Appropriation of Twitter in Educational Settings by Mentor Teachers of Delhi Government Schools: A Beginning

[1]*Manu Gulati &* [2]*Syedah Fawzia Nadeem*
[1]*Mentor Teacher, T.G.T (English), Directorate of Education GNCT of Delhi, Delhi, India,*
Email: mwadhwa22@gmail.com
[2]*Professor, IASE Jamia Millia Islamia, New Delhi, India*

Abstract

This study aims to explore how Mentor Teachers (MTs) appropriate Twitter in their academic and pedagogic endeavours. It explores the journey of all 190 Mentor Teachers of Delhi Government Schools using Twitter in their educational settings; beginning from training of these teachers on tweeting skills to understanding their twitter usage post one year of the training. Tools and techniques of the study were the survey, interviews and content analysis. The findings of the survey and interviews were triangulated with the content analysis of the tweets. Five hundred tweets chosen for content analysis were hand-coded into emergent patterns to identify the messages these Mentor Teachers pass on Twitter. Findings of the study demonstrate that Mentor Teachers use Twitter to build networks with fellow Mentor Teachers, teachers and other educational professionals. The study reveals diversity in the extent of Twitter usage by the Mentor Teachers in their educational settings. Diversity is also evident in Mentor Teachers' sharing of resources related to their respective teaching subjects. Mentor Teachers' tweets' content relate to different themes. Inclination was most on the theme of sharing achievements of students, school, other teachers and self. Majority of the Mentor Teachers reported the positive role of Twitter in their professional development.

Keywords: Mentor Teachers, Twitter, Network, Codes, Achievements

Introduction

Beginning of the 21st century has witnessed the emergence of social media as a powerful tool of communication. It enables people to share their ideas, thoughts and practices. It has the immense potential to build powerful narratives thereby bringing a positive change in the society. In the last one and a half decade, the use of social media has been on a rise in the educational landscape. Social Media has helped teachers "foster interaction, collaboration, and contribution" (Gunawardena et al. 2009) in their academic and pedagogic endeavours. Interactions enhance a teacher's ability to engage in reflective dialogue and also question ineffective routines (Kruse & Louis 1993, Little 2002). Interactions and sharing of thoughts and practices are parts of professional development programs of teachers. When teachers participate in professional development programs, they "develop, implement and share practices, knowledge and values that address the needs of all students." (Schlager, Fusco et al. 2004).

From this, we can thus infer that social media has the potential to enhance the professional competencies of teachers in their educational settings.

Amongst the various social media platforms including Facebook, Twitter, LinkedIn, Instagram, this particular study focusses on use of Twitter in the educational settings. One of the prime reasons for choosing Twitter is its growing usage by the educators for their professional development in North America and Europe.

Review of Literature on the Use of Twitter in Education

In a 2012 study, researchers investigated how teachers used Twitter in their professional development (Forte, Humphreys & Park 2012). The study was exploratory in nature. Data collection tools were online survey and interview. The sample comprised 37 respondents. Majority i.e. 78 percent of these had been using Twitter for more than 12 months. Eight respondents were interviewed telephonically and these interviews were recorded. The respondents were asked to describe how their use of Twitter has changed over a passage of time. The findings from an online survey and detailed interviews were gathered along with 2000 tweets related to education. Content analysis of these 2000 tweets was done. The findings of the study were that with the use of Twitter, teachers built and maintained professional connections with other school teachers and shared new ideas, practices and resources with them. The study hailed teachers on Twitter as progressive thinkers who could raise the efficacy of the reform

process by using social media for the classroom.

