



## Original Article

## Exploring Undergraduate Medical Students Perspectives on PowerPoint Presentation In Medical Evaluation: A Qualitative Study

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## ABSTRACT

PowerPoint lectures are a growing way of improving topic understanding for students. Its use in teaching has increased in every field of education. **Objective:** To access different perceptions of students towards PowerPoint lectures at public sector medical college. **Methods:** Phenomenological survey was performed in Physiology Department, Sahiwal Medical College, Sahiwal. Questionnaire was spoken in front of participants one-by-one and responses were collected in voice notes. These responses were converted into text later. Six undergraduate students of 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> year each were included in study. **Results:** Under the Development section the participants said "Yes, PowerPoint teaching helps in better collection of subject matter because it allows one to dive into the excellent presentation of PowerPoint." After that, we discussed the Spectacles part "Yes, PowerPoint teaching increases attention span to the lecture session when it is being made in a versatile pattern." When discussion moved towards Multimedia "Yes the major difference between PowerPoint teaching and traditional board teaching style is that you cannot deliver your expressive thoughts in board teaching styles." When discussion moved towards teaching. One of them said, "Educators can improve the integration of PowerPoint in teaching by using it as a support tool, not a replacement for teaching." **Conclusions:** Our study concluded that there was difference of opinion among students regarding PowerPoint in terms of its uses and better integration in lectures. Still, further studies are required to find out more beneficial ways of using PowerPoint in educational system.

## INTRODUCTION

PowerPoint is a popular presentation software developed by Microsoft, allowing users to create engaging and interactive slideshows, presentations, and reports [1]. A PowerPoint lecture usually consists of a series of slides, each containing text, images, diagrams, charts, or multimedia elements that support the speaker's message. The slides can be designed to be interactive, with features like animations, transitions, and hyperlinks. With its user-friendly interface and versatile features, PowerPoint enables users to design and customize slides with text, images, charts, graphs, and other multimedia elements, making it an essential tool for professionals, educators, and students alike. Whether you're creating a business pitch, academic project, or personal photo album, PowerPoint provides a powerful platform to communicate

ideas, showcase creativity, and leave a lasting impression on your audience [2]. The software also provides collaboration features, allowing multiple users to work together on a presentation in real time. PowerPoint is commonly used in business, education, and personal projects, making it an essential tool for effective communication, persuasion, and information sharing. Whether you're creating a sales pitch, training module, or personal photo album, PowerPoint provides a powerful platform to engage and inform your audience [3]. It is used worldwide because of its benefits. It is used in different fields because of its advantages, it becomes part of the educational system. PowerPoint lectures offer several benefits. They help to illustrate complex concepts and make the information more engaging and memorable. They

provide a structured format for presenting information, making it easier to follow and understand. They allow speakers to convey a large amount of information in a short amount of time. They can be easily edited, updated, and shared with others. Around the world before its proper implementation, the first studies were done to get responses and analyse its benefits. Still, studies are being done to get more beneficial outcomes from PowerPoint. It is found helpful to both teachers and students. For teachers, it is a time saviour to present lectures and for students, it brings visual help in understanding [4]. To create effective PowerPoint lectures, it's essential to keep the design clean and simple, use clear and concise language, and practice the presentation to ensure a smooth delivery. PowerPoint is widely used in education for various purposes. Instructors create PowerPoint presentations to deliver lectures, illustrate key concepts, and provide visual aids. Students use PowerPoint to create presentations for assignments, projects, and research papers. Teachers create interactive PowerPoint lessons with quizzes, games, and activities to engage students. PowerPoint is used in online courses and virtual classrooms to deliver instruction and facilitate discussion. Students use PowerPoint to create study guides, flashcards, and concept maps. PowerPoint is used for student presentations, such as book reports, science fairs, and history projects. Teachers create PowerPoint videos for students to watch at home, and then use class time for discussion and activities. PowerPoint's accessibility features help students with disabilities, such as text-to-speech functionality and closed captions. PowerPoint's collaboration tools enable students to work together on group projects and presentations. Teachers use PowerPoint to create quizzes, tests, and assessments, making it easier to track student progress. In SLMC, Sahiwal PowerPoint is part of lectures. After getting good reports from international researchers, it also becomes part of our college lectures. There is less research work on it in public-sector medical colleges. The objective of this research is to check difference of opinion of SLMC students from other students worldwide.

