



Technical Communication and its Challenges in Educational Perspective in Post graduate Media programmes

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Abstract

Technical Communication is an emerging field in the area of communication, which has a wide scope and dual importance nowadays. We live with it, interact with it, engaged with it, play with the contents, study with the text and image interpretation, and it is widely familiar with people in all walks of life, Engineers, Doctors, Professors, Scientists, Designers, Content writers, Documentary film makers, Photographers and media persons.

In the industry, in manufacturing sectors, this field has emerging and we need people with technical writing skills for the development of science and technology and they are capable in working wherever computer and human interaction is involved. Technical communication is act of communication through the technology. Researchers and companies are striving to bridge the inclusive nature of society by developing more accessible technologies. Technical writing techniques have also changed due to a massive influence of software and digital technology in the authoring process. Today, there are so many different technical writing tools available that it becomes a hard choice as well as the fact that their usage has to be mastered. This study is a descriptive Qualitative study of emerging trends and challenges in technical communication in educational perspective in Post Graduate Media Programmes.

The researcher has adopted qualitative focus group methodology in order to bring insights from Subject experts of Post graduate media Programmes ,experts from learning management systems and post graduate students from media institutions . Media professors teach subjects like Communication skills, Theories of communication, Communication Research methods, Technical Communication, Television Studies, Videography, Graphic design, Multimedia, Drawing and Animation, Photography, Film language, Audio and Video editing using various visual aids and software in the field of Visual communication and Electronic media. Post graduate Students of the same department learn those subjects using mobile

applications, laptop and computers. The study states that teachers using technical communication had an impact on education in post graduate media programmes. The researcher concludes that the technical communication is challenging among faculties and students and creates a new platform for the learning system with many number of online tools in computer and mobile applications and for a better effective learning we need to take physical classes face to face using visual tools in the blended learning process.

Key words: Technical Communication, Technical writing, Visual Communication, Electronic Media, Focus group.

Introduction

Technical Communication is an emerging field in the area of communication, which has a wide scope and dual importance nowadays. We live with it, interact with it, engaged with it, play with the contents, study with the text and image interpretation, and it is widely familiar with people in all walks of life, Engineers, Doctors, Professors, Scientists, Graphic Designers, Artists, Sculptors, Content writers, Documentary film makers, Photographers, Journalists, and many more.

In the industry, in manufacturing sectors, this field has emerging and we need people with technical writing skills for the development of science and technology and they are capable in working wherever computer and human interaction is involved. Technical communication is act of communication through the technology. Researchers and companies are striving to bridge the inclusive nature of society by developing more accessible technologies. Technical writing techniques have also changed due to a massive influence of software and digital technology in the authoring process. Today, there are so many different technical writing tools available that it becomes a hard choice as well as the fact that their usage has to be mastered. This article is a descriptive study of emerging trends and challenges in technical communication in educational perspective in Post Graduate Media Programmes. Media professors teach subjects like Communication skills. Theories of communication, Communication Research methods, Technical Communication, Television Studies, Videography, Graphic design, Multimedia, Animation, Photography, Film language, Audio and Video editing using various visual aids and software in the field of Visual communication and Electronic media. Post graduate Students of the same department learn those subjects using mobile applications, laptop and computers

Objectives of the study

To describe and explore the role played by technical communication in the educational perspective in Post Graduate Media Programmes

To explore the technical writing tools involved in learning process bridging the gap between user and technology in Post Graduate Media Programmes

Review of Literature

In the dissertation from Technical Communication's Importance to Change by Crystal Michels of Bowling Green State University, it is found that Bowling Green's professors showed their experience teaching online and created courses that allowed for additional development and interesting challenges. Crystal Michels says that, When I perused online programs, I found that Bowling Green offered exactly what I needed. I chose Professional Writing and Rhetoric because I wanted to develop a stronger understanding for varying types of writing and needed the opportunity to challenge my writing. This program has worked best for me (Michels.C,2018). The portfolio examines what needs to be adjusted when exploring technical communication's impact and how to improve the viewpoint of it.

In the article "Training Online Technical Communication Educators to Teach with Social Media: Best Practices and Professional Recommendations" Stephanie Vie says that on social media research in technical and professional communication (TPC) training through a national survey of 30 professional and technical communication programs asking about their use of social media in technical communication. This research clearly states the basis of recommendations for training online TPC faculty to teach with social media.

In the research article, Does a presentation's medium affect its message? PowerPoint, Prezi, and oral presentations, the authors found that after experimenting the presentation tools like power point, Prezi and oral presentations with live participants and concluded that the observed effects of presentation format are not merely the result of novelty, bias, experimenter, or software-specific characteristics, but instead reveal a communication preference for using the panning and zooming animations that characterize Prezi presentations.

