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ERASMUS+ CBHE Project # 101177299-eCAMPUS-EDU-2024-CBHE

"Fostering Socially Distanced and Inclusive on Campus Education in Armenian HEIs"

YEREVAN STATE MEDICAL UNIVERSITY (YSMU)

NEEDS ANALYSIS REPORT

Results of the Surveys on Teaching Staff Digital Competence Needs Assessment and Students Digital Learning Needs Assessment

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YEREVAN 2025

Content

Introduction

This report presents the results of a comprehensive needs analysis conducted at Yerevan State Medical University (YSMU) within the framework of the Erasmus+ CBHE Project "eCAMPUS". The dual-focused survey initiative comprised assessments of digital competence needs among teaching staff and digital learning needs among students. The overarching objective was to identify existing practices, gaps, and improvement opportunities in the digital teaching, learning, and assessment (TLA) environment of the university. This document synthesizes the findings to provide actionable recommendations for institutional advancement in digital education.

Section 1: General Information

1.1. Teachers' characteristics

The survey was distributed to 200 members of the academic staff, with a response rate of approximately 55%, resulting in 109 completed responses. According to Image 1.1, the distribution of academic positions among respondents was as follows: assistant professors (21%), associate professors (17%), lecturers (53%), and full professors (8%). This illustrates that a significant portion of the university's teaching personnel involved in the survey are actively engaged in both instruction and curriculum development, particularly at the mid-level academic ranks.

Image 1.2 provided data on the age distribution of teaching staff. The largest age group among respondents was 36–45 years, constituting 42% of the sample, suggesting a mature cohort with established professional experience. This was followed by the 25–35 age group (21%), representing younger, potentially more digitally fluent instructors.

Image 1.3 indicated gender distribution among respondents, with females making up 62% and males 38%. This gender representation underscores the equitable gender composition within the YSMU teaching community and suggests inclusivity in faculty participation across digital competency initiatives.

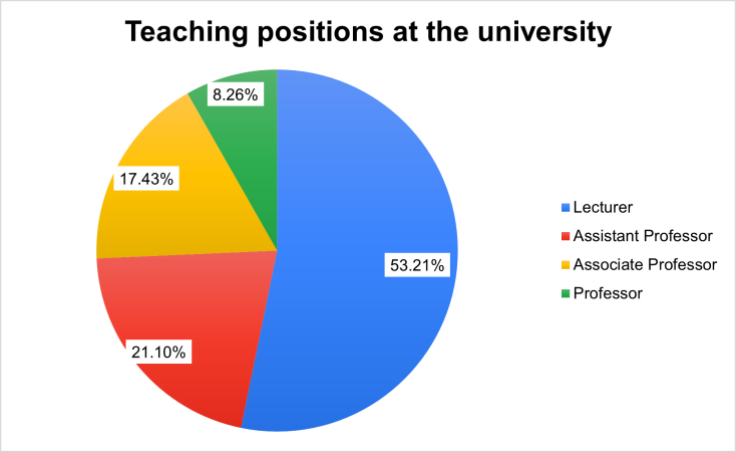

Image 1.1. Teaching positions at the university

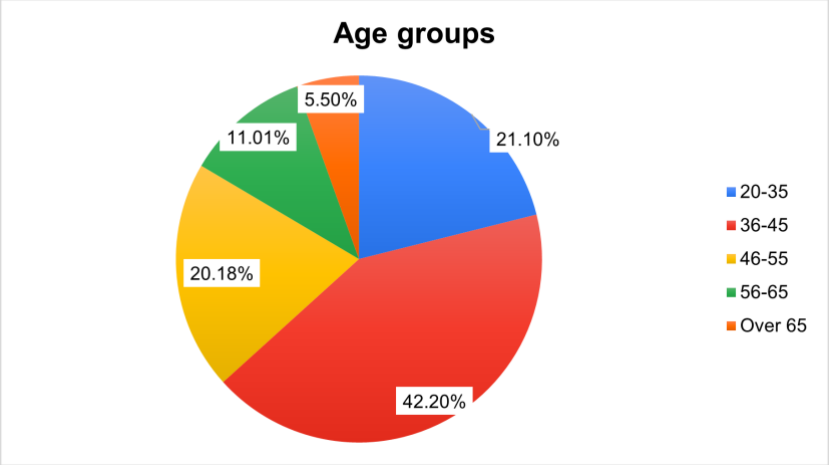

Image 1.2. Teachers age groups

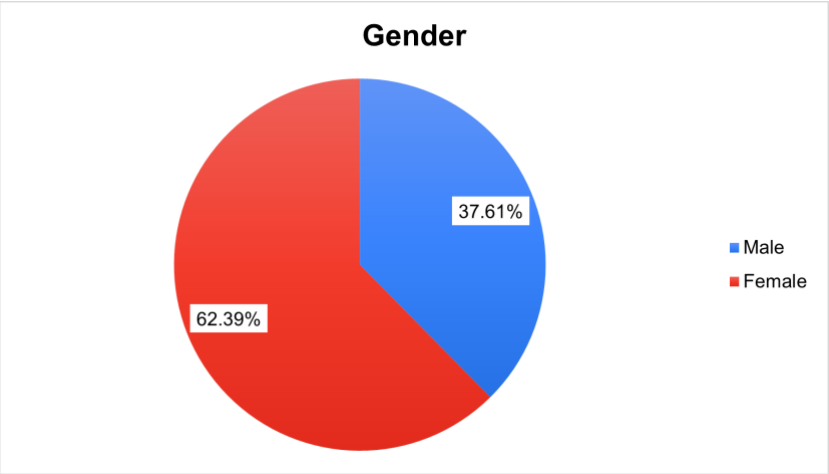

Image 1.3. Teaching staff gender

1.2. Students' characteristics

The student survey was completed by a total of 118 students, representing various academic levels. All respondents were undergraduate students. Despite the modest sample size, the survey captured a representative cross-section of the university's student population, allowing for meaningful insights into the digital learning environment. The results reflect the perspectives of early-stage learners as well as those engaged in more advanced and research-intensive programs.

Image 1.5 provides the gender breakdown, revealing a relatively balanced representation: 60% of respondents identified as female, while 40% identified as male. This near-equity supports the assumption that digital learning needs and experiences are being inclusively assessed across the student population. The gender parity in responses also underscores the relevance of gender-sensitive approaches in developing digital learning resources and strategies.

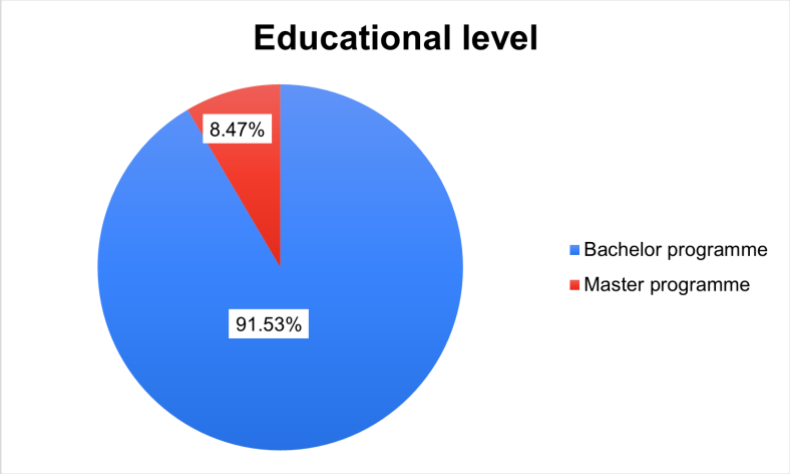

Image 1.4. Students' educational level

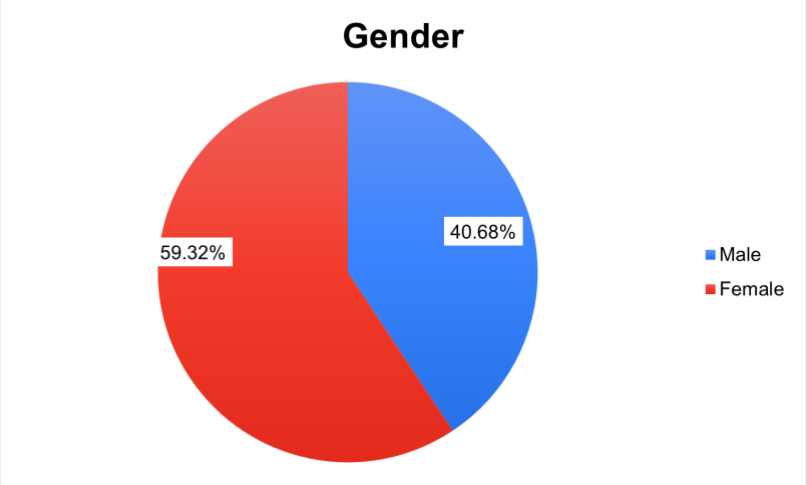

Image 1.5. Students' gender

Section 2: Digital Competencies and Technologies in Teaching, Learning & Assessment (TLA)

2.1. Digital competencies and technologies currently applied

According to Image 2.1.1 and 2.1.2, both teachers and students report significant use of core digital platforms such as Learning Management Systems (LMS), including Moodle and Google Classroom, as well as video conferencing tools like Zoom and Microsoft Teams. These platforms serve as the foundation for both remote and hybrid education formats. Teachers tend to emphasize tools that facilitate structured content delivery, synchronous lectures, and assignment dissemination. Their preference reflects a pedagogical approach centered on instructor-led formats and administrative efficiency. On the other hand, students prioritize technologies that provide consistent access to educational resources, user-friendly interfaces for assignment submissions, and tools for real-time communication with peers and instructors, underscoring the value of intuitive and responsive digital learning environments.

However, the survey data also highlights significant underutilization of advanced educational tools such as virtual laboratories, immersive simulation environments, online

collaborative whiteboards (e.g., Miro, Jamboard), and gamification platforms. This discrepancy reveals a notable development gap in both exposure and application of cutting-edge educational technologies. The minimal usage patterns suggest a need for targeted institutional initiatives that enhance the digital competencies of staff and improve student access to modern, interactive learning tools. Such initiatives could include investment in digital infrastructure, provision of hands-on training for faculty, and integration of more diverse learning formats to promote engagement, inclusivity, and deeper learning outcomes.