In a 2016 study, the researcher examined the way an online community of educators took part in professional development using Twitter (Wesely, 2016). The community of practice was composed of World Language (WL) teachers who used Twitter as a social media platform for professional development. This research study took a socio-cultural perspective in approaching and understanding teacher learning. It was a qualitative, netnography study. Researcher in the study was a participant observer for more than a year. The key data source was interviews with 9 teachers who were the community members. All the teachers in the community of practice (CoP) lived and worked in the United States and taught either Spanish or French language. The researcher analysed teacher learning situated in a community of practice on the basis of three essential characteristics specified by Wenger in 2006- Domain, Community and Practice. Evidence of the study demonstrates that the community of practice of educators distinguished themselves as experts in world language education. These educators shared resources and participated in joint discussions using Twitter. These discussions lead to collaboration and different projects initiatives and #chats. The #Langchat recorded the highest collaborative effort in this community of practice. This study provides ample evidence that in this process of tweeting, learning took place in the community of practice of world language educators.

Another 2016 study investigated

the factors affecting administrators' understanding about Twitter and it's use over a period of time (Cho & Rangel, 2016). The study is based primarily upon interviews and 1455 tweets of 17 administrators located in the United States and Canada. By approaching structuration theory, the study found that administrators' understanding and use of Twitter were based on their social contexts i.e. values, expectations and beliefs. Practices of using Twitter were neither predetermined nor fixed. In fact, enhanced interactions with colleagues and friends on the use of Twitter changed their perception about Twitter. Some administrators used Twitter more frequently while others used Twitter less number of times. The reasons for less use of Twitter by a few administrators were twitter's panoptic effect, increased surveillance in the online environment.

A study on '#PD: Examining the Intersection of Twitter and Professional Learning' was conducted in 2016 (Biddolph & Curwood, 2016). The study focused on use of Twitter for professional learning of English language teachers most of whom were from Australia. Data collection was done from multiple sources through online survey (of all 64 teachers), semi-structured interviews (with 8 participants) and content analysis of 530 tweets that used #ozengchat hashtag. The study gave evidence of use of Twitter as an authentic platform to share, promote and acknowledge teachers' ideas and practices. The study reiterated that Twitter helped teachers to exercise their agency in choosing professional development programs as per their needs and interests.

In a 2019 review study the researcher reviewed 103 peer-reviewed research studies published during the period 2007 to 2017. These research studies focused on use of Twitter across educational settings. Most of the reviewed research studies were descriptive case studies and were conducted with the students of higher Education of North American and European countries. Majority of the reviewed studies indicated that use of Twitter increases students' motivation, engagement in the class and their learning (Anthony & Jewel, 2017). Another major finding of the study was the professional development of teachers by networking, sharing of ideas, resources, practices and forming a community of practice of teachers.

Researchers noted many recurring negative issues of Twitter usage in Education; some of which were infringement to right to privacy, unavailability of sufficient space for expressing oneself and load of handling lots of information. In spite of there being drawbacks in using Twitter, there is enough evidence about Twitter's potentiality in aiding professional development for teachers and students as well (Carpenter 2014; Carpenter & Krutka, 2015). Finally, the study envisaged that most of the analysed studies were spread in North American and European countries. The study suggested an intense need to carry out more studies on the use of Twitter in other parts of the world especially within countries of Asia and Africa continents where use of social media is remarkable.

The review of the related literature suggests the need for the use of

Twitter for professional development of teachers in India. A study was thus conducted to support the Mentor Teachers of Delhi Government schools to appropriate Twitter in their professional endeavours.

Objectives of the Study

1. To enable the Mentor Teachers to learn the technique of tweeting through training.

2. To enable the Mentor Teachers to participate in Live Twitter chats.

3. To know the status of engagement of Mentor Teachers on Twitter post one year of the training.

4. To understand how Mentor Teachers appropriate Twitter in educational settings post one year of the training.

There are 1026 schools in Delhi which are funded and managed by the Government of National Capital Territory of Delhi. Teachers teaching in these schools are known as Delhi Government School Teachers. The total number of teachers teaching in Delhi Government Schools is approximately 60,000. Out of these, 190 teachers are Mentor Teachers. Most of the Mentor Teachers are Trained Graduate Teachers (T.G.T.s) and some are Post Graduate Teachers (P.G.T.s). The role of Mentor Teachers is to provide onsite academic and pedagogic support to teachers of their respective mentee schools. Each Mentor Teacher has been assigned approximately five schools. Mentor Teachers facilitate theme based and other programs to enhance the professional competencies of teachers.

