# Correspondence

# Ink or Pixels: Preferences of medical students between printed books and e-books

For students reading not only serves as a means of acquiring information but also helps develop critical thinking and reflective abilities. In recent years, the educational landscape has undergone major changes, particularly with the rise of digital learning materials such as e-books. This shift is evident in medical colleges, where libraries have transitioned to e-libraries, and online education platforms have become increasingly prevalent.<sup>1</sup> However, this transition raises questions about students' preferences for study materials, especially in medical education. Understanding these preferences is crucial for optimizing educational resources and enhancing learning outcomes. We investigated the preferences of medical students between printed books and e-books in the Delhi National Capital Region (Delhi/NCR).

The participants included MBBS students in their third and fourth years, and internship phase from medical colleges in Delhi/NCR. Data were collected from 294 students over 2 months after obtaining approval from the institutional ethics committee and informed consent from the participants. The data was gathered using an online survey.

The questionnaire had 3 sections: demographic details (age, gender, year of study, residence, and parents' occupation), 15 questions assessing students' preferences for reading medical books and lecture delivery modes, and 9 questions analysing factors influencing preferences between e-books and printed books. Questions were inspired by prior studies<sup>1–3</sup> and developed with the input of professional experts. The survey included multiple-choice and Likert scale options. Statistical analysis was done with significance set at p<0.05.

Among the respondents, 48.6% were females and 51.4% males. A majority of students (87.4%) had tablets, 48.6% had laptops, 12.6% had desktops, and 4.4% had Kindles. Most participants (84.7%) resided in urban areas, while 11.6% were from semi-urban regions. Statistical analysis revealed no significant correlation between gender, residence, occupation of parents or type of device owned and reading preferences.

Medical students increasingly rely on both e-books and printed books for studying complex texts. Traditional printed books remain the preferred choice for in-depth study (30.3%), while 69.7% favour e-books for their convenience and accessibility. E-books are especially popular for quick reference (86.1%) and academic texts (55.8%). Printed materials are predominantly used for academic study (81%) and leisure reading such as novels (44.9%).

Social influence played a notable role in the adoption of e-books, with 61.9% reporting that most of their social circle used e-books. Students expressed a preference for offline, face-to-face education (61.2%) over online recorded or live lectures (38.8%). Daily reading habits were almost evenly split between e-books (49.3%) and printed books (50.7%). Mobile phones were integral to medical education, with 68.7% using these frequently for academic purposes. Additionally, students used alternative educational tools, including YouTube podcasts (55.8%), research articles (57.8%), audiobooks (9.2%), and academic apps or coaching platforms. Popular applications included YouTube (84%), PubMed (58.8%), SlideShare (48.6%), and Wikipedia (39.8%).

Approximately 42.9% of students preferred printed books for primary text delivery, while 35% favoured e-books. For lecture delivery, 57.8% preferred online formats, while 42.2% favoured face-to-face interactions. Social media influenced e-book preferences, with 63.2% agreeing that it played a role. Despite growing digital integration, 44.2% of students were uncomfortable with a complete shift to soft copies, while 35.4% supported the transition.

Our findings indicate a stronger preference for e-books over traditional printed books, consistent with trends in previous studies. E-books were favoured for their cost efficiency, portability, up-todate information, ease of searching, environmental benefits, and multimedia features. Students appreciated the ability to use multiple books simultaneously, constant availability, and the convenience of reading in the dark. However, students who preferred printed books cited reduced eye strain, better retention during revision, and a sense of permanence as key advantages. Printed books were particularly valued for extended study sessions and in-depth reading. These observations align with studies highlighting higher cognitive engagement and comprehension associated with print materials.<sup>4,5</sup>

While a subset of students advocated for online lectures due to their flexibility, the majority preferred offline learning for its human interaction and structured environment.<sup>4</sup> Students reported using e-books and printed books in nearly equal measure, with e-books primarily for academic reading and printed books for both academic and leisure purposes. Social media and mobile applications have further influenced the shift toward e-books, enabling students to combine traditional methods with modern, flexible tools.<sup>1.3</sup>

The pandemic accelerated the adoption of digital learning resources, yet many students emphasized the importance of handwritten notes and offline education. A hybrid approach integrating both digital and traditional formats may offer the most effective and flexible educational experience.<sup>1</sup> These findings underscore the need for educational institutions to consider diverse preferences and provide a balanced mix of resources to optimize learning outcomes.

Our study was limited to medical students in the Delhi/NCR region, which may affect the generalizability of the findings to other regions or disciplines. Additionally, reliance on self-reported data may have introduced biases, such as socially desirable responses. We focused primarily on e-books and printed books, excluding other learning formats such as podcasts or interactive platforms.