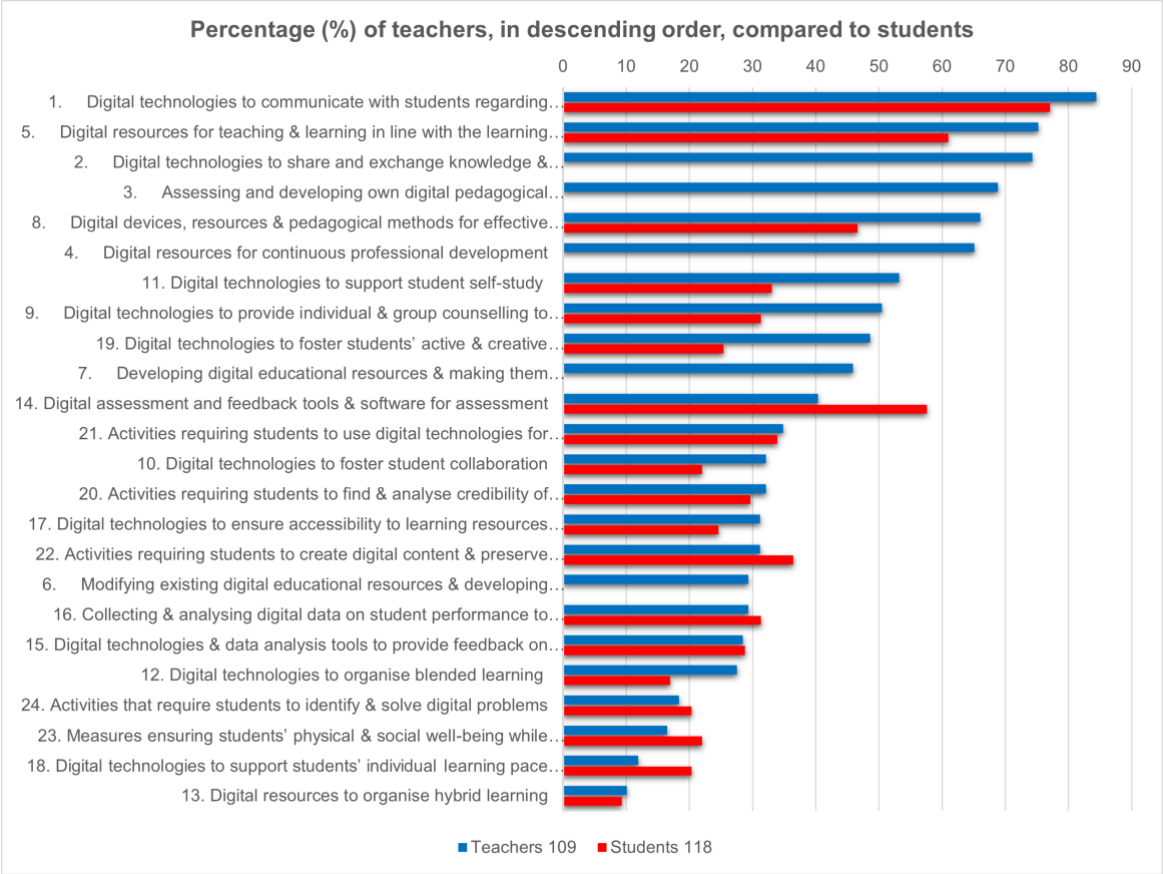

Image 2.1.1. Percentage (%) of teachers, in descending order, compared to students

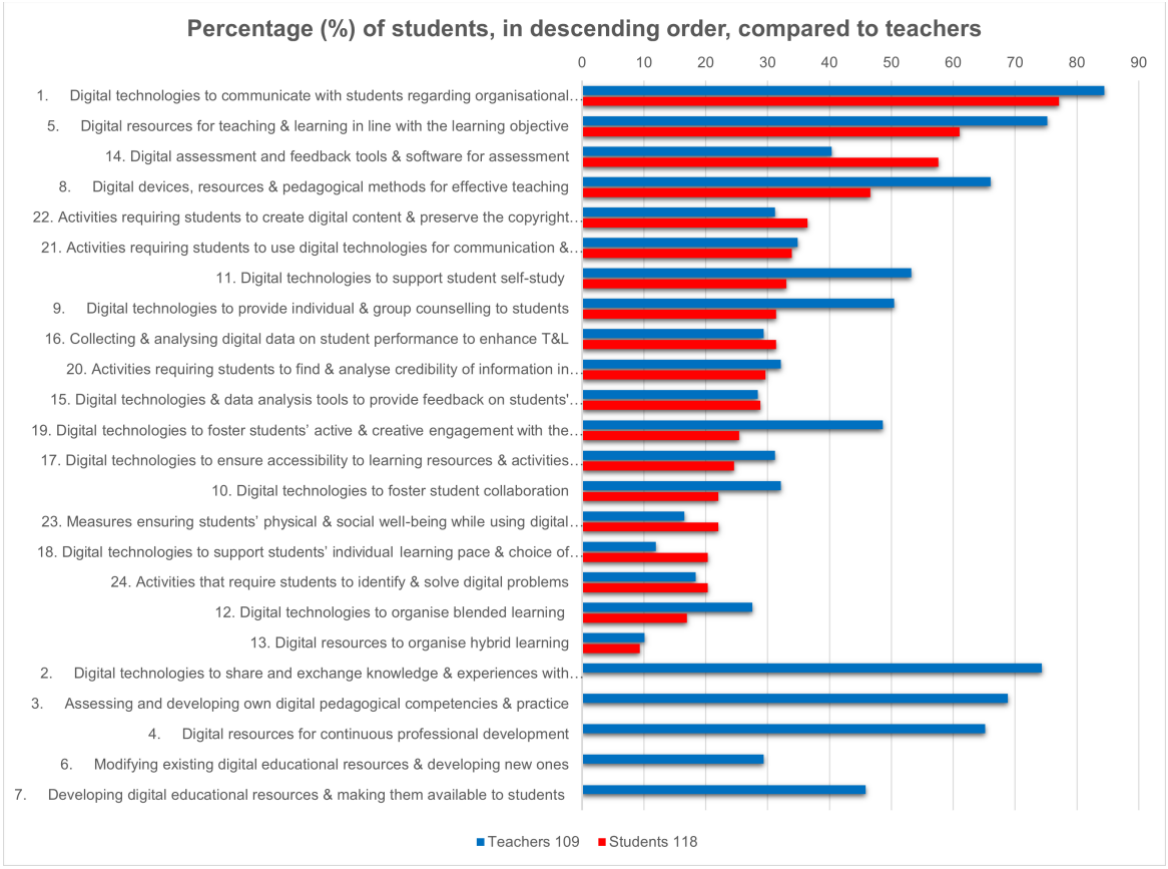

Image 2.1.2. Percentage (%) of students, in descending order, compared to teachers

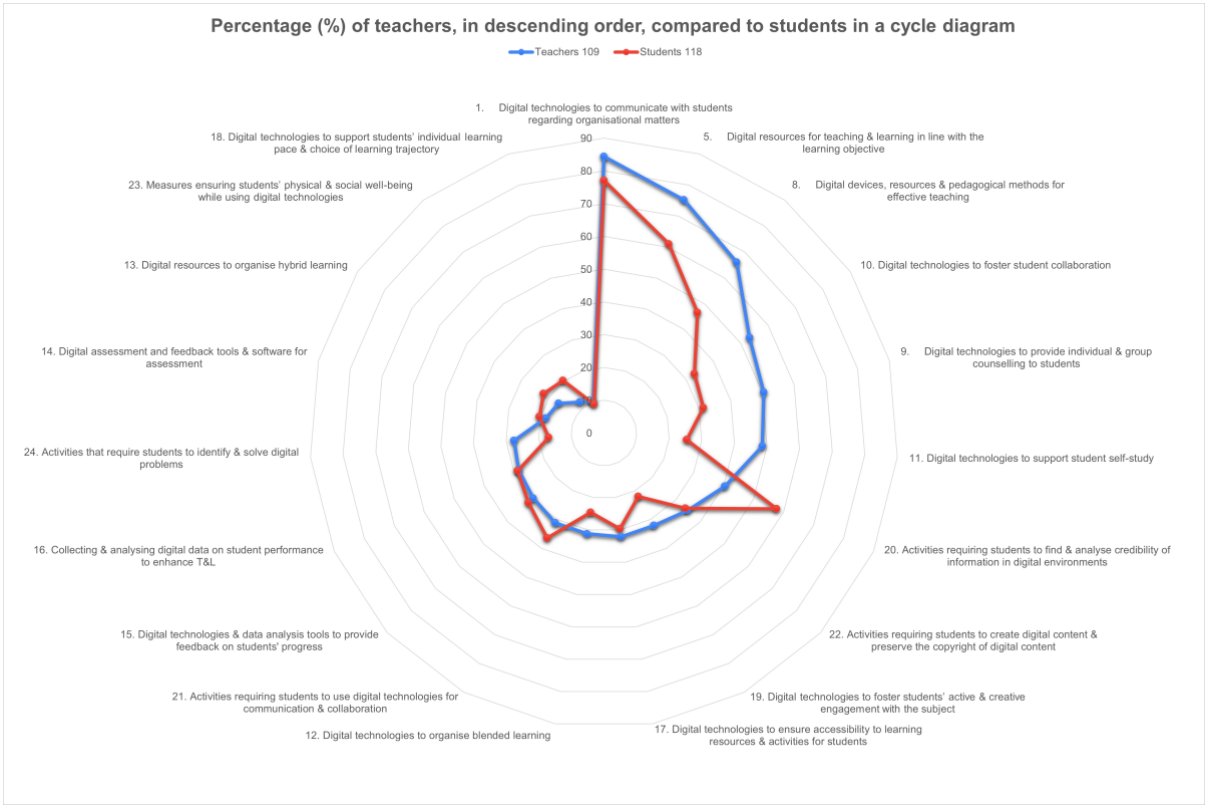

Image 2.1.3. Percentage (%) of teachers, in descending order, compared to students in a cycle diagram

2.2. Level of need for developing the digital competencies and technologies[1]

Figures 2.2.1 to 2.2.3 provide nuanced insights into the differing yet overlapping perceptions of digital competency development needs among teachers and students. Teachers exhibit a pronounced demand for professional advancement in several key areas, most notably digital assessment tools, interactive content development, and the effective implementation of blended learning models. This reflects a growing awareness among academic staff of the limitations of traditional pedagogical methods in fully engaging students within a digital or hybrid context. Their need points toward a desire to transition from passive content delivery to dynamic, student-centered methodologies that leverage digital tools for enhanced educational outcomes.

Students, while acknowledging the importance of these same areas, diverge slightly in their prioritization. Their emphasis lies more heavily on the practical usability of digital tools and the quality and frequency of feedback provided by instructors through these platforms. This reveals a student-centric lens focused on day-to-day user experience and the pedagogical immediacy of feedback, which is often critical for continuous learning and motivation in digital environments.

This comparative analysis demonstrates that while both groups are aligned on the core needs for digital competency development, they approach these needs from distinct angles—educators from a strategic implementation perspective, and students from a usability and engagement viewpoint. The robust response reliability rates (teachers: 78.0%, students: 71.2%) further affirm the credibility of these findings, suggesting that both cohorts engaged thoughtfully with the survey and that their feedback should be weighted heavily in shaping institutional digital transformation initiatives.

[1] This indicator (weighted average rating) is calculated by multiplying the number of people who gave ratings of 0, 1, 2, and 3 by the corresponding rating, summing these products, and dividing by the total number of respondents. For example: (0 x 10 people + 1 x 20 people + 2 x 30 people + 3 x 20 people) / (10+20+30+20) people = 140 / 80 people = 1.75 (out of a maximum of 3).