## METHODS

This Phenomenological Qualitative Study was conducted at the Physiology Department of Sahiwal Medical College Sahiwal from 8<sup>th</sup> May 2024 to 1<sup>st</sup> June 2024 after obtaining Institution Review Board Approval (104/IRB/SLMC/SWL). Non-probability purposive sampling technique was used for data collection. Undergraduate students of MBBS were included in the study while those with graduate or post-graduate status were excluded. Informed consent was taken from all the participants of the study beforehand. 3 focus groups from the 1<sup>st</sup> year, 2<sup>nd</sup> year, 3<sup>rd</sup> year were made. The reason for not including 4<sup>th</sup> year and final year was that

the PowerPoint is majorly used in 1<sup>st</sup> 2<sup>nd</sup> and 3<sup>rd</sup> year whereas 4<sup>th</sup> year and final year classes are more of clinical based in wards so there is non-significant use of PowerPoint in their lectures. In each focus group, there were 3 girls and 3 boys, and these were randomly selected. Focus group discussions were conducted and a validated questionnaire was put in front of them after taking their informed consent. All their data were recorded on 2 separate mobile phones. Two mobiles were used so if unfortunately, one device is lost then the other can be used for this purpose. This data were translated into the text manually and then the thematic analysis was done by using the software NVivo (Non-Versioned Information, Versatile Outcomes). Sample size is calculated by saturation of data. After 18 responses we got repetition in responses so we concluded that saturation of data are achieved.

## RESULTS

**Development:** In this section, the participants of the focus group discussion talked about the developmental role of PowerPoint in the study. Different participants had different views about the developmental benefits of PowerPoint. It was evident from their discussion that they had benefits in subject matter recollection and in understanding concepts and complex topics. "Yes, PowerPoint teaching helps in better collection of subject matter because it allows one to dive into the excellent presentation of PowerPoint writing style and visual animation with slides" Another participant thought that it gives memory clues "Yes it can because visual aid provided by the PowerPoint site can serve as a memory clue helping students recall information more easier and more quickly" One of them rise importance of animation in it "Yes, it helps a lot, but just theory is not always attractive. One should add more and more pictorial views and animations for better recollection of the subject." Concept development also became part of the discussion. One of them said "The PowerPoint teaching emphasizes the visual information, and this helps one to widen their parameter of thinking" Another participant added that "PowerPoint teaching helps in grasping the concepts more efficiently because it allows the one to understand the topics by returning to its visual memory." Complex topic understanding also became part of the discussion, one of them said "Yes. PowerPoint usually helps in well-organized slide making, and this can break down complex topics into digestible chunks." Another participant used word digestible chunks "Yes. PowerPoint usually helps in well-organized slide making, and this can break down complex topics into digestible chunks." **Spectacles:** After a discussion of the developmental role, we discussed the Spectacles part of PowerPoint. We got supportive responses "Yes, PowerPoint teaching increases attention span to the lecture session when it is being made in a versatile pattern, including pictures, animations, videos or its excellent writing." One of them said about