Pamela Stone Nicolle in her Technology adoption into teaching and learning by mainstream university faculty study attempted to provide insight into the processes of the adoption of innovation by mainstream faculty members, thus resulting in a Technology Integration Process Model. The results found that faculty members recognize potential benefits of technology in teaching and learning and that peer interactions and collegiality are significant in helping them learn new innovations and strategies. This fundamental knowledge is expected to inform the design of professional development relevant to those continuing on the journey and those who have not yet chosen to travel.

Bernadette Longo says that changing social media practices, arguing that technical communicators and teachers understand their roles as mediators of information and communication technologies. Drawing on a case study growing out of a colloquium on technology diffusion and communication between the Global North and South, the author proposes that technical communicators be attentive to the participatory nature of social media while not assuming that social media replace the dynamics of face-to-face human interaction.

The above reviews furnish the various technology-oriented benefits in using electronic medium in education with technical communication supports the researcher's study.

Theoretical Framework and Methodology

This Research study is systematically handled with qualitative focus group methodology in order to bring insights from the subject experts of the Post graduate department of Electronic media and Post graduate department of Visual communication, experts from learning system management of image infotainment and students of the two departments with researcher as the moderator. Through this method the researcher has gathered views and experience of the professors and students in handling the new media tools through mobile, laptop and computers through teaching and learning.

New media theory, broadly speaking, conceptualizes the implications of digital technologies: from the novel socio political configurations fostered by computer-mediated communication, to the aesthetic and cultural significance of digital culture. Media Professors and students handle innovative tools in the digital mode for teaching and learning, in this research article new media theory is adopted to find out improvements and changes in teaching and learning by the professors and students of the post graduate programme in media studies

Focus groups provide insights into how people think and provide a deeper understanding of the phenomena being studied. While a valuable research tool, surveys generally ask closed-ended questions that may limit the feedback that can be gained from a respondent. A method to gain more in-depth information to supplement surveys is interviews; conducting interviews, however, can be an expensive proposition that can exceed the available resources. Focus groups are group interviews that give the researcher the ability to capture deeper information more economically than individual interviews. This research article is systematically studied by applying in the theoretical perspective of new media theory and qualitative focus group methodology

The need of technical Writing for E-learning

A technical writer must understand and ensure how the reader gets the message and what that the product team wants to convey. It may be about educating the reader on a product, service, new technology, anything. It is a Technical writers duty to make the complex contents into a simplified structure and to make the reader understand things with more clarity. Nowadays Modern trends have found that e-learning is a very effective technique to achieve this. It may be instructional videos or live interactive sessions, learning content can be of various forms, deployed using an LMS (Learning Management System). Thereby E-learning serves to achieve a critical portion of the product adoption process and trains the user on the product. On the whole in reality that technical writers role in the creation of E-learning content is wide and important in nature

The application of technical writing tools

Technical writing and documentation tools help technical writers curate the right content to help get the contextual information correct and easy to understand.

These tools include the writing, editing, drawing, reviewing, and rewriting phase. This is the phase when the information documentation team is at its full strength churning out guides, manuals, blogs, video demos, online help pages, and what not. Given the variety in the tasks in this phase, the technical writing tools employed are also quite diverse, and innumerable.

Microsoft word and its applications in writing documents

In the process of content writing, Microsoft Word is the first tool that comes to mind in a flash for any technical writer. Microsoft Word is definitely a technical writer's best friend and is so popular because of its simple and elegant look combined with a rich set of features. From the secondary datas available that in the usage of Microsoft, 1 out of every 7 persons uses Microsoft Word either for his/her professional or personal work. Statistics also say that about 80 percent of students use Microsoft Word for individual work, while 13 percent use it for group work. Professors in the teaching profession are using Microsoft word in preparing notes, setting questions for universities and for writing articles in research journals. This is a major digital tool for people in the writing field with their personal computer application

Multiple digital teaching tools handled by Teachers through online and offline

Today due to covid pandemic, we are forced to work in online that is work from home, professionals in the industry, School teachers and College professors are working in online, using google meet, google class room, zoom, Microsoft teams, power points for teaching, Microsoft word for typing, Professors in media schools are using Photoshop, illustrator, Corel draw, Adobe premiere, Avid, FCP, Neundo and Protools to teach audio editing. The Scenario of using the above tools and software are growing day by day, and we are moving towards digitization in all our work flow from morning to night. In offline teaching in media education those who teach visual communication and electronic media use many number of innovative tools, this media programmes need to be applied with electronic communication which is a major system to teach technical communication, here technical communication plays a vital role which is nothing a text and image interpretation

Developments and Trends in Technical Writing today.