Methodology

This study was conducted in four phases. In the first phase, Mentor Teachers were imparted hands-on training of using Twitter and participating in Live Twitter chats. After one year of their usage of Twitter in their educational settings, in the second phase, a survey and interview were conducted with the Mentor Teachers (Survey with 190 Mentor Teachers and Interviews with 12 Mentor Teachers). In the third phase, content analysis of 500 tweets was done. In the fourth phase, findings of the interviews and survey were triangulated with the content analysis of the tweets.

Training of Mentor Teachers on Tweeting Skills

Five day face to face training programme was conducted for Mentor Teachers on tweeting skills. Providing hands on experience on the technique of tweeting was the essential component during the training. Tweets done by the teachers were peer reviewed. Main parameters of discussion and review of the tweets were brevity, content of tweet, meaning to be conveyed, appropriate tagging and use of hashtags, number of characters, attaching photos and videos in tweets, time limit of video to be attached, safety, security and privacy issues. MTs were oriented in participating in Live Twitter chats. Followed by the training, MTs participated in 8 Live Twitter chats.

Survey

Next, post one year of the training, to explore MTs educational practices on twitter, an online survey of the entire population (190 MTs) was conducted via

google forms. One hundred and eighty four MTs responded to the survey request. Of these, 51.6 percent of the Mentor Teachers were female and 48.4 percent were male. Further, 81percent MTs were TGTs and 19 percent were PGTs. Almost all MTs (97.8 percent) were post graduates. TGTs and PGTs were of different subjects. Twenty Five percent of the TGT MTs were teachers teaching English, 20.1 percent teaching Mathematics, 18.5 percent teaching Science, 13.6 percent teaching Hindi, 10.3 percent teaching Social Science, 1 percent teaching other subjects and the rest were PGTs. Average teaching experience of these 184 MTs was 18.7 years. It had a wide range from 3 years to 36 years. Standard deviation of teaching experience was 7.2 years.

On being asked to share their experience of appropriating Twitter in the educational settings through an open ended question in the survey, the respondents shared their experiences in about 50 to 100 words each.

Interviews

Twelve participants were selected for a telephonic interview based on stratified random sampling technique- 2 participants (Mentor Teachers) teaching each subject at the secondary school level (English, Hindi, Mathematics, Science, Social Science). These respondents were at least for 1 year on Twitter and on average had tweeted at least 4 times a week.

Each telephonic interview lasted from 15 minutes to 25 minutes. These interviews were recorded and transcribed. The interviewees were asked to share in detail their tweeting experience, the various themes and their description on which they have been tweeting and how they appropriated twitter for their professional development.

The analysis of this interview content was done on Braun and Clarke (2006) approach in which patterns of conceptually related content were identified. Content of the tweets shared by teachers in their survey were classified into various themes as identified in the interviews. The researcher could understand from Mentor Teachers' shared experiences how they appropriated Twitter in their educational settings. In this study researcher herself being one of the Mentor Teachers was a participant observer. She trained the Mentor Teachers in tweeting skill, observed their tweets and participated in tweeting for more than a year. (May 2019 to September 2020). Thus, this analysis is based on grounded theory. However, this analysis does not build grounded theory as no theoretical explanations are developed on the content tweeted by the Mentor Teachers. This thematic analysis along with the survey details of respondents provided researchers a starting point of content analysis of tweets.

Content Analysis

A dataset of 500 tweets related to educational context tweeted by the Mentor Teachers (respondents) was collected. These 500 tweets were searched by using certain hashtags used commonly by the respondents. These hashtags are #DelhiGovtSchool, #ProudDelhiGovTeacher,

#LetsTalkEducation, #HappinessClass, #DelhiEducationRevolution, #EMC, #DelhiEducationOnline. The 500 tweets have been identified in such a manner that they cover tweets tweeted in the entire period of the study (May 2019 to September 2020). These tweets give a fair representation of different periods of school activities and pandemic period activities.