normal brain behaviour "Yes. The idea of PowerPoint teaching increases the attention span of the lecture session. It is because, for a human brain, it is very convenient to like get the information in a digital pattern, to assess that information, and also to memorize it and get the better meaning of it." Another participant raised the importance of Spectacles in it "Yes, PowerPoint teaching increases attention span to the lecture session when it is being made in a versatile pattern, including pictures, animations, videos or its excellent writing." One of the participants found a colourful portion of PowerPoint impactful "The PowerPoint teaching increases the attention paths because the colourful pictures, colourful picture related to topic help divide our attention towards that, towards the lecture rather than from the warning whiteboard." Some thought that quiz in it is also eye-catching "Interactive elements also include in this in which teachers arrange like polls, quizzes, hyperlinks, which can increase the engagement between the students and teachers." The spectacles portion of PowerPoint was considered a major useful part of it. Visual memory became part of the discussion and in most of the discussion importance of pictures was discussed "Yes, it boosts attention by displaying pictures and breaking down text, which makes learning more engaging. "Multimedia: When our discussion moved towards Multimedia, participants of the different focal groups started comparing it with board teaching "Yes the major difference between PowerPoint teaching and traditional board teaching style is that you cannot deliver your expressive thoughts to the board teaching styles to the students but you can create an image of your expressive thoughts through the PowerPoint." One of them said "Yes. With PowerPoint, instructors can create consistent and well-developed presentations, and all these things will ensure that the students receive the content in a uniform format, and these things promote clarity and build the comprehension of the topic." Multimedia used in engaging students also became part of the discussion "PowerPoint presentations enhance engagement and comprehension through visual aids, while the board teaching may allow for more spontaneous interactions." Multimedia is a vast thing that includes a lot of things but due to more use of PowerPoint in lectures, students mostly use PowerPoint in discussion "The main thing that is different in PowerPoint teaching is animation and pictures, while both teaching lacks this one. So when you see the things happening in actuality through animation, I think this method will be a favorite one for anyone." While discussing Multimedia, participants also talked about its educational role "Yes. Preparing PowerPoint presentations can save instructors time and also the students. And they also allow them to create reusable and standardized material." One of them emphasized its use in the education system "Yes, obviously, there is no doubt it plays an effective role in education. We are living in a digital era and are blessed to

use technology for educational purposes. Students stay focused and time is also saved." Participants of focal groups were convinced of its importance in education "Arguments for a larger role includes engagement. It helps a better engagement between the teacher and the students. Organization in which teachers present the lecture in an organized way and complex information. "Teaching: when the discussion among participants moved toward teaching there two main things became topics of discussion one was Student- Tutor relationship and the other one was improving PowerPoint integration. One of them said "It can enhance the student-tutor relationship by providing a structured and engaging platform for communication. Again, the visual aids and interactive features like videos, audio, and animations, promote clarity, understanding, and collaborations between student and tutor as well." Some thought that it depended mostly on tutors "We listen to the lectures of teachers who use excellent PowerPoint illustrations in their lectures." Another participant thought that it shows teachers' efforts "Yes. PowerPoint helps the teacher-student relationship in such a way that by looking at the PowerPoint lectures, by looking into the effort the teacher made, by making the lectures easier for the students and more convenient to understand, we understand, how well the teachers are working for our better learning." We also got responses on how PowerPoint integration can be improved "Educators can improve the integration of PowerPoint in teaching by using it as a support tool, not a replacement for teaching, by keeping the slides concise, clear, and visually emerging" One of the participants talked about active learning "I think instead of just using PowerPoint for lectures, educators can encourage students to create their presentations, and this will promote their active learning." One participant discussed psychological calmness "I think this is the main thing a professor must care about. He should put lesser theory in his slides to make students psychologically calm down about the content" (Table 1).

**Table 1:** Themes Identified Along with Their Categories and Codes

S.No.	Themes	Categories	Codes
1	Development	Improvement	Increase
			Enhance
			Better
		Aid	Help
			Use
2	Spectacles	Immersive	Interactive
			Engaging
			Attention
			Discuss
			Group
		Imagery	Pictures
			Visuals
		Impression	Influence
			Remember

			Learning
3	Multimedia	Resources	Information
			Content
		Display	Slide
			Presentation
4	Teaching	Teaching	Teaching