Dobrin (2014) offers this brief definition of technical writing:

“technical writing is writing that accommodates technology to the user”

Today Technical Writing has become a major task in the field of communication, and in the digital scenario it has been a wide area with multiple interdisciplinary fields. All most in most of the corporate communication sectors this technical writing has become more popular and demanding. There is a demand for content writers today as a technical writing profession for young media aspirants who want to develop their career in media today.

The importance of mobile optimization today in the digital era

In this visual and digital era and technology has become worldwide, mobile optimization is well structured and helps us to reach targeted audience. Many of us today use mobile to gather essential information rather using personal computers. Today it is essential to design our website to remain visually appealing and highly functional on various devices used. This means that when we use our smartphone or laptop to access a particular website, the site should look better in the visual sense and should work properly. Smartphones are the leading technology that people use to stay connected today. Technical writers and user experience experts must take this mobile-first reality into account in every aspect of their work moving forward and focusing on a few key points: brevity, clarity, and ease of use.

Effective Mobile content must be concise and Smartphones offer a more structured visual space for users and our people don't want to spend time scrolling for the content they access and as a result, writing for mobile also needs to emphasize clarity in such a small space. Finally, it really makes a clear sense that technical writing optimizes the reading experience for mobile-first users. Technical writers should learn to share information and should write concisely to multiple audiences with professional environment and focus towards effective content within a simplified format. There are three key aspects in mobile optimization today which is trending, Mobile-optimized website, Mobile friendly website design and Responsive website design. On the whole today we have advanced web design, user-friendly web design and responsive web design which is flexible and automatically adjust into the specific screen of the device we use.

The application of Blended learning today

In the article on Blended Learning: How Do You Choose the Best Medium for Your Students? it clearly describes the process in practical and explains that high school and colleges have been implementing Blended learning in their curriculum today, after the application of using e-learning opportunities among students, educational institutions are making the concept of blended learning to the students in an more appropriate way other than the classroom lectures in-depth.

It analyses further that, how Blended learning works in our workplace. The concept of blended learning is almost exactly what it sounds like: a combination of in-person instruction led by a teacher or instructor alongside other types of learning, often e-Learning through digital tools, platforms, and other types of technology.

Blended learning is introducing iPads and other tablets to the classroom and it allows students to take a certain percentage of their coursework through an online learning platform. In the Industry, blended learning has some major advantages. During company-mandated face-to-face seminars, blended learning brings the human element of classroom teaching and also offers the flexibility of e-Learning around the schedule. At the same time, it may be more engaging than simply requiring employees to take an online course with little to no in-person feedback or interaction. In every organization the employees have limited time for in-person learning on the job. On the whole, in-person learning is a great opportunity to discuss important topics and learn together as a group, more over employees are resentful and distracted because in-person learning is taking up valuable time in their workday schedule. To make a healthy practice in learning, it's important to think about how to best maximize the employees in-person learning opportunities. Certain instruction must absolutely take place in-person while which lessons can be moved online will be discussed. In-person time makes spent better learning new skills, discussing important topics, or practicing skills that are already learned.

The current scenario in Technical Communication

Technical communication is continually shaped by the advancing technologies that facilitate its process, practice, and professionalization. As the Society for Technical Communication puts it, technical communication mainly constitutes the act of “communicating by using technology” (“Defining,” 2019).

Clearly, technical communicators must pay attention to the changing nature of communication and information technology in order to employ/deploy technology appropriately for various purposes. The value that technical communicators present is twofold in nature and They make information more understandable and applicable to those who need that information, and in doing so, they learn the goals of the companies or organizations that employ them. It is the technical communicators who have the responsibility to focus on user centered approach to provide the right information in the right sense in the right time and in the right way to make someone understand things with clarity

Expert's views on the technical writing tools in teaching ,technical communication and interactive technology from focus group discussions

To explore the detailed output from academic side the researcher has gathered expert opinion from the academicians about the technical writing tools from the professors working in Colleges who are handling classes in the PG department of electronic media, Visual Communication, experts from online learning system provider and students were summarised below

From the post graduate department Professors handling classes in technical communication, communication research, visual research, Audio and video editing express that, when talking about technical communication tools, we have different types like, Authoring tools Screen Capture tools, Image Editing tools, Publishing tools and Spell check tool. The main purpose of these tools is to edit and design technical documentations. With these tools help the process of editing and designing is made easy, some of the tools like Grammarly, a spell check tool also a writing assistant for most technical and content writers and even for researchers. This tool automatically highlights the mistakes instantaneously and offers suggestions to improve or correct the errors. This also has the capability to check a document for plagiarism. It has an internal logic that automatically classifies the content as copied from the internet. And due to this technological developments, most of the works are made easy.