The feedback from students highlights the strengths and limitations of both e-books and printed books. While technological advancements have driven a shift toward digital resources, printed books continue to hold value for many students. A hybrid approach that integrates both formats is likely to provide the most effective and flexible educational experience.

#### Conflicts of interest. None declared

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### Accreditation in India: The road not taken

In India, in recent years, accreditation by national agencies has come to play a major role in higher educational institutions (HEIs) usurping the role hitherto played by regulatory agencies because of its importance in admissions. While the need for quality control has great merits, it has come at a great cost to education by the very nature of the process and the weightage for various activities of an educational institution on a day-to-day basis.

The two major accrediting agencies in India are the National Assessment and Accreditation Council (NAAC) and the National Institutional Ranking Framework (NIRF). The criteria for ranking have been imported from foreign accrediting agencies without reference to the Indian scenario and without reference to different educational streams.

In the NIRF ranking criteria, there are five areas: (i) teaching/ learning and resources; (ii) research and professional practice; (iii) graduation outcomes; (iv) outreach and inclusivity; and (v) perception. All these carrying equal weightage of 100 marks out of 500 or 20%.<sup>1</sup> In the Research category weightage is almost exclusively for number of publications in one of two major indexing data bases, Scopus and Web of Science and the UGC care list. PubMed, in which most health sciences publications are indexed, does not find a place. Since there is focus on numbers, unhealthy practices such as hiring professional writers to produce papers, number-based targets, and paid publications amounting to as much as ₹50 000 per paper have replaced traditional practice. Quality research has no value, only quantity as measured by numbers.

In the NAAC system, of a total of 1000 marks, 250 marks are for research-related activities and innovations such as intellectual property rights (IPR). The weightage for other metrics are: (i) curricular aspects 150 marks; (ii) teaching/learning and evaluation 200 marks; (iii) infrastructure and learning resources 100 marks; (iv) student support and progression 100 marks; (v) governance, leadership and management 100 marks; and (vi) institutional values and best practices 100 marks.<sup>2</sup>

Neither gives any value to quality of teaching/learning as evidenced by program outcomes, program specific outcomes or course outcomes. Since the criteria are uniform across streams, there is no weightage for patient care activities in HEIs devoted to healthcare and no provision of quality of these services or feedback from patients and relatives. IPRs such as patents and copyrights are infrequent in HEIs devoted to healthcare. There is major weightage for placements and activities such as industry collaborations. While these may be relevant to engineering streams they are of little merit for the healthcare stream. Placements are rare in the medicine stream as most students pursue postgraduation or are self-employed.

The result has been that less than 10 healthcare only-related HEIs find a place in the ranking framework in the top hundred ever since

accreditation started in India. For a ranking process to be fair, the weightage for different aspects should be based on the nature of the institution and not be uniform across streams. Also, all activities such as teaching/learning, research and patient care should receive equal weightage for healthcare institutions and criteria which are less relevant to them such as placements and industry collaborations, startups, etc. should have less value. Therefore, the guidelines need to be revised and specific ranking criteria for each stream of education need to be drawn.

A new NAAC accreditation system is said to be coming with 10 metrics instead of 7.<sup>3</sup> These are under three categories and include: (i) input metrics (curricular design, faculty resources, infrastructure, and financial resource and management; (ii) process metrics (learning and teaching, extended curricular engagements, and governance and administration); and (iii) outcome metrics (student outcomes, research and innovation outcomes, and sustainability outcomes).

Though these new criteria are a great improvement on the old scheme, once again there is no weightage to the major activity of a healthcare-related HEI, namely patient care activities. In fixing weightage, factors such as the stream of education and the applicability of the metric to that stream must be kept in mind. These new guidelines should be stream-specific. A similar process is also long overdue for the NIRF criteria.

One hopes that we will go on a new path and not stick to the beaten track or import metrics from abroad without local relevance.

Robert Frost in his poem 'The road not taken' ends by saying 'Two roads diverged in a wood, and I took the one less traveled by, And, that has made all the difference.' We need to be innovative and fair in our accreditation process and ignore what others do and take the road less taken. Otherwise, it will increasingly result in demotivation or what is worse, fudging.

#### Conflicts of interest. None declared

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## Sebaceous carcinoma arising in a sebaceous cyst: Impossible, because 'sebaceous cyst' is a histogenetic misnomer

We read with interest the letter by Kumar *et al.* on malignant transformation in a sebaceous cyst.<sup>1</sup> Though they state that such a transformation is 'uncommon but not impossible', we most emphatically state that it is indeed impossible. As Nigel Kirkham states, 'It seems impossible to get across to general surgeons that 'sebaceous cyst' does not exist.'<sup>2</sup>