Image 2.2.1. Needs of teachers on a scale of (0, 1, 2, 3), in descending order, compared to students

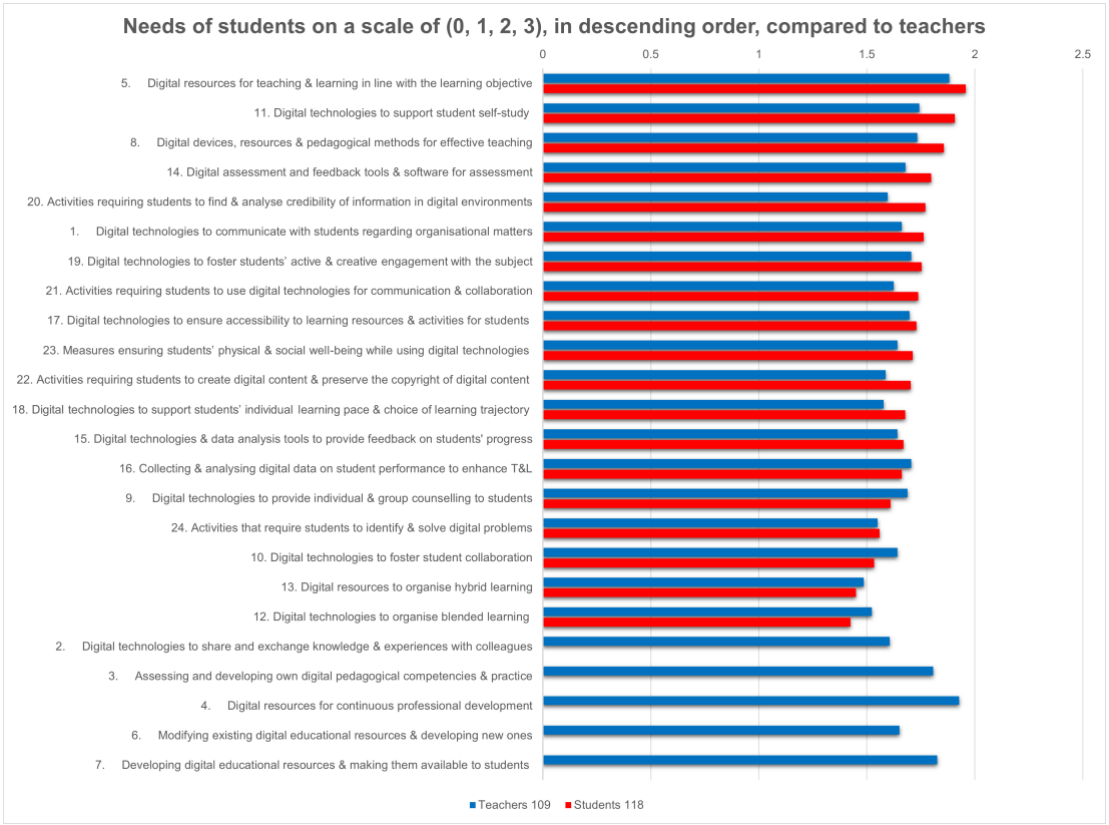

Image 2.2.2. Needs of students on a scale of (0, 1, 2, 3), in descending order, compared to teachers

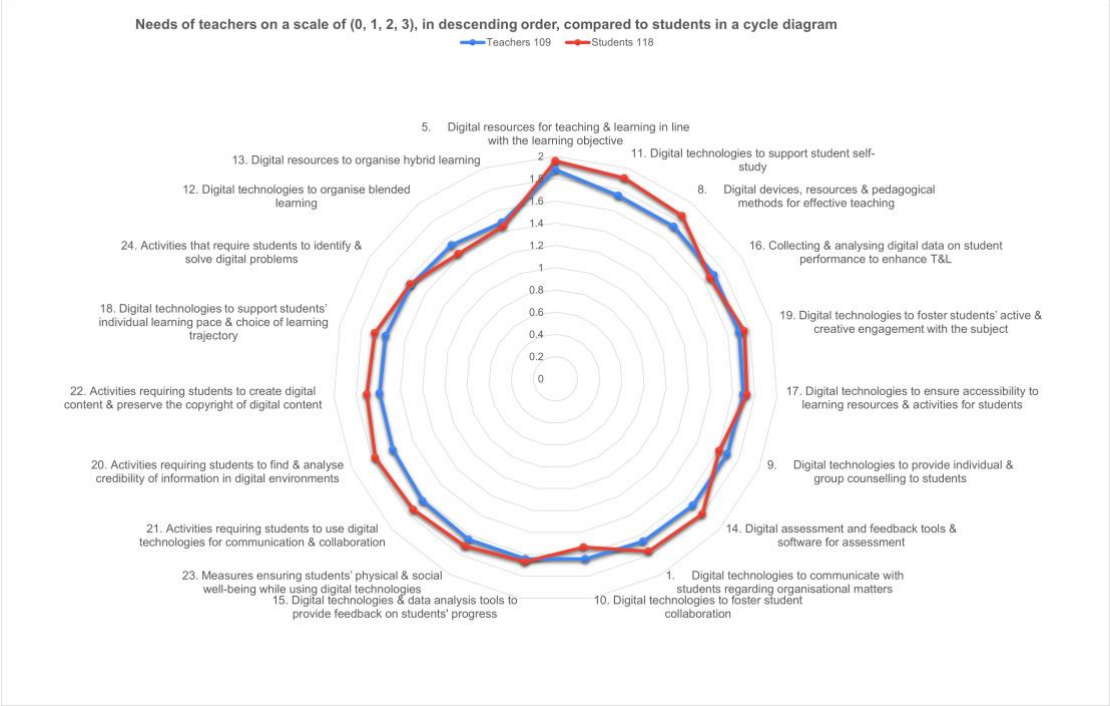

Image 2.2.3. Needs of teachers on a scale of (0, 1, 2, 3), in descending order, compared to students in a cycle diagram

Section 3: Technologies and Facilities Supporting Digital TLA

3.1. Technologies and facilities currently applied to support digital TLA

As seen in Image 3.1.1 and 3.1.2, teaching staff demonstrate a predominant reliance on traditional classroom-based hardware technologies such as projectors, digital boards, and desktop computers, which they integrate with institutional Learning Management Systems (LMS) like Moodle or Google Classroom to facilitate lecture delivery, document sharing, and assignment tracking. These technologies are deeply embedded in conventional instructional practices that emphasize the teacher's role as the primary disseminator of knowledge. The integration of such tools reflects an approach that, while efficient for content delivery and classroom control, often lacks the interactivity and flexibility demanded by contemporary educational models.

This educator-centric model generally prioritizes the maintenance of institutional norms and structured oversight, such as lecture sequencing, attendance tracking, and summative assessment schedules. Teachers leverage LMS platforms to post static content—slides, syllabi, recorded lectures—rather than to foster continuous dialogue or real-time peer collaboration. As such, while these tools serve essential administrative and instructional functions, their pedagogical use remains limited without further integration of active learning strategies or adaptive feedback mechanisms.

Additionally, despite the availability of more advanced teaching technologies such as smart boards with AI-enhanced feedback, real-time analytics dashboards, or mobile-friendly teaching apps, the adoption rate among faculty remains low. This limited integration could stem from a combination of factors including unfamiliarity with advanced tools, insufficient training, perceived lack of institutional incentives, or infrastructural constraints. Consequently, teaching practices may remain rooted in

didactic traditions, even within digitized environments, unless comprehensive support and motivation are provided for pedagogical transformation.

Conversely, students report prioritizing technologies that directly enhance their ability to access and engage with educational content remotely and asynchronously. Lab computers, high-speed internet access in university facilities, online assignment submission systems, and lecture recording tools constitute the core of their technological engagement. The emphasis on access to recorded lectures indicates a preference for flexible learning schedules and the ability to revisit complex content at their own pace—an essential feature for students juggling academic and personal responsibilities or those requiring more time for comprehension.

This divergence between teaching and student technological preferences underscores a significant gap in digital infrastructure alignment. Teachers, while focused on facilitating instruction, may inadvertently overlook the importance of universal design and accessibility. Students, on the other hand, experience the digital infrastructure through the lens of usability, continuity, and autonomy in learning. Bridging this divide necessitates institutional strategies that promote co-design of educational technologies, improve user interface design, and enhance cross-functional feedback mechanisms to ensure that the technologies deployed meet the pedagogical and practical needs of all stakeholders involved in the teaching and learning process.

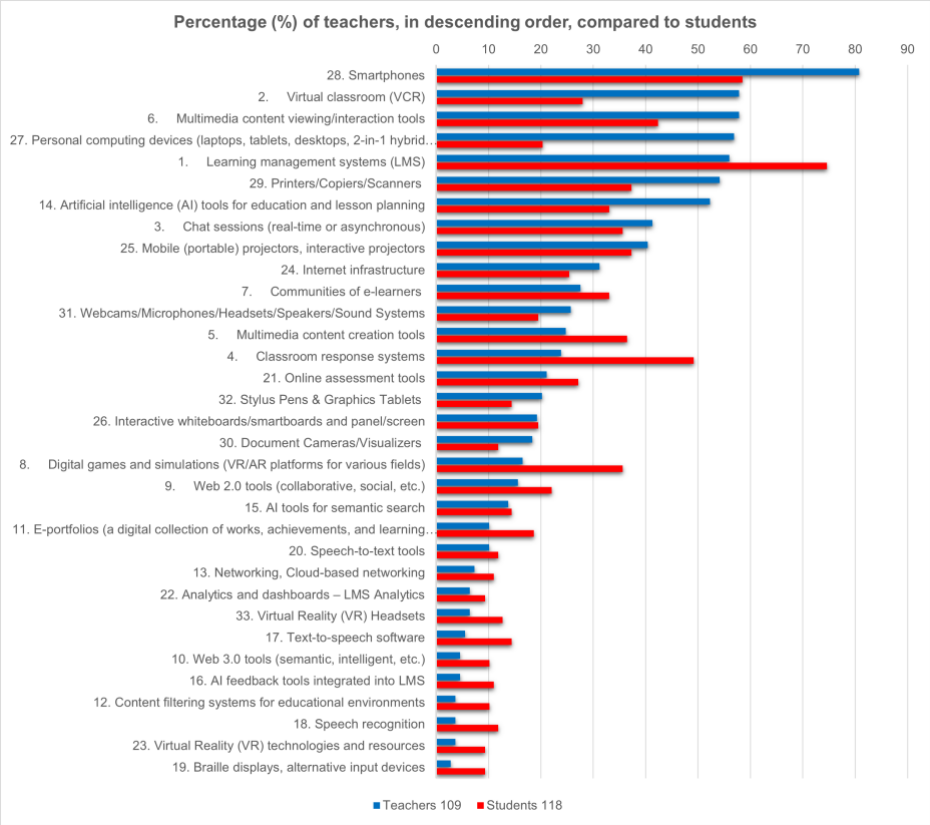

Image 3.1.1. Percentage (%) of teachers, in descending order, compared to students