An expert's view from Image infotainment research department on technical communication who works on learning management system says that we have been developing our resources in an interactive design structure today. World is more interactive today. Interaction creates critical thinking. Nowadays people became more interactive in every field of study. Further he says that there is a demand for design today. Specifically graphic design is mandatory in all the fields. Today to say something we design something in a visual format, this now became a usual practice. Graphic design has become a part of Everyday life. Students and professors design their resume in a design format to make it more attractive and impressive. The role of online learning system has become wider like applications of BIJU's, udemy and upGrad. Students are much benefited by learning systems like this in social media. This online platforms provide interactive curriculum to students which is the trend today. LinkedIn is the world's largest professional networking platform. It's also one of the most influential social media networks, with 756 million members.

Discover, Share, and Present are various presentations and info graphics with the world's largest professional content sharing community. It is a very useful platform for academic and students for education in their learning purposes.

It's completely free to view presentations on the SlideShare website and apps. The SlideShare website does heavily promote LinkedIn Learning slideshows and courses. It also offers free online courses on their respective discipline and provides certificate to the registered candidates. It's a knowledge gathering platform for all the academicians, students, professional, business and future employers. These are not free and require a monthly LinkedIn Learning subscription to access and download presentations.

Learning and teaching through technical communication Visual tools from social media in Virtual Classrooms

Further experts from the group share that today we have many number of social media technical communication contents that are used by both student and teacher in virtual class rooms. In every class room the content presented by the teacher is a documentation of ppts or videos. Today students are able to use and access most of the technical communication digital tools to understand the content taught by the teacher.

These tools are available in the social media sites for students, but here the teacher has to share his experience while teaching when handling available resources in the social media sites. This is a major advantage in online classrooms nowadays. Previously we do not have these much virtual educational technical communication contents available. In every class room, Teacher's lecture and students presentations are recorded today, this is another important factor to be considered now. Considering the trends in the field the experts opinion gives a clear picture through the technical tools the lecturer can communicate effectively with students from any point around the globe, the participant students can express their content via virtual meet by mobile applications like google meet, zoom and Microsoft teams, the data which is received from the listeners can be stored securely in virtual drive so that it can be accessed by any candidate at any time. Some professors express that there are more negative impacts in online teaching compare to offline because of the lack of social interaction which affects the grading system and network can shut down anytime, parents were able to monitoring the screen, lack of competitiveness among the students, so only offline mode can make students to learn better and face to face is the best way to engage effective learning, whereas digital learning is the best implementation only during the pandemic time in online mode. It is further stated that it is very flexible and also personalised to learn new things. Students submitting test and assignments is very easy in online mode and will get immediate response

Post Graduate Students learning Experience in current technical communication scenario through focus group discussion.

The researcher gathered informations from the students perspective was summarised below. Nowadays students are using Celtx app which is meant for scriptwriting to prepare for their project work in radio, tv and film. Students are using Dji Mobile app for operating drone cameras and Videmote is an application to download video files from social media sites. Google translator is one of the most familiar application for translation work. Students are using Clubhouse an interactive platform in online for listening about expert speeches which is part of their curriculum. YT studio is an application used by students to maintain their you tube content and study the usage of channel by the audience. Students from the discussion express that today there are many number of social media applications available through mobile and we are able to handle them and it is really challenging for our current project studies and professional projects we are handling with ease.

Conclusion of the study

Based on primary and secondary data from this descriptive study, the researcher concludes that the technical writing tools which are applicable to educational academic side are a vast number available today to write, to edit writing, to take videos, to conduct webinar in google, to prepare research project, to record audio and video, to make ppts, to study through e-learning and many more.

Considering the trends in the field the experts opinion gives a clear picture through the technical tools the lecturer can communicate effectively with students from any point around the globe, the participant students can express their content via virtual meet by mobile applications like google meet, zoom and Microsoft teams, the data which is received from the learners can be stored securely in virtual drive so that

it can be accessed by any candidate at any time. LinkedIn is a knowledge gathering platform for all the academicians, students, professional, business and future employers. Only thing is as we are moving towards Digital India we are in to need learn things faster than earlier. Both logical and creative thinking should work together for technical writers. Media Students are using many apps from the online platform learning system like Celtx, Dji, Videmote, Clubhouse, YT studio, Dolby on, Canva, Inshot, Kinemaster for developing their post graduate media programmes in their learning process with interactive technology and many more. Based on the focus group interviews from the faculties, experts and students, the researcher concludes that the technical communication is challenging among faculties and students and creates a new platform for the learning system with many number of online tools in computer and mobile applications. But for a better effective learning we need to take physical classes face to face using visual tools in the blended learning process. Online mode will be useful and plays a alternate learning process during the pandemic situations only.

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