

It is evident from Table1 that the F-value of technical skills on the Content Management System of teacher educators is 3.642, which is significant at the 0.05 level when df = 1/516. This indicates that there is a significant effect of technical skills on the Content Management System of teacher educators. In this context, the null hypothesis, 'There is no significant difference in implementation of Content Management System between proficient and basic technical skilled able teacher educators,' is rejected. Therefore, it can be said that teacher educators with proficient technical skills are able to find implementing Content Management System more relevant and are able to make greater use of the Content Management System than the teacher educators who have the basic technical skills.

The reason for this discrepancy in implementation of the content management system could be that technically proficient teacher educators are more familiar with digital platforms and online resources. They can efficiently perform activities such as

content uploading, lesson planning, assessment, and feedback, which enhance their confidence and ease of use. This enables them to organize and update content effectively and improve the overall teaching-learning process. Furthermore, technical skills help them adopt innovative teaching methods and enhance student engagement. On the contrary, teacher educators with limited exposure to digital tools and resources, although aware of the importance of CMS, may not be able to utilize it fully in practice. Such educators often rely on traditional methods and fail to take full advantage of CMS. Due to lack of opportunities or insufficient practice, they are unable to effectively apply their technical skills, resulting in limited CMS usage. This finding is supported by a previous study carried out by Barak and Ilhan (2013) who found that teachers who are proficient in technical skills can efficiently work on their content, control discipline and manage the activities. Similarly Albrahim F. A. (2020) also observed that the teachers who possessed higher self-efficacy could efficiently operate the content management system.

Objective 2. Effect of Attitude towards Administrators on the Content Management System of Teacher Educators

It is evident from Table 1 that the F-value of attitude towards administrators on the Content Management System of teacher educators = 3.921, which is significant at the 0.01 level when df = 1/516. This indicates that there is a significant difference in the effect of attitude towards administrators on the Content Management System of teacher educators. In this context, the null hypothesis, 'There is no significant difference in implementation of Content Management System between teacher educators possessing favourable attitude towards administration from those exhibiting unfavourable attitude towards administrators,' is rejected. This means that teacher educators who consider the administrator to be cooperative and helpful can implement the Content Management System more effectively whereas, the teacher educators who are unsupportive of their administrators, have difficulty in accessing information, managing its content or sharing with their fellow beings. A reason for such finding can be that a positive administrative environment fosters confidence, security, and freedom to experiment among teachers, enabling them to utilize their technical skills effectively. Moreover, Positive administrative support towards technology increases teachers' confidence, enthusiasm, and efficiency in using CMS. When administration encourages technological innovation, provides necessary training and resources, and supports in resolving technical issues, technical skills are transformed into practical application. This findings are supported by the study of Teo, Fan and Du (2015) who found that

administrative support, facilitating conditions, and organizational backing positively influence teachers' technology acceptance, leading to effective CMS usage.

Objective 3. Effect of Technical Skills, Attitude towards Administrators, and their Interaction on the Content Management System of Teacher Educators

It is evident from Table 1 that the F-value of the interaction of technical skills and attitude towards administrators on the Content Management System of teacher educators is 4.032, which is significant at the 0.01 level when df = 1/516. This indicates that the Content Management System of teacher educators is influenced by technical skills, attitude towards administrators, and their interaction. In this context, the null hypothesis,'There is no significant effect of technical skills, attitude towards administrators, and their interaction on the Content Management System of teacher educators,' is rejected. This means that teacher educators having high technical skills and a positive administrative perspective, when combined together, enhance the Content Management System teacher educators. The difference in the effect of technical skills, attitude towards administrators, and their interaction on the Content Management System of teacher educators is described in Figure1.

Figure 1: Effect of Technical Skills, Attitude towards Administrators, and their interaction on implication of Content Management System