This dataset of 500 tweets along with findings from the survey and interviews were triangulated to infer the meaning and essence of tweets tweeted by the Mentor Teachers. This meaning and essence paved a path for developing an understanding of how MTs appropriated Twitter in their educational settings.

These tweets were hand-coded to identify the emerging themes. For this, two researchers independently analysed 50 tweets in a set. The researchers categorised the tweets in different codes that had been decided after thematic analysis of the interview. Both the researchers compared and discussed the codes that finally emerged after the interviews. These codes were achievements, classroom activities, resource sharing, events, online teaching learning and other activities performed by teachers during pandemic, sharing of thoughts and ideas on education, motivational and inspirational quotes. This was followed by 2 iterations. Finally, both the researchers reached agreement on 93 percent of their observations. This process helped develop the final code book and meaning of various tweets to be included in this. Tweet Codes developed remained the same as decided post interviews. Each tweet was assigned just one code.

Tweet Codes along with their description have been given in the table below.

Table-1: Tweet Codes and Description

Code	Description
Achievements	Students' achievements, Teachers' achievements, Schools' achievement, Achievements of self
Classroom activities	Teaching Learning activities
Resource Sharing	Blogs, YouTube links, Links to tools related to education
Events	Parent Teacher Meeting, Annual Day, Sports Meet, School Management Committee Meeting etc
Online Teaching Learning and other activities of teachers during pandemic	Online worksheets, Teacher professional development sessions, teachers' duties in hunger relief centres and other field duties.

Sharing of ideas and thoughts on Education	Teacher thoughts
Motivational/Inspirational quotes	Inspiring poetry, famous quotes

Findings

Given below are the findings of the study in respect of Mentor Teachers' networks and engagement on Twitter, their reported experiences in this regard and their appropriation of Twitter in the educational settings.

Mentor Teachers' Networks and Engagement on Twitter

The survey shared data about MTs networks on Twitter. Their networks were diverse. Leaving aside the Mentor Teacher with the highest number of followers (4000 followers), the range of number of followers (teachers/ educational professional/ educational organisation) of MTs on Twitter was from 01 to 1116, average 163.2, standard deviation 187.9. Range of the people (educational professionals only) whom Mentor Teachers follow on Twitter was 00 to 1684, average 197.1 and a Standard deviation of 233.8. This implies that Mentor Teachers had developed strong networks with educational professionals on Twitter. MTs' engagement on Twitter in terms of their duration on Twitter was also diverse. Whereas 19.1 percent of Mentor Teachers have been using Twitter for less than one year, 46.7 percent have been using Twitter between 1 and 2 years and 34.2 percent have been using Twitter for more than 2 years. Further, in the context of the time frame of checking twitter, it was revealed that 58.7 percent MTs checked Twitter everyday.

It is also important to understand the range of average number of tweets per week tweeted by MTs in the context of Education. The range varied from 01 to 20, average 5.2, standard deviation 3.3. Further, responding to their participation in Twitter chat, 64 percent respondents reported that they had taken part in Twitter chat. Further in response to use of subject-specific hashtags in tweets, 48 percent respondents reported that they used subject-specific hashtags.

Reported Experiences of Mentor Teachers

In response to sharing their experiences as a Mentor Teacher on Twitter, in an open ended question; all 184 MTs shared their experiences in different ways. MTs used different adjectives to share their experiences. Some of the reported experiences were 'good', 'very good', 'wonderful', 'great', 'amazing', 'nice', 'excellent', 'unique', 'brilliant', 'useful', 'modern', 'awesome', 'happy' etc. Some other reported experiences were 'normal', 'mix', 'not much fond of', 'not much happy' and 'no comments' etc. Few of the MTs shared their twitter experience using a single adjective while the majority reported specific details of their tweets along with the adjectives. MTs gave their own perspectives on usage and role of twitter in professional development of twitter.