## DISCUSSION

PowerPoint is a software widely used by presenters in business, marketing conferences, and education. Advanced use of PowerPoint in teaching and lectures has revolutionized the education system [5, 6]. The impact of PowerPoint lectures was already established and known among the researchers but we emphasized more on the Pakistani undergraduate medical students' perspectives on PowerPoint lectures. The perceptions are mostly in line with already published studies related to PowerPoint lectures [7]. Whatever the likely impact of these viewpoints will be, the purpose of this approach was that the use of PowerPoint can be optimized and improvement in teaching methods can be achieved. The sample of students interviewed was self-selected and very small and the findings were essentially the perceptions of this small group of students about the PowerPoint lectures [8]. The validity of this study to generalize with those of other Pakistani university students was therefore limited. However, the study provided important validation for some subjective evidence both about the perception of students about PowerPoint lectures and the reasons for that viewpoints [9]. We argued that students of all the focus groups had almost correct conceptions of PowerPoint lectures. Delivering content by creating slideshows using text, pictures, and videos, engaging students by using interactive elements, discussions, or application activities based on the slides, and lectures that are displayed on the screen with the help of a projector were the main concepts of PowerPoint lectures shared by the students [10]. As far as the perceptions of PowerPoint lectures were concerned, students considered that PowerPoint lectures were used to increase attention span, build concepts, understand complex topics, build healthy student-tutor relationships, and better content recollection. Moreover, better student collaboration was highlighted by many students, and a comparison of PowerPoint lectures with board teaching was also discussed [11]. Students perceived that PowerPoint presentations can increase attention span to lecture sessions if used skilfully by making visually appealing slides and interactive elements like animations [12]. It can make lectures engaging for a longer duration, decreasing distractions and keeping focused. However, the demonstrator should be skilful to avoid poor design and well equipped to reinforce students' attention rather than surpassing slides in a monotonous manner which makes students bored [13]. While comparing and contrasting PowerPoint lectures with board

teaching mixed opinions were submitted. Students were in favour of PowerPoint teaching because of visual-based learning, delivering expressive thoughts in a more organized and easy manner to follow [14]. Some were of the viewpoint that board teaching encouraged discussion and participation creating an interactive and dynamic environment promoting problem-solving and brainstorming but at the same time limiting space and visibility. A striking response of weakening eyesight was also received with PowerPoint lectures [15]. Students identified that PowerPoint lectures harm student-tutor relationships because of an impersonal learning environment leading to disconnection between tutor and student reducing face-to-face interaction making it harder to build a personal connection and trust [16]. Therefore, tutors needed to strike a balance between technology and human interaction by engaging students rather than just making lecture notes and cramming slides [17]. Regarding student collaboration positive feedback was achieved. Students were of the favour that PowerPoint presentations enhanced collaboration by developing communication skills in students, and promote socialization by organizing group presentations [18]. This encourages teamwork. The quiz should be arranged on PowerPoint. Students can share ideas and gather maximum knowledge about their topics. Hence teachers can utilize PowerPoint for group activities and discussions [19]. The subject material recollection was also a highlighting feature of the research. Opinions of students in this matter showed that PowerPoint lectures help in organizing information and retaining key concepts via summarizations, mnemonics, and repetition through slides in a short time. Visual aids such as graphs and diagrams served as memory clues for recalling information more easily and quickly. In short, it should be combined with other teaching tools for optimal resilience. The role of PowerPoint in education had a considerable debate among our respondents. Students argued its role in enhancing engagement and understanding with the help of visuals, interactive features, and structures which make it effective in the digital age to learn and understand concepts [20]. This can also facilitate organized delivery and can help in standardization, but its usage can hinder critical thinking reduce student-teacher interaction and limit hands-on experience. Poorly designed slides can distract or oversimplify important concepts. Thus, a hybrid approach The data revealed perceptions of students regarding the use of PowerPoint. Students in favour of the use of multimedia and PowerPoint appreciated how visual animations and dividing topics into digestible segments aid in comprehension and retention. Conversely, some students had concerns regarding the oversimplification of material, lack of depth, and reduction in teacher-student interaction due to the use of it which is crucial for grasping intricate subjects. The effectiveness of PowerPoint,

therefore, depended upon its design and use. This dichotomy underscores the need to employ PowerPoint in such a way that it supplements rather than supplants traditional teaching methods.

## CONCLUSIONS

Our study concluded that there was a difference of opinion among students regarding PowerPoint in terms of its idea, uses, and better integration in lectures. Still, further studies are required to find out more beneficial ways of using PowerPoint in the educational system. In our study, while comparing, the majority of students were having almost the same opinions.

## Authors Contribution

Conceptualization: SZ

Methodology: MAN

Formal analysis: SZ

Writing, review and editing: ASS, NS

All authors have read and agreed to the published version of the manuscript.

## Conflicts of Interest

The authors declare no conflict of interest.

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