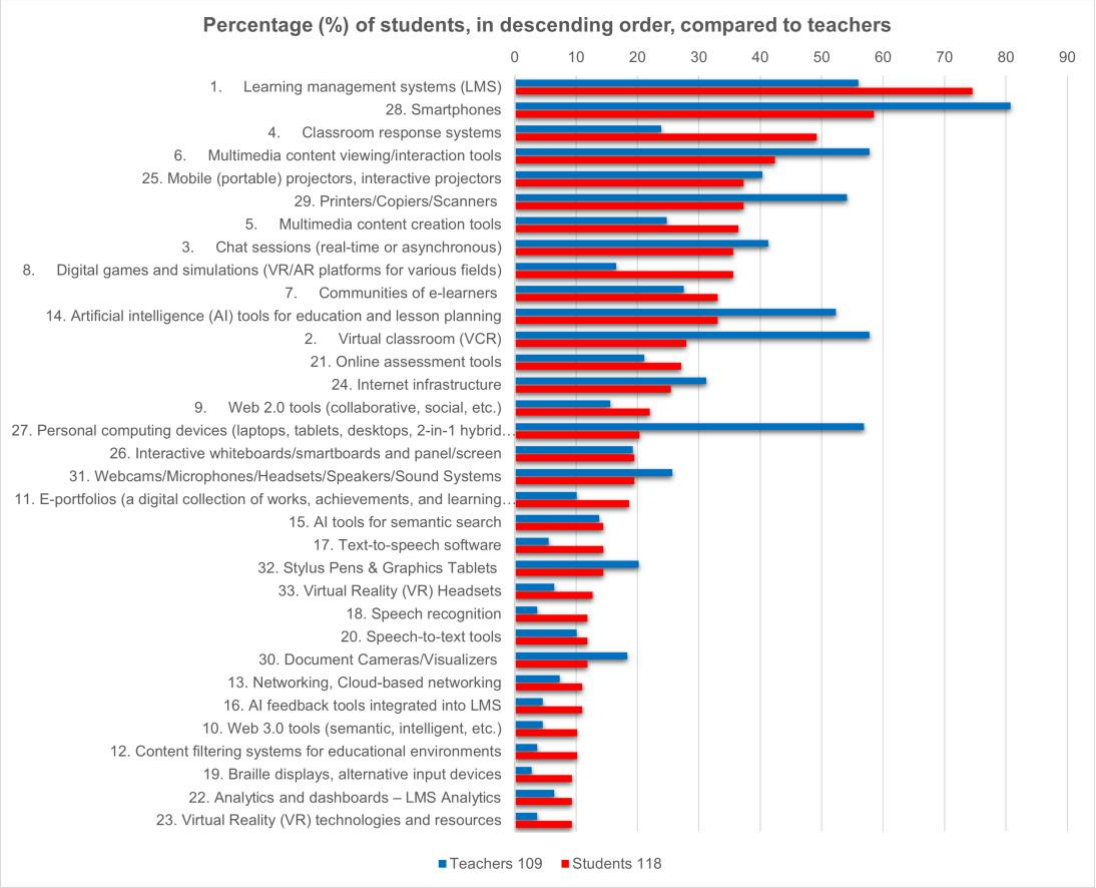

Image 3.1.2. Percentage (%) of students, in descending order, compared to teachers

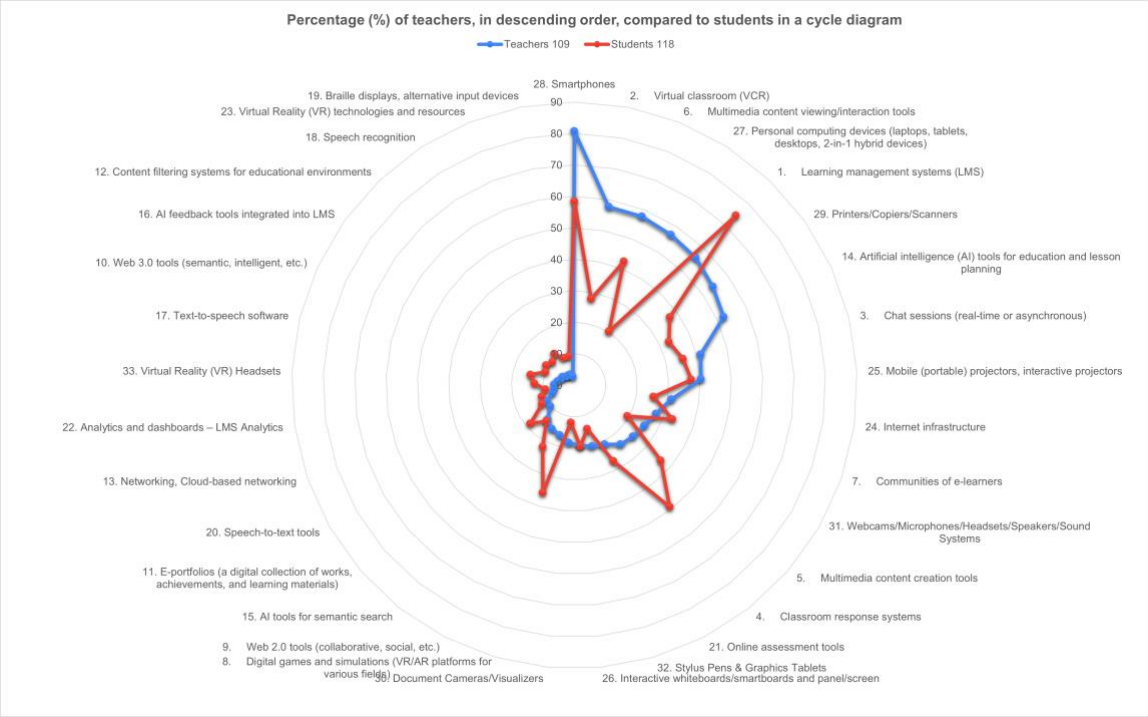

Image 3.1.3. Percentage (%) of teachers, in descending order, compared to students in a cycle diagram

3.2. Usefulness of the technologies and facilities supporting digital TLA

Figures 3.2.1, 3.2.2, and 3.2.3 collectively highlight a consistent and noteworthy discrepancy in how teachers and students assess the usefulness of digital infrastructure.

Figure 3.2.1 illustrates that teachers rated nearly all digital tools with high utility scores, particularly those related to learning management systems, content delivery mechanisms, and communication tools. This trend suggests that faculty view these technologies as effective for achieving instructional goals, streamlining administrative tasks, and supporting course organization. The relatively high response reliability (76.1%) further reinforces the strength and internal consistency of these evaluations among teachers.

Teachers are prioritizing some technologies over others, while students assessing usefulness of all technologies relatively equal. This outcome can be a result of more awareness of students about different technologies such as web 3.0 tools, speech recognition, then of lecturers.

In contrast, Figure 3.2.2 reveals a more conservative and less optimistic set of ratings from students, who appear more critical in their assessments of the same tools. The lower response reliability score (64.4%) among students may be indicative of varied experiences and access levels, or possibly a lack of standard training and support across different programs. Students particularly rated lower the usefulness of tools for interactive engagement, timely feedback, and mobile accessibility—factors that are crucial for an effective and user-friendly digital learning experience.

Figure 3.2.3, a cycle diagram, visually reinforces these differences by showing clear clustering of teacher responses in higher usefulness categories, while student responses are more dispersed and skewed toward lower and moderate usefulness. This visual pattern signals that teachers and students do not merely differ slightly but exhibit fundamentally different experiences and expectations with digital learning technologies.

Together, these three figures underscore an urgent institutional need to harmonize the technological environment by addressing student concerns. This includes making tools more intuitive and responsive to student needs, ensuring equitable access, and integrating user feedback into platform selection and development processes. Bridging this gap will require continuous user engagement, targeted training, and stronger support systems to ensure all users—not just content deliverers but also content recipients—benefit fully from the digital infrastructure.

Firstly, the higher ratings from faculty may be attributed to their role as primary selectors and implementers of digital tools within the learning ecosystem. Teachers are more likely to evaluate tools based on their administrative efficiency, content delivery potential, and alignment with institutional expectations. Consequently, their perspective may not fully capture the experiential nuances faced by students, especially regarding interactivity, intuitiveness, and navigational simplicity.

In contrast, students interact with digital platforms primarily as end-users who depend on these tools for continuous learning, self-paced study, and peer collaboration. Their lower usefulness ratings may reflect frustrations related to inconsistent platform interfaces, slow access speeds, insufficient user support, and a lack of training on how to effectively navigate or utilize digital tools. These usability barriers can significantly impact student satisfaction, engagement, and learning outcomes, particularly in asynchronous or remote learning contexts.

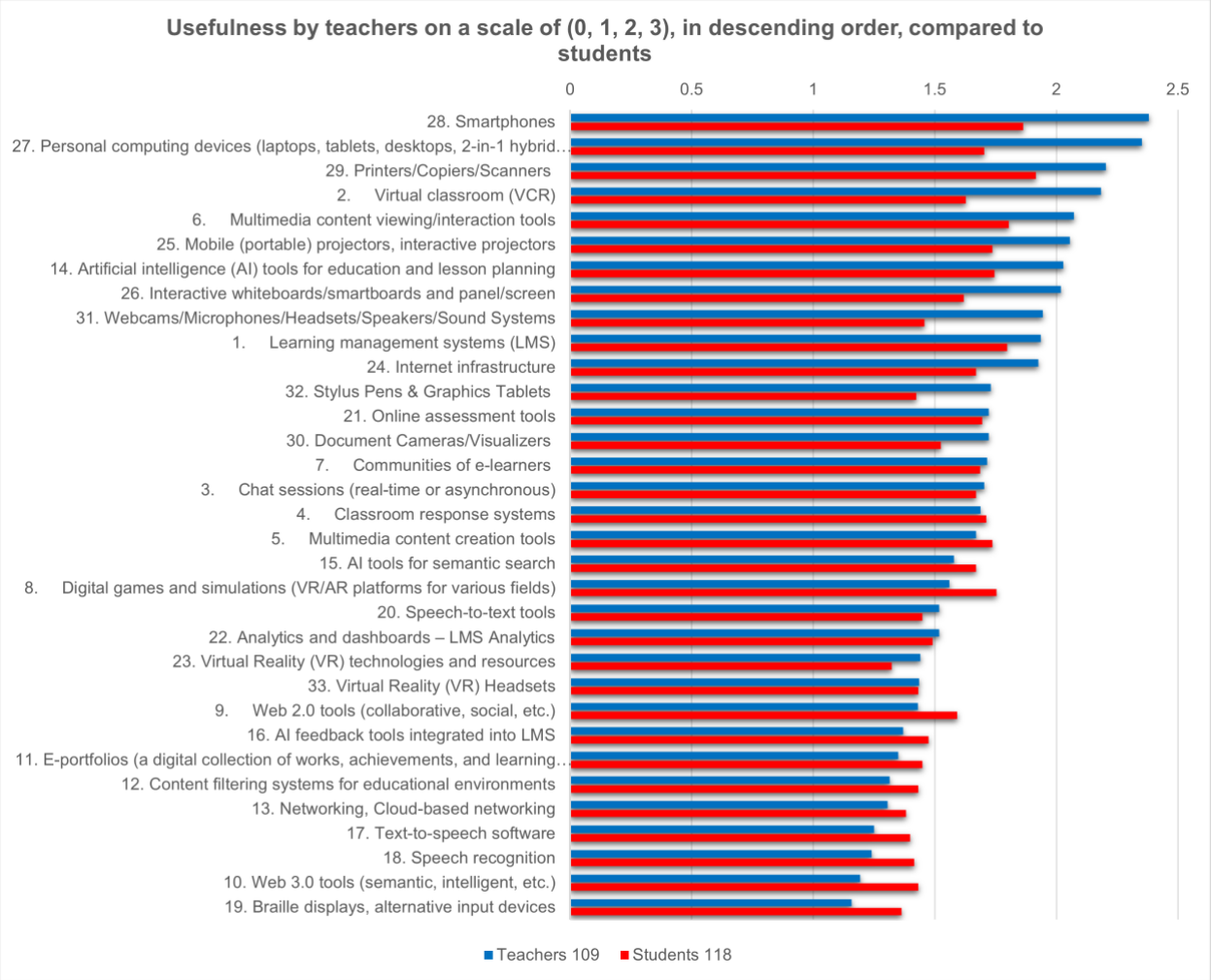

Image 3.2.1. Usefulness by teachers on a scale of (0, 1, 2, 3), in descending order, compared to students

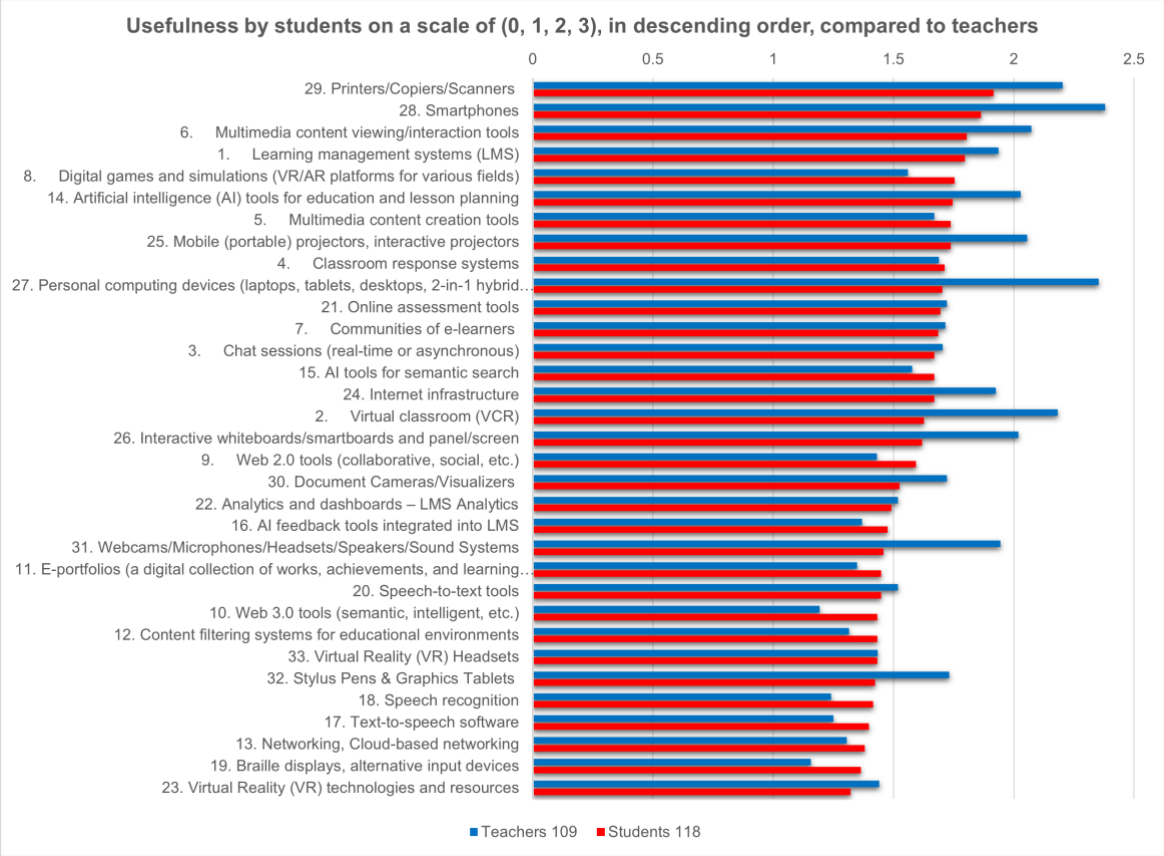

Image 3.2.2. Usefulness by students on a scale of (0, 1, 2, 3), in descending order, compared to teachers

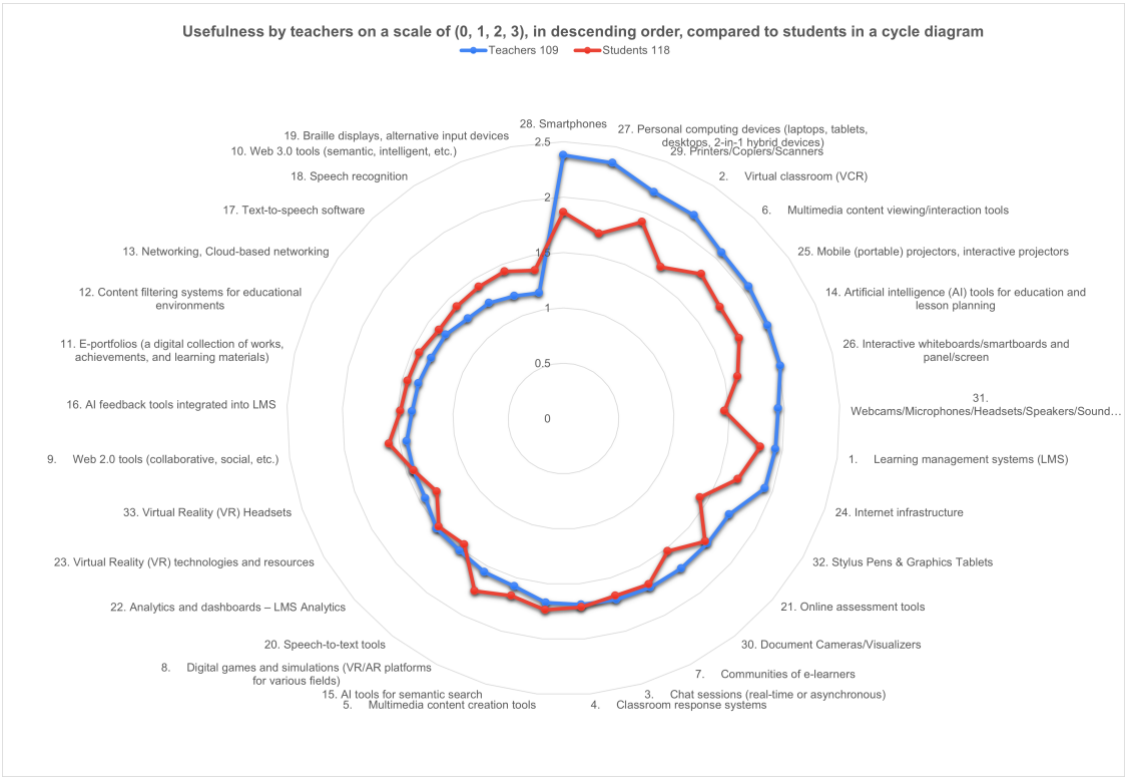

Image 3.2.3. Usefulness by teachers on a scale of (0, 1, 2, 3), in descending order, compared to students in a cycle diagram

Section 4: Teaching and Learning (Study) Materials

4.1. Study materials currently in use

Both teaching staff and students indicate a high frequency of use for conventional digital study materials such as lecture slides, PDFs, and documents hosted on institutional repositories. These materials serve as foundational content for course delivery and exam preparation. Teachers also report integrating multimedia elements such as instructional videos, interactive quizzes, and hyperlinks to external databases in an effort to diversify learning modes and foster engagement.

Images 4.1.1 to 4.1.3 further demonstrate the distribution and hierarchy of materials used. Teachers prioritize text-heavy documents and structured slide decks that support lecture-based instruction. These resources are favored for their efficiency in information delivery and ease of replication across different courses. On the other hand, students express a marked preference for audiovisual aids—such as video lectures, animated explainers, and recorded demonstrations—which cater to varied learning styles and promote better retention.

The cycle diagram in Image 4.1.3 provides additional insight into these preferences. It reveals a consistent alignment between both groups on the utility of core materials, while also highlighting a growing divergence as the content becomes more interactive and media-rich. Teachers' reliance on more static materials contrasts with students' demand for dynamic and personalized resources, indicating a shift in learner expectations in the digital era.

Furthermore, students report utilizing external tools and materials—like YouTube tutorials, online flashcards, and educational apps—not formally integrated into the university's digital learning environment. This reliance on third-party resources underscores potential gaps in institutional offerings and highlights the need to expand the range and adaptability of sanctioned learning materials.

To bridge this gap, YSMU could explore strategies such as incorporating co-creation of materials, involving students in resource design, and ensuring compatibility across devices. By aligning the types of materials offered with the evolving demands of digital learners, the university can better support inclusive, effective, and self-directed learning.

Both groups report frequent use of lecture slides, PDFs, and institutional repositories. Teachers also mention multimedia and interactive quizzes. Students appreciate audiovisual aids and self-paced materials (Images 4.1.1 to 4.1.3), highlighting the need for more engaging and accessible resources.

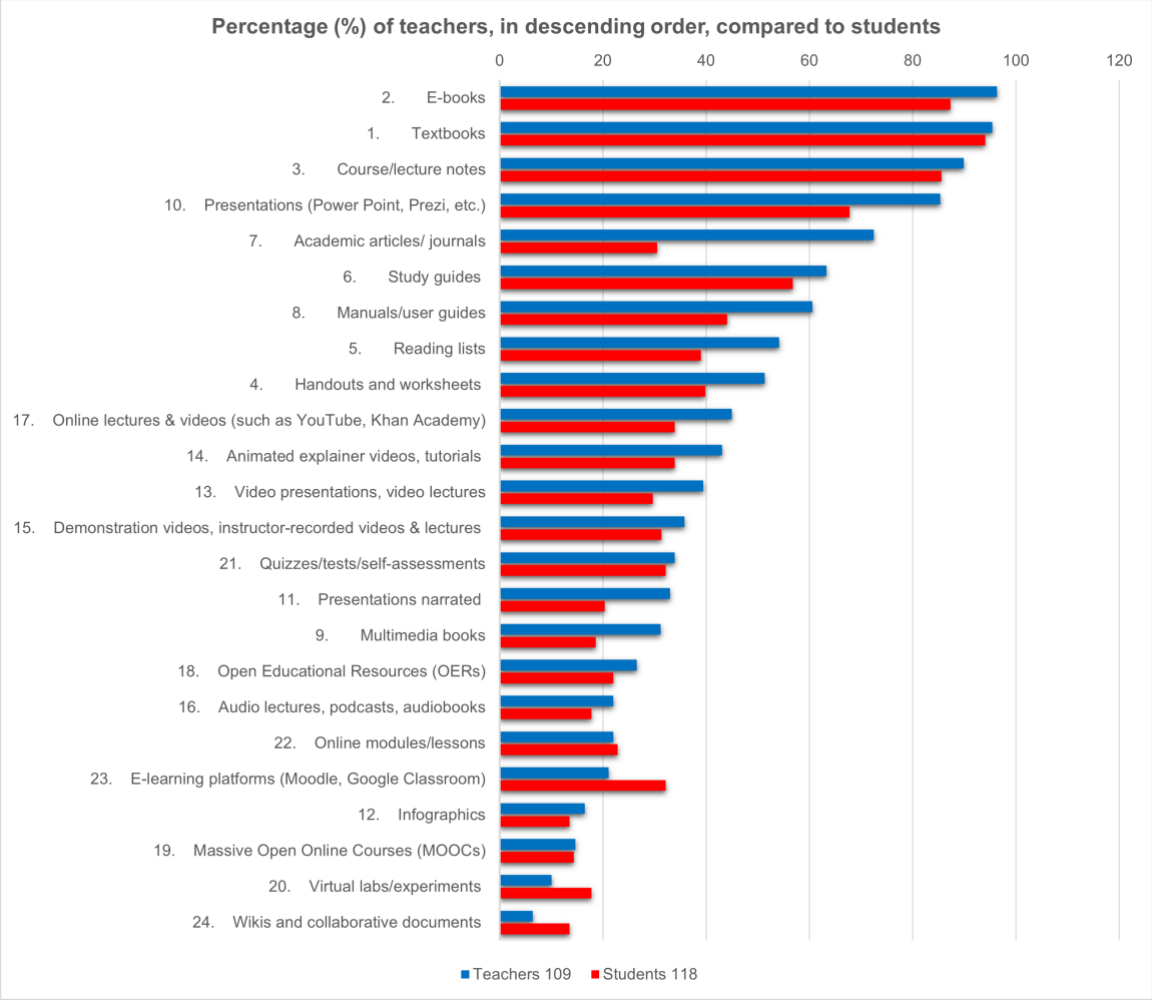

Image 4.1.1. Percentage (%) of teachers, in descending order, compared to students

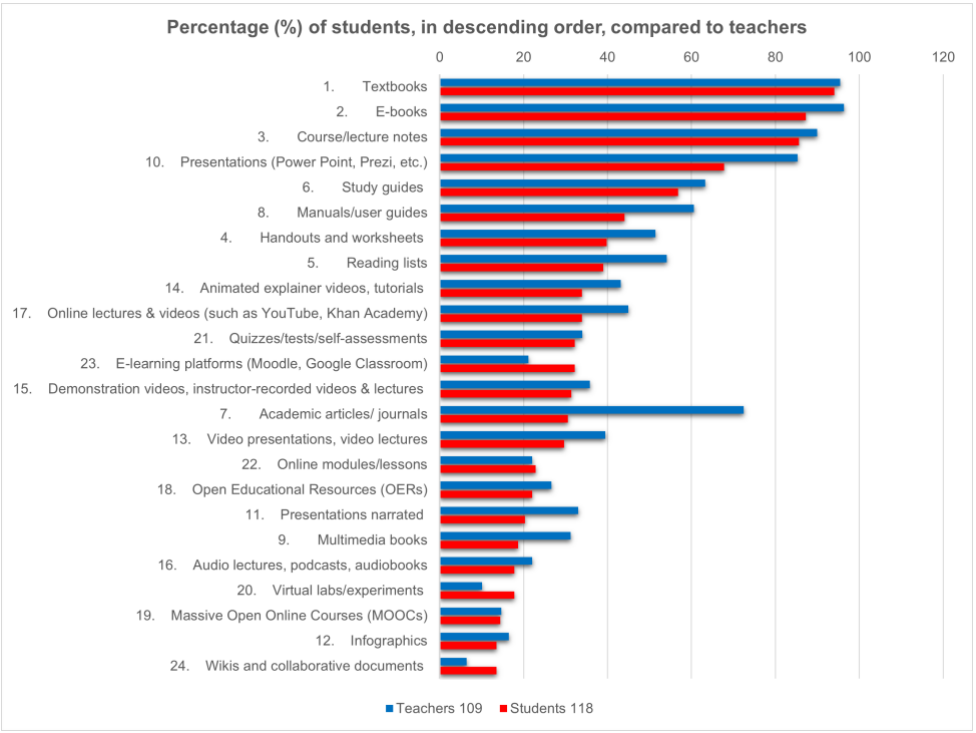

Image 4.1.2. Percentage (%) of students, in descending order, compared to teachers

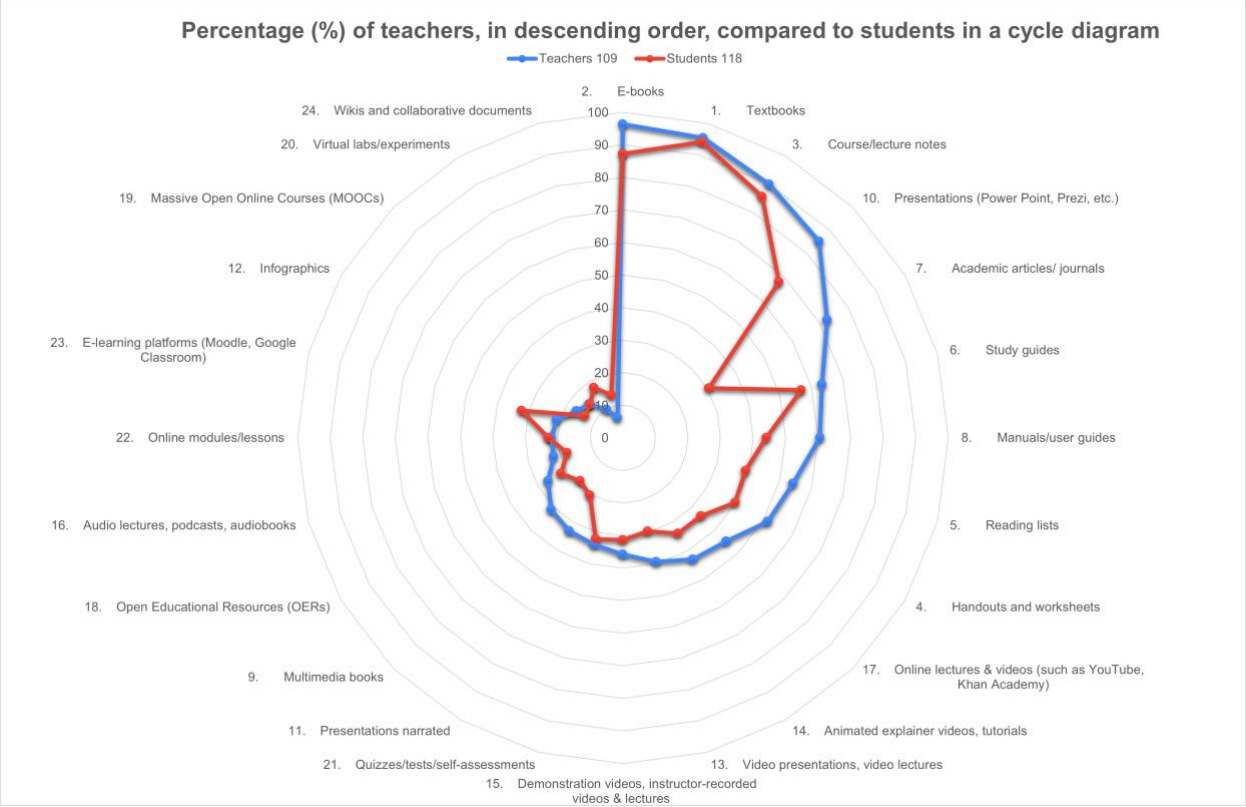

Image 4.1.3. Percentage (%) of teachers, in descending order, compared to students in a cycle diagram

4.2. Usefulness of the study materials for TLA

Figures 4.2.1 and 4.2.2 provide compelling evidence of a notable divergence in how digital learning materials are perceived by teaching staff and students in terms of their usefulness. Faculty responses, as shown in Figure 4.2.2, reflect a strong appreciation for digital resources that offer structure, clarity, and alignment with instructional goals. Materials such as curated PDFs, slide presentations, and structured e-course modules are highly valued for their consistency and ease of integration into standard curricula. The high response reliability score of 81.7% among faculty underscores the uniformity and confidence in their evaluations.

In contrast, student evaluations in Figure 4.2.1 indicate a more varied and at times critical view of the same materials. While students acknowledge the utility of basic formats such as slides and readings, their assessments suggest a clear preference for content that is interactive, visually rich, and adaptable to different learning paces. For example, recorded video lectures, quizzes with instant feedback, and gamified content scored higher among students than traditional text-based formats. The student response reliability of 74.6%, while still strong, signals more diverse individual experiences, which may be influenced by factors such as learning preferences, digital access, and previous exposure to innovative content.

The pattern becomes even more pronounced when analyzing the visualized distribution in Figure 4.2.3. This cycle diagram captures the relational trends in perception, showing clusters of high-value ratings from teachers that contrast with students' scattered lower-to-mid ratings. Notably, items like downloadable slide decks and eBooks cluster near the high-utility zone for faculty but appear farther from the center in student responses. Meanwhile, interactive formats such as multimedia case studies and adaptive learning

modules are positioned closer to the student-preferred zone, indicating an unmet demand for dynamic and personalized content.

These insights point to a critical pedagogical challenge: while teachers value digital resources that support their instructional structure, students increasingly desire content that fosters active learning and individualized engagement. To address this, institutions like YSMU must adopt a dual-pronged strategy. First, professional development for faculty should emphasize instructional design principles that promote interactivity and user engagement. Second, resource development should involve students as co-creators to ensure materials reflect actual learner needs and expectations.

Furthermore, it is essential to evaluate the platforms through which these materials are delivered. Usability, accessibility, and cross-platform compatibility are key to maximizing the perceived and actual usefulness of any digital resource. By aligning technological delivery with diverse student learning preferences and ensuring educators are equipped to innovate, YSMU can significantly enhance the overall educational experience and learning outcomes.

Figures 4.2.1 and 4.2.2 indicate that while teachers value structure and ease of use, students emphasize clarity, interactivity, and relevance. The higher response reliability among teachers (81.7%) than students (74.6%) suggests that students may experience more variability in the effectiveness of digital resources.

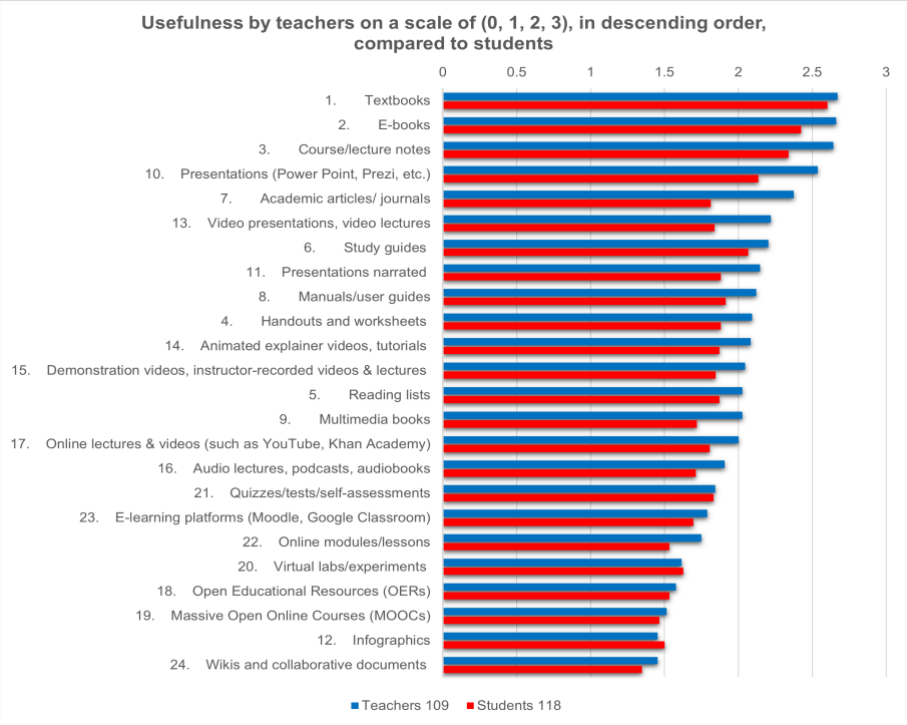

Image 4.2.1. Usefulness by teachers on a scale of (0, 1, 2, 3), in descending order, compared to students

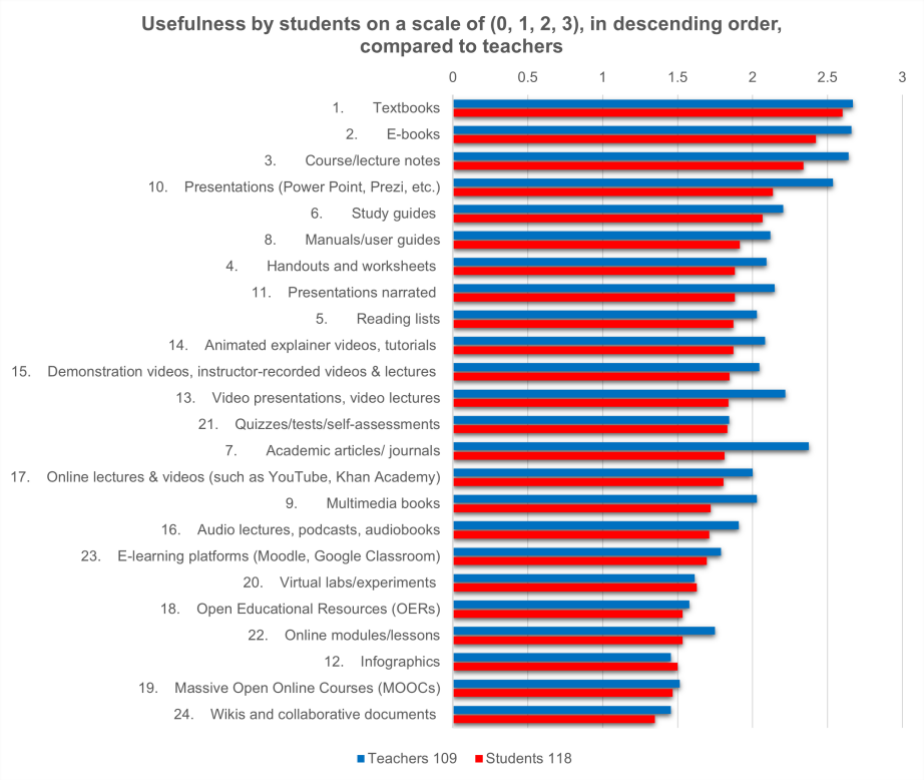

Image 4.2.2. Usefulness by students on a scale of (0, 1, 2, 3), in descending order, compared to teachers

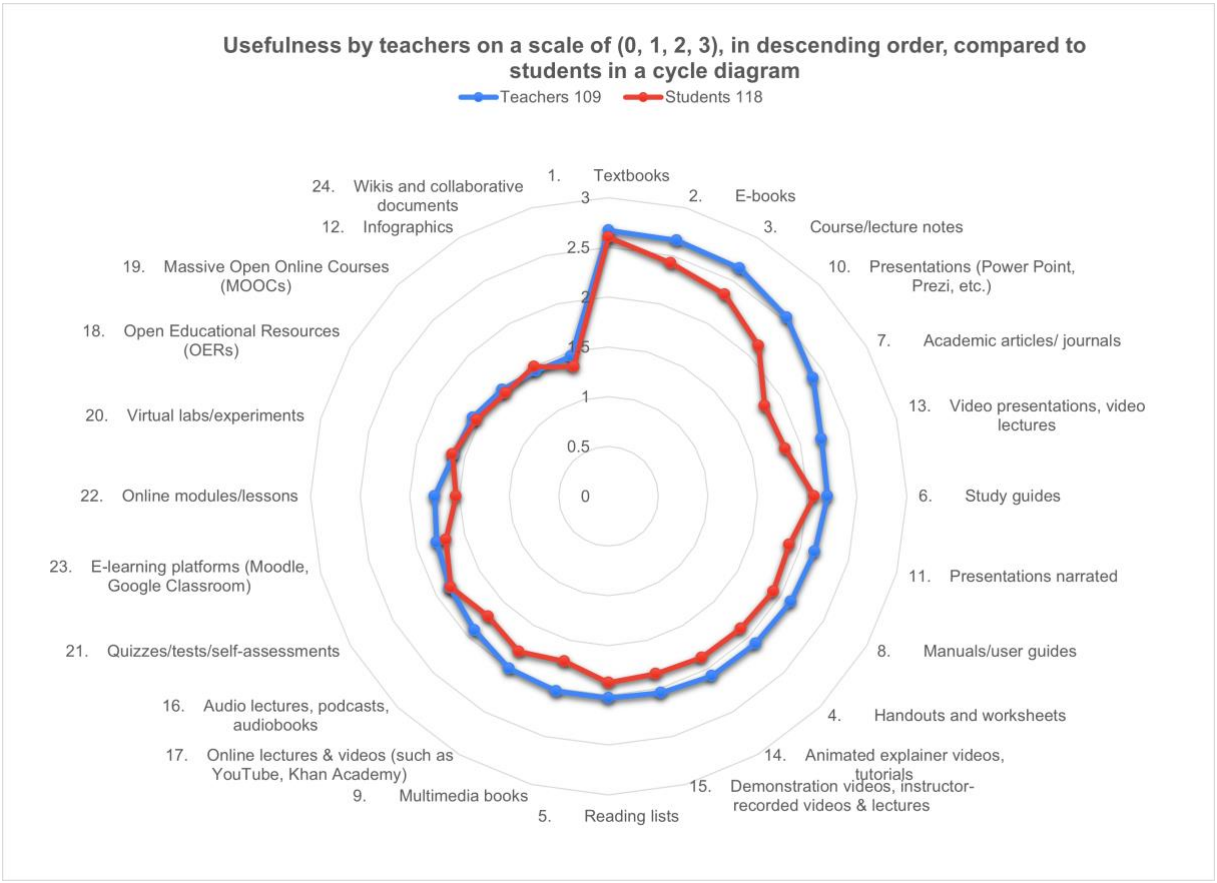

Image 4.2.3. Usefulness by teachers on a scale of (0, 1, 2, 3), in descending order, compared to students in a cycle diagram

Section 5. Main Obstacles to Digital TL

5.1. Main obstacles to digital TLA in HEIs

Both students and faculty report numerous overlapping and distinct challenges that hinder the effective implementation of digital teaching, learning, and assessment (TLA) practices at YSMU. As represented in Image 5.1, the most frequently cited issues include insufficient access to reliable digital infrastructure, unstable internet connectivity, outdated hardware, and a lack of integrated, interoperable digital platforms. These limitations significantly restrict both synchronous and asynchronous engagement, especially in courses that rely heavily on real-time interaction or access to multimedia content.

Faculty-specific challenges revolve around the structural and organizational aspects of digital transition. A notable proportion of teaching staff cited limited availability of time and institutional incentives to develop or adapt digital learning resources. Many also pointed out the absence of comprehensive and ongoing professional development programs focused on digital pedagogy. Although some instructors had previous training in tools such as LMS navigation or e-assessment creation (as indicated in Section 6.2), there appears to be a mismatch between training content and actual instructional demands. Additionally, a lack of departmental coordination on which platforms or tools to use has resulted in fragmented and inconsistent digital experiences for both instructors and learners.

Students, on the other hand, emphasized usability and equity-related challenges. A recurrent issue is the difficulty accessing digital materials on mobile devices or during off-campus hours, particularly for students without high-speed internet at home. They also reported frustration with the variability in how instructors use digital tools, noting inconsistencies in how materials are uploaded, feedback is given, and communication is managed across different courses. This fragmented user experience undermines the promise of digital learning to provide equitable and streamlined access to academic resources.

In sum, the main challenges to digital TLA at YSMU can be categorized into infrastructure deficits, insufficient pedagogical and technical training, lack of standardized digital practices across departments, and the absence of a robust support system for both instructors and students. Addressing these barriers requires a comprehensive and collaborative strategy involving technological upgrades, faculty empowerment, student support initiatives, and a unified institutional vision for digital transformation.

Both students and faculty report challenges such as insufficient digital infrastructure, inconsistent internet access, and lack of integrated platforms (Image 5.1). Teachers also cite limited time for digital resource development and insufficient training opportunities.

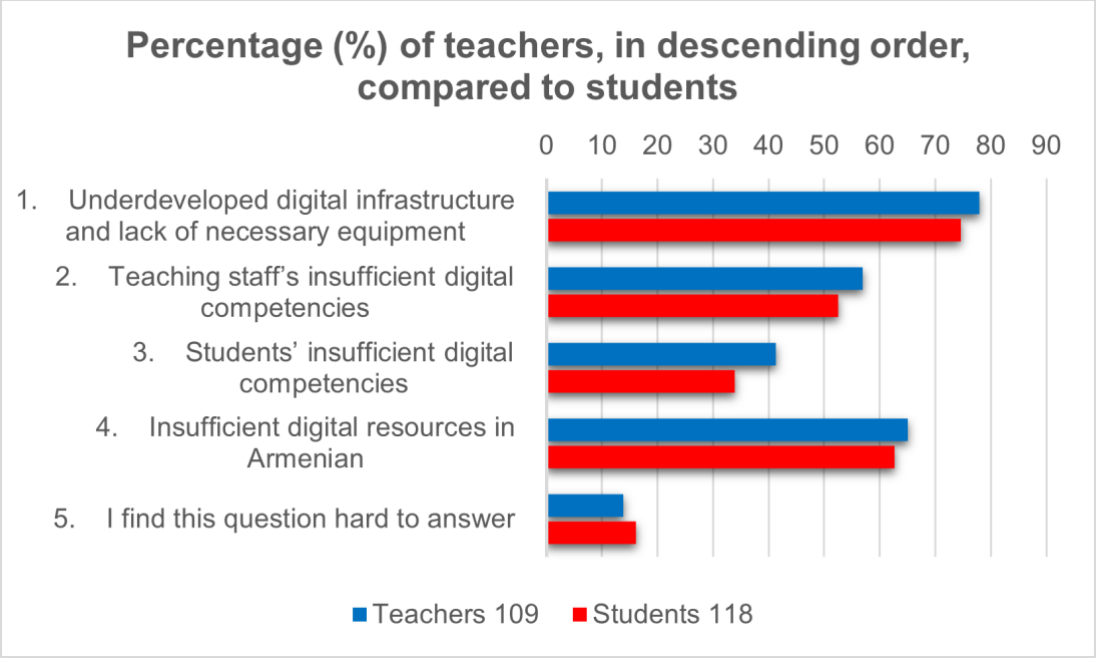

Image 5.1. Percentage (%) of teachers, in descending order, compared to students

5.2. Teachers' previous participation in the training on digital TLA

Only a subset of faculty has undergone formal training in digital pedagogy, with topics including LMS use, e-assessment techniques, and student engagement strategies (Image 5.2). However, the breadth and depth of training appear inadequate to meet evolving digital demands.

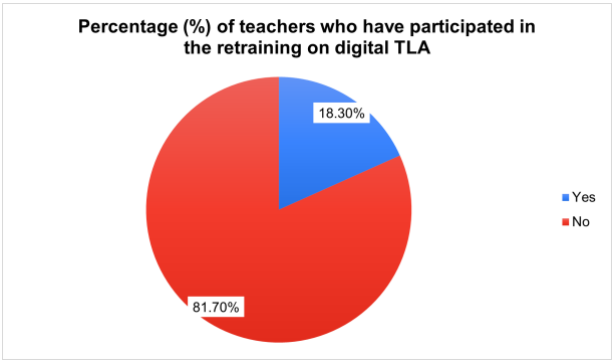

Image 5.2. Percentage (%) of teachers who have participated in the retraining on digital TLA

5.3. Main topics of the Teachers' previous training

Answers written by lecturers in this section can be summarize under following few topics: Electronic university (web based software for administration of educational process in TSMU), Interactive tools for teaching (Mentimeter, Kahoot, …), Moodle, AI in teaching.

Section 6: Additional Information Provided by Teachers and Students

6.1. Teachers' responses

All lecturers by answering this open question are highlighting the importance of digital technologies in teaching, learning and assessment processes. As it mentioned in most answers, these technologies are increasing motivation among students, providing more objective methods for assessment and can elevate the level of residual knowledge. On other hand the need for additional trainings on usage of different tools in education process is also very common among answers. Specifically, AI tools are in focus of interest of lecturers from this point of view. Accordingly, the modernization of infrastructure of university in general and classrooms particularly is going by bold letters through answers of teaching staff.