Fifteen percent of the surveyed respondents had reported some issue/ issues regarding use of twitter. These

issues were privacy, civil service conduct rules and trolling. Issue of privacy was reported by a high majority of the respondents.

The survey data revealed that overall the inclination of the MTs was more towards the use of Twitter in educational settings and in their professional development. These findings are in tandem with the study conducted by Forte, Humphreys & Park 2012 that hailed teachers on Twitter as progressive thinkers who could raise the efficacy of the reform process by using social media for the classroom.

Understanding MTs' Appropriation of Twitter in the Educational Setting

Mentor Teachers' tweets revealed that they were inclined the most towards sharing the achievements of their students, colleagues, schools and themselves on twitter. This also became evident from the interviews and survey data. A few verbatims from the interviews and survey have been shared below. (MT below stands for the serial number of the Mentor Teacher who was interviewed. S below stands for the serial number of Mentor Teacher in the survey)

'Sharing achievements of others on twitter spreads happiness around. The teachers of my school feel happy when I share their achievements on Twitter, when I post about their work. They work even harder for this now.' MT-2

'I have now started sharing with everyone the courses that I pursue. My achievements, I think this inspires people to join the learning fraternity with me. It motivates me as well.' MT-7

'My students come from marginalised sections of society. A little motivation means so much to them. I regularly tweet on their achievements and I make sure I tell them this. They feel happy, stay connected to me and strive to achieve more.' MT-3

'This year when I saw the results of my mentee school which had increased by 38 percent than the previous year, I was very happy. It is actually a boys' school. People have notions that no teacher teaches and no student learns in boys' school. I tweeted about my boys' school's achievement. I wanted people to know that when everyone in school works together towards a goal, results are fruitful.' MT-11

'Being a teacher I find this platform very useful for me to showcase my students' achievements, my online learning, achievement of self, nature related motivational thoughts globally.' S-47

'Twitter allows me to share a brief description of the achievements and the work being done in my mentee schools.' S-130

'It is a very nice and motivational thing to let the world and your friends and other eminent persons know about your achievement for your surroundings on good remarks.' S-57

The inclination of teachers towards tweeting the achievements was also evident from content analysis of tweets. Thirty two percent of the tweets related to the code- Achievements, 17 percent to the code- classroom practices, 12 percent to the code Event Sharing. Whereas 16 percent of the tweets related to online teaching learning and other activities of teachers during the

pandemic, only 6 percent related to sharing the motivational thoughts and quotes. Eight percent of tweets shared ideas and thoughts on the theme of education and 9 percent related to resource sharing.

With this data, the researchers could trace the emergent pattern of Delhi Government schools' Mentor Teachers' appropriation on Twitter in educational settings.

Conclusion

This study aimed at exploring how Mentor Teachers of Delhi Government Schools appropriate Twitter in the educational settings, post one year after their twitter training. Findings of the study reveal that Mentor Teachers use Twitter to build networks with fellow Mentor Teachers, teachers and other educational professionals. These networks help them build connections, share ideas and practices. The study reveals diversity in the size of the network of Mentor Teachers on Twitter. Diversity is also evident in the extent of Mentor Teachers' Twitter usage in educational settings and also in sharing resources related to their respective teaching subjects. Mentor Teachers' tweets' content relate to different

themes. Inclination was most on the theme of sharing achievements of students, school, other teachers and self. Other themes chosen by Mentor Teachers for tweeting in order of priority were classroom activities, online teaching learning and other activities of teachers during pandemic events, resource sharing, sharing of ideas and thoughts on education, motivational/ inspirational quotes.

The study also reveals diverse experiences reported by Mentor Teachers in respect of tweeting. Majority reported the positive role of Twitter in their professional development. However, a few did not view Twitter with a positive disposition. Fifteen percent of Mentor Teachers raised issues about Privacy and Civil Service Rules. In totality, the journey of Mentor Teachers appropriating twitter in educational settings has begun and moved ahead on a positive note. However, this is just the beginning. There is still a long way to go.

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