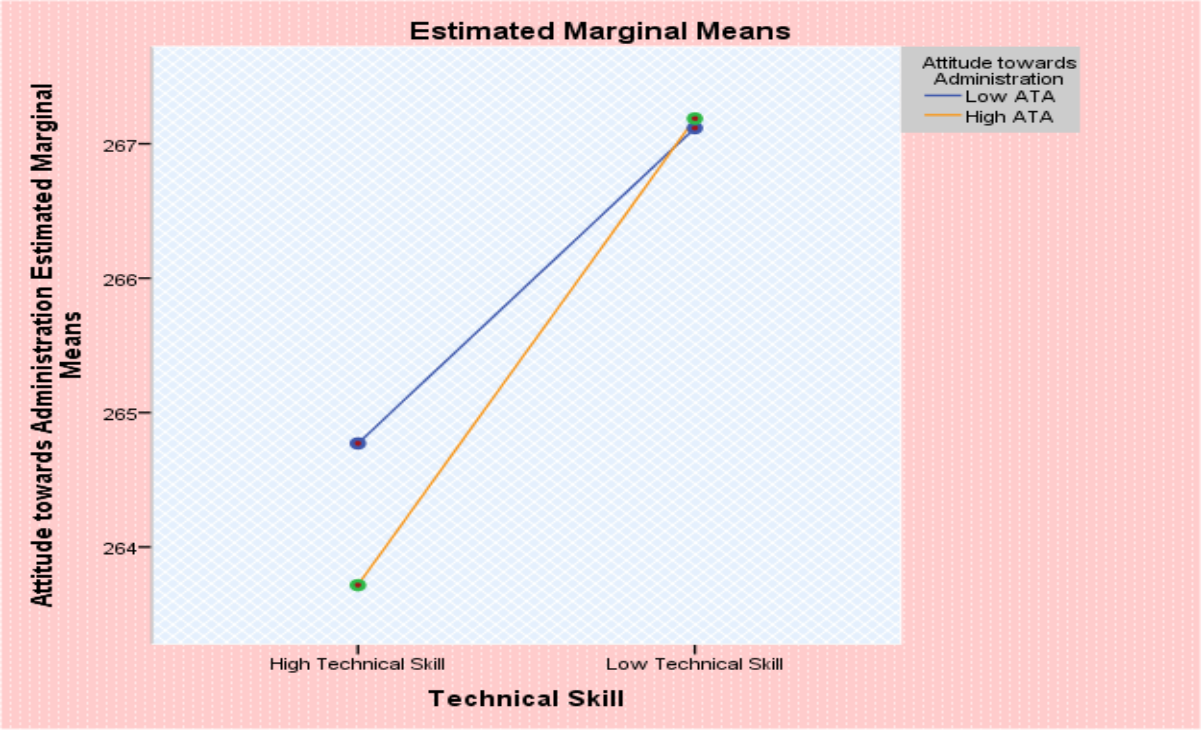

Figure1 displays the difference in the effect of technical skills, attitude towards administrators, and their interaction on the Content Management System of teacher educators. The figure shows that when both technical skills and a positive

administrative skills perspective are at a high level, the use of the Content Management System is most effective. The figure shows that when a technically proficient teacher educator works with a positive administrative outlook, he/she makes more effective use of the Content Management System.

A possible explanation to such finding is that technical competence combined with a positive attitude towards administration strengthens CMS use among teacher educators. Conversely, even technically competent teachers may show limited CMS usage if they lack administrative support. The result is supported by Walker, Lindner, Murphrey and Dooley (2016) who highlighted that training, technical assistance, and structural support from administration positively shapes teachers' attitudes and increase CMS usage. Further, Islam (2016) and Kattoua, Al-Lozi and Alrowwad (2016) concluded that administrative policies, institutional support, and strong technological infrastructure, when combined with teachers' technical abilities, enhance the effectiveness of CMS/LMS usage.

CONCLUSION

This study provides valuable insights into the factors for content management system implementation in Lucknow's professional education landscape. The findings indicate that teachers' technical skills (especially digital skills and digital literacy) significantly influence the effective use of Content Management Systems (CMS). This highlights that a positive attitude towards technology enhances the meaningful use of CMS in teaching-learning processes. The study helps teacher educators to understand the importance of preparing trainee teachers according to the needs of contemporary digital education. On the other hand, the study also shows that a positive attitude of teachers towards administration leads to more effective use of technical skills in CMS; which means administration plays a decisive role in the successful adoption of Content Management Systems. Overall the study demonstrates that administrative support, clear policies, training, and technical assistance result in a positive perspective of teachers, leading to an increase in the effective use of Content Management Systems. On the contrary, lack of administrative support or unclear policies create a situation of negative perspective and as a consequence limited use of CMS. The study also highlights the differences in teacher educators' technical skill competency and attitude towards administrators, which calls for extra initiatives for support and resources, specifically for teacher training institutes and universities, to ease CMS implementation problems and boost support for digital education. Teacher training programs though have mostly the same type of training in Lucknow, the differences in input are striking.

This exhibits the institutions, policymakers and administrators to improve their input towards assistance in digital education to fully meet the aspirations of NEP 2020.

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