

A Comprehensive Need Assessment Survey for Faculty Development in Medical Education

Abdulmohsen M. Alomair¹, Imran Sabri, Syed Ziaur Rahman²

ABSTRACT

Background

Medical education is a continuously evolving field that requires faculty members to engage in ongoing professional development to maintain high-quality instructions. Faculty development programs at medical education department of medical colleges play a critical role in equipping educators with the necessary skills to address the dynamic challenges of medical education. However, the effectiveness of such programs is contingent upon accurately identifying faculty training needs. This study aimed to conduct a comprehensive need assessment survey to determine the specific areas where faculty members require further development in order to improve their teaching skills.

Methods

The study was conducted at College of Medicine, King Faisal University, Al-Ahsa. A structured google survey was designed and developed to assess faculty training needs across various competencies, including teaching methodologies, clinical instruction, curriculum development, and educational research. Faculty members were asked to rate the importance of each competency and indicate their need for additional training. The survey was distributed to all faculty members of college of medicine, King Faisal University, Al-Ahsa by email. 41 faculty members across different departments, including Surgery, Biomedical Sciences, Clinical Neurosciences, and Obstetrics and Gynecology responded to the survey. Data collection was conducted over one month, and responses were analyzed using descriptive statistics.

Results

The survey yielded responses from 41 faculty members, with Assistant Professors constituting 70% of the participants. The highest departmental representation was from Biomedical Sciences (35%) and Surgery (25%). Teaching in large and small groups received the highest mean importance rating (4.5), followed by facilitating and managing learning (4.3). The most frequently reported areas requiring additional training included large group teaching (65%), assessment and learning (60%), and educational research (55%). Faculty members recommended regular workshops on teaching methodologies, educational research, and statistical analysis, with an emphasis on accreditation of training sessions through relevant health authorities.

Discussion

The findings highlight the critical need for faculty development in large group teaching, student assessment, and educational research. The increasing role of technology in medical education was also evident, as faculty members expressed a need for training in e-learning platforms. Need assessment surveys provide valuable insights for tailoring faculty development initiatives; however, their limitations must be acknowledged. Surveys may not capture all faculty challenges due to reliance on self-reported data, potentially leading to a narrow focus on training programs. To address these limitations, institutions should integrate qualitative methods such as focus groups and peer mentoring to supplement survey findings. The integration of interdisciplinary faculty development initiatives has the potential to augment collaborative efforts and elevate the quality of educational experiences. **Conclusion:** This need assessment survey provides essential insights into the training needs of faculty members, emphasizing the importance of structured and targeted faculty development programs. While need assessment surveys serve as a foundational tool for shaping faculty training initiatives by the Faculty Development Committee, Medical institutions must adopt a multifaceted approach that includes qualitative insights and collaborative strategies to ensure comprehensive professional development of faculty members and other staff. By fostering an inclusive and dynamic faculty development culture, medical institutions can enhance teaching effectiveness and improve overall educational outcomes. The study helped a lot in development of annual faculty training need for the college of medicine, King Faisal University, Al-Ahsa

Keywords

Medical Education; Need Assessment; Faculty Development

INTRODUCTION

Medical education constitutes a dynamic domain that necessitates the ongoing professional advancement of faculty members to ensure the provision of superior educational experiences. Faculty development initiatives are imperative for furnishing educators with the requisite competencies and knowledge to address the progressive requirements of medical education.¹ Nevertheless, the efficacy of such initiatives is contingent upon the precise identification of the specific needs of faculty members. This study sought to undertake a thorough needs assessment survey to ascertain the training requirements of faculty members within a medical institution.

The ever-changing landscape of medical education necessitates a continual assessment of faculty development programs to ensure that educators possess the requisite competencies to address the dynamic demands of the healthcare profession. A needs assessment survey functions as a crucial instrument in this regard, offering vital insights into the specific training necessities and professional advancement opportunities available to faculty members. By methodically

1. Faculty Member, Department of Medical Education, College of Medicine, King Faisal University, Al-Ahsa, Saudi Arabia Email: amaalomair@kfu.edu.sa
2. Faculty Member, Department of Biomedical Sciences, College of Medicine, King Faisal University, Al-Ahsa, Saudi Arabia. Email: ikhan@kfu.edu.sa
3. Professor, Department of Pharmacology, Aligarh Muslim University, Aligarh, India. Email: rahmansz@yahoo.com

Correspondence

Dr Abdulmohsen M. Alomair, Head Department of Medical Education, College of Medicine King Faisal University, AL-Ahsa. Email: a.m.alomair1987@gmail.com

pinpointing deficiencies in knowledge, skills, and pedagogical methodologies, such as google surveys empower institutions to customize their development programs to correspond with both faculty ambitions and institutional objectives. This study seeks to examine the effectiveness of needs assessment surveys in shaping faculty development strategies within medical education, ultimately enhancing instructional efficacy, fostering learner engagement, and elevating educational outcomes. Through a meticulous analysis of the data acquired from these surveys, this study will contribute to the ongoing dialogue regarding exemplary practices in faculty development, ensuring that educators are not only proficient but also assured in their capacities as leaders in medical training. Faculty development activity is present in most of the colleges like clinical meeting, few medical education related sessions, and research related activity. For upgrading of medical education faculty development programme should be conducted regularly, monitoring of present programme and development of qualified resource person should be ensured.²