6.2. Students' responses

Surprisingly students are less prioritizing usage of digital technologies in medical education by emphasizing that digital technologies can create gap between student and real hospital and patients.

Conclusions and Recommendations

Responses to the open-ended survey question posed to teaching staff provide qualitative depth to the broader quantitative findings. A recurring theme across lecturer responses is a strong consensus on the centrality and growing indispensability of digital technologies in teaching, learning, and assessment processes. Faculty repeatedly emphasize the transformative potential of these tools to enhance student motivation, streamline evaluation processes, and contribute to longer-term knowledge retention. Specifically, several lecturers mention that digital technologies foster increased engagement by allowing for flexible and interactive learning environments. These environments help cater to diverse student needs and learning styles, thereby improving participation and academic outcomes.

Moreover, a substantial number of lecturers link the adoption of digital tools with the creation of more objective, transparent, and reproducible assessment frameworks. Through digital quizzes, automated grading, and online analytics dashboards, educators are now better equipped to provide timely and individualized feedback, monitor student progress, and adjust instruction accordingly. This is seen as a significant step toward quality assurance and continuous improvement in educational delivery.

However, while there is enthusiasm, there is also a strong and frequent call for further training and capacity building. Many lecturers note that although they recognize the value of digital tools, they do not feel fully confident in their ability to use them optimally. This sentiment is especially pronounced regarding emerging technologies such as artificial intelligence (AI) in education. AI tools, including content generation applications, predictive learning analytics, and adaptive learning systems, are highlighted as areas of keen interest but also acknowledged gaps in professional knowledge and preparedness. Lecturers express a strong desire for structured training

modules, workshops, and peer-learning communities specifically focused on integrating AI meaningfully and ethically into their pedagogy.

Equally emphasized in the feedback is the need for infrastructural modernization. Multiple responses draw attention to the inadequacy of current classroom facilities, including outdated hardware, inconsistent internet access, and lack of smart classroom capabilities. In many instances, educators describe their teaching environments as misaligned with the digital pedagogies they are expected to implement. As such, there is an urgent appeal for university-level investment in classroom technology upgrades—ranging from interactive whiteboards and high-resolution projectors to stable wireless networks and mobile device integration systems.

In summary, the qualitative feedback from teaching staff strongly supports the broader trends identified in earlier sections of this report. It confirms both the increasing reliance on digital tools and the simultaneous gaps in training and infrastructure. These perspectives provide essential insights for guiding institutional strategies in digital education, emphasizing not just what is needed, but also how lecturers are experiencing and adapting to digital transformation in practice.

Teaching staff underscore the importance of sustained institutional support, suggesting the integration of digital pedagogical frameworks and peer-learning platforms. Students recommend greater consistency in platform usage across courses and improved responsiveness from instructors.

Key Competencies to Develop

- Interactive digital content design
- Online assessment literacy
- Blended learning pedagogies

Technologies and Facilities to Enhance

- Campus-wide high-speed internet
- User-friendly LMS enhancements
- Access to mobile-compatible learning tools

Digital Materials to Develop

- Gamified and interactive simulations
- On-demand video lectures
- Formative assessment banks

Strategies to Overcome Barriers

- Establish continuous professional development programs
- Offer micro-credentialing for digital teaching skills
- Improve student access through device lending and digital literacy workshops

This report highlights a dual landscape at YSMU: a motivated teaching staff striving for digital integration and a student body seeking more engaging, accessible, and coherent learning experiences. Strategic alignment between institutional investment, pedagogical innovation, and user-centered design will be pivotal in evolving the university's digital education landscape.

Appendix: Temperature Map Analysis of Response Patterns

Analysis of Teacher and Student Responses

For questions 2.2, 3.2, and 4.2, temperature maps have been generated and analyzed to reveal deeper insights into the response patterns of both teaching staff and students. This visualization approach reveals nuanced patterns that might otherwise remain hidden in conventional data analysis.

Response Reliability Assessment

The analytical methodology includes calculation of relative response reliability for each participant group. This metric accounts for response bias by adjusting for instances where respondents selected identical options across multiple items - a pattern that may indicate disengagement rather than authentic responses.

Comparative Results

The reliability findings for both respondent groups appear in Figures 2.2, 3.2, and 4.2. The table below summarizes these results, presenting the percentage of responses deemed reliable after applying the uniform-response adjustment algorithm.

These percentages reflect the proportion of responses that demonstrate meaningful engagement with the questions, after filtering out potentially automated or disengaged response patterns.

Question ID	Teaching Staff	Students
2.2	78.0 %	71.2 %
3.2	76.1 %	64.4 %
4.2	81.7 %	74.6%

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2.2. Level of need for developing the digital competencies and technologies

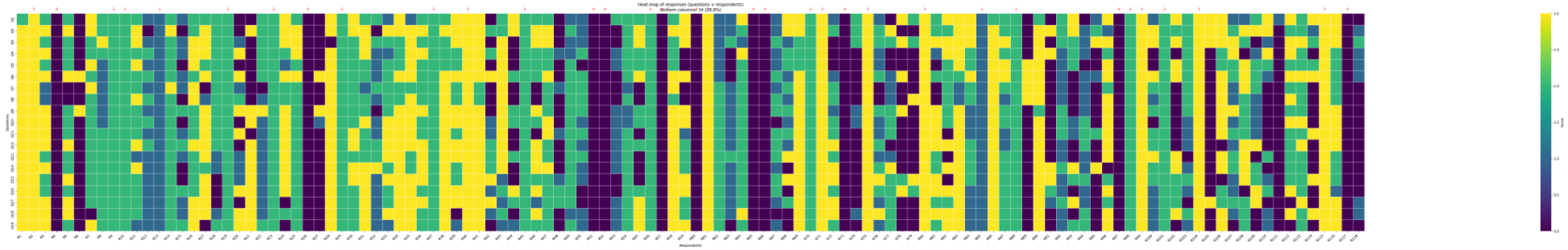

Fig. 2.2.1: Students responses

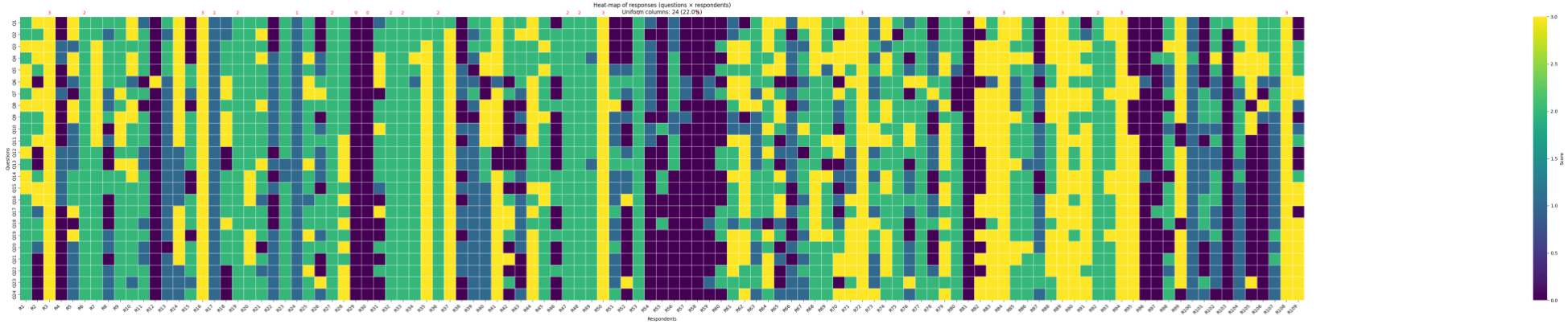

Fig. 2.2.2: Teachers responses

3.2. Usefulness of the technologies & facilities supporting digital TLA

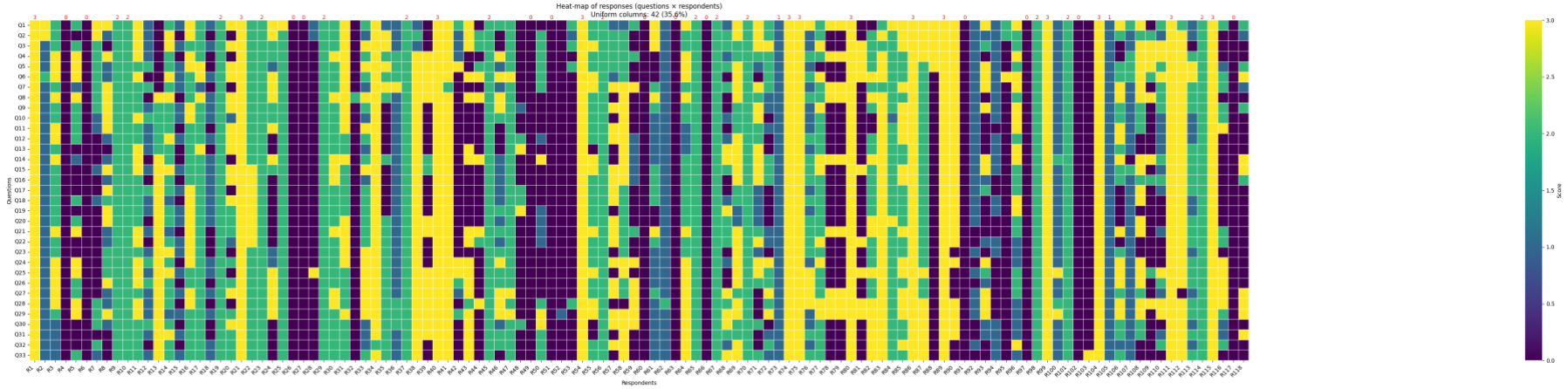

Fig. 3.2.1: Students responses

Fig. 3.2.2: Teachers responses

4.2. Usefulness of the study materials for TLA

Fig 4.2.1: Students responses

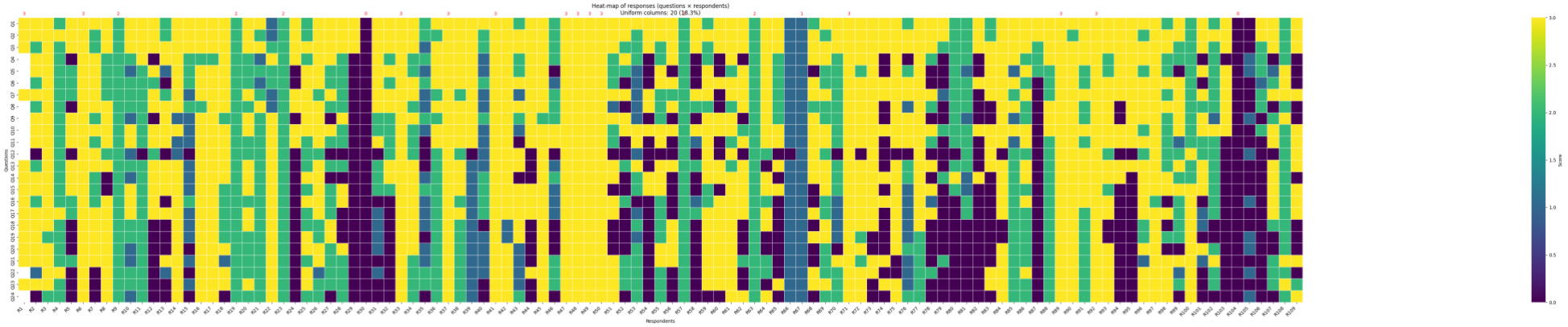

Fig 4.2.2: Teachers responses

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