Medical education involves pre-clinical and clinical teaching to build a strong knowledge foundation and clinical experience for the medical students. Their physical presence in inpatient and outpatient clinical settings is imperative for the successful practice of early clinical experiences and the clerkship curriculum. However, the COVID-19 pandemic has caused substantial ramifications on the medical education system.³ Faculty Development activities are not only important for basic sciences but also to teach clinical medicine, which further realizes the importance of faculty needs based on new demands.

This comprehensive study additionally contributes significantly to the formulation and advancement of a meticulously structured annual faculty development program, which is designed to enhance the professional growth and pedagogical skills of the faculty members involved.

METHODS

The study was conducted at College of Medicine, King Faisal University, Al-Ahsa during August-September 2024. The inclusion criteria is the faculty members presently enrolled at the college on the ranks of Assistant Professor, Associate Professor and Professor.

The faculty members were motivated to participate in the study.

Survey Design

A cross-sectional descriptive study design was utilized to evaluate the training needs of faculty members. The study population included academic staff from Assistant Professor to Professor, and data were gathered over a two-month period [August-September 2024] using an online survey administered through Google Forms. This design allowed for the collection of data at a single point in time, enabling the identification of prevailing trends and perceived gaps in faculty training. A meticulously structured google survey was developed to evaluate the training requirements of faculty members. The survey encompassed inquiries pertaining to an array of competencies, including instruction in both large and small group settings, clinical pedagogy, curriculum formulation, and educational research. Participants were requested to assess the significance of each competency and to denote their necessity for additional training in particular domains.

Data Collection

The google survey was distributed to all faculty members of College of Medicine, King Faisal University, Al-Ahsa during the two-month period of August-September 2024. 41 faculty members across various departments of the college, including Surgery, Biomedical Sciences, Clinical Neurosciences, and Obstetrics and Gynecology. Data were collected over a period of two months, and responses were recorded in a google Excel sheet for analysis.

Data Analysis

Descriptive statistics, which serve as a critical tool in the field of data analysis, were meticulously employed to scrutinize and interpret the dataset in question. The various responses obtained from the participants were systematically categorized, taking into account the relative significance of the competencies displayed as well as the identified necessity for additional training and development opportunities. The findings derived from this comprehensive analysis were subsequently organized and presented in a series of meticulously crafted tables, thus enhancing the overall clarity and facilitating a more nuanced interpretation of the results.

RESULTS

Demographics

The comprehensive survey conducted encompassed a total of responses provided by 41 esteemed faculty members, a significant proportion of whom, amounting to 70%, were occupying the esteemed role of Assistant Professor within their respective academic institutions. Furthermore, the participants in this extensive study hailed from a diverse array of departments, with the most substantial representation being observed in the field of Biomedical Sciences, which accounted for 35%, closely followed by Surgery, which constituted 25% of the total representation.

Competency Ratings

In Response to the question “Please rate the competencies listed below, in terms of their importance and your needs in that area on a Five point scale.” Table 1 & 3 meticulously delineates the average evaluations pertaining to the significance attributed to a diverse array of competencies, which are essential in the educational domain. Notably, the instructional practice within both expansive and intimate group settings attained the highest mean rating, quantified at an impressive 4.5, which was subsequently trailed by the vital processes of facilitating and managing the learning experience, which garnered a commendable mean rating of 4.3. In contrast, the competency related to the development of managerial and communication skills received the least favorable mean rating, which was recorded at a relatively modest figure of 3.8.

Training Needs

In Response to the question “Which of the following areas do you need more training.” Table 2 and 4 provides a comprehensive summary of the specific areas in which faculty members have articulated a significant demand for additional training and development opportunities to enhance their professional expertise. Among these identified areas, the most pronounced need was reported in the domain of large group teaching, with an impressive 65% of faculty members indicating that they require further assistance, closely followed by a substantial demand for training in assessment and learning methodologies, which was noted by 60% of the respondents, and finally, educational research, where 55% of faculty members expressed a desire for further knowledge and skill enhancement. Blackboard training received 40% of the attention which is least amongst provided list.

Some General Comments

Faculty development can be significantly enhanced and improved through the consistent implementation of regular workshops and meticulously designed training programs that are specifically focused on various teaching methodologies, advanced statistical analysis techniques, and the art of reflective writing practices. In this context, it is imperative to recognize the pressing need for structured and comprehensive training sessions that address both small and large group teaching dynamics, with a strong recommendation advocating for the institution of monthly workshops that serve this purpose. Furthermore, it is of utmost importance to ensure that instructors or coordinators responsible for elective courses are actively included in the faculty duty roles, as their participation is crucial for the overall effectiveness of the teaching staff. Additionally, collaboration with the Saudi Commission for Health Authorities is not only beneficial but also necessary to facilitate the accreditation of committee workshops by providing Continuing Medical Education (CME) hours, which is an essential requirement for clinicians who are in the process of renewing their professional licenses.

DISCUSSION

The outcomes of this needs assessment survey elucidate several pivotal domains wherein faculty members necessitate additional training. The considerable emphasis accorded to instructional methodologies in both large and small group settings accentuates the imperative for efficacious pedagogical strategies within the realm of medical education.^[4] The pronounced demand for training in assessment and learning intimates that faculty members are aspiring to refine their competencies in appraising student performance and delivering constructive feedback.

Furthermore, the results manifest a pronounced interest in educational research, indicative of an escalating acknowledgment of the significance of evidence-based practices in the field of medical education.^[5] The requirement for training in e-learning and Blackboard underscores the augmenting influence of technology in education and the necessity for faculty members to attain proficiency in the utilization of digital tools.

The execution of needs assessment surveys not only augments faculty development but also cultivates a culture of perpetual enhancement within educational

institutions. By actively involving educators in the identification of their professional needs, these assessments can engender heightened job satisfaction and retention rates among faculty members, as they perceive themselves as valued and supported in their professional growth endeavors. For instance, research findings have indicated that particular teaching competencies, such as “diagnosis and reflection” or “facilitation,” are frequently prioritized by faculty, thereby highlighting areas where focused training could yield substantial advantages for both instructors and students alike.⁶ Furthermore, aligning faculty development programs with the distinctive challenges encountered by various academic tracks—such as clinician educators versus researchers—can ensure that all educators receive pertinent support tailored to their roles, thereby optimizing overall educational effectiveness and enhancing learner outcomes.^{7,8}

Moreover, the insights derived from needs assessment surveys can act as a catalyst for fostering interprofessional collaboration among faculty members across diverse disciplines within medical education. By identifying shared training requirements—such as innovative pedagogical techniques and educational technology—institutions can develop interdisciplinary development programs that not only enhance individual competencies but also promote teamwork and collaborative learning experiences among educators from various backgrounds.⁹ This collaborative methodology is essential in preparing future healthcare professionals who must function effectively within multidisciplinary teams. Additionally, addressing dimensions of diversity and inclusion within these programs can further enrich the educational milieu, ensuring that all faculty members are equipped to meet the diverse needs of their students while contributing to an inclusive academic culture.⁷ Ultimately, by broadening the scope of faculty development initiatives to encompass interprofessional learning, institutions can better equip their educators to navigate the complexities of contemporary healthcare education and practice.

In many ways, faculty development is a planned program to prepare institutions and faculty members for their academic roles, including teaching, research, administration, writing and career management. To help faculty members fulfill their multiple roles, a variety of faculty development programs and activities have been designed and implemented. These activities

include workshops and seminars, short courses and site visits, fellowships and other longitudinal programs.²

The Limitations of Need Assessment Surveys in Faculty Development for Medical Education:

The effectiveness of need assessment surveys for faculty development in medical education may be exaggerated. Their reliance can obscure broader systemic issues within educational institutions. Surveys often fail to capture the full range of faculty challenges, as self-reported data can be biased and short-term. This misalignment can diverge training from actual medical education demands. Moreover, these surveys may foster complacency among faculty, leading to dependency on assessments for professional growth. Such dependence can impede the development of a proactive mindset necessary for adapting to the evolving healthcare landscape. Additionally, the emphasis on specific competencies may promote a standardized approach to faculty development, neglecting individual teaching styles and experiences. This may result in diminished engagement and applicability of training, adversely affecting teaching effectiveness and learner interaction. Furthermore, while promoting interprofessional collaboration through assessments appears beneficial, it may not be feasible in every educational context. Faculty members may exhibit diverse interests and expertise in collaborative practices, potentially leading to resistance against programs based solely on survey results. Lastly, while diversity and inclusion are crucial, surveys cannot guarantee these values are embedded in faculty development programs. A more nuanced approach, involving qualitative assessments and deeper dialogue, is necessary to understand the diverse needs of faculty and students. In conclusion, although need assessment surveys may offer some insights, they should not be the primary basis for faculty development strategies, as they might overlook essential elements vital for effective medical education.

To overcome the limitations of need assessment surveys, educational institutions might integrate qualitative methods with quantitative data to better understand faculty development needs. Focus groups and in-depth interviews can reveal detailed insights often missed by surveys, shedding light on the unique challenges faced by educators. For instance, research indicates that nursing faculty prioritize innovative teaching and interprofessional education more than medical faculty, revealing potential disparities not captured by surveys.⁹

By promoting an environment conducive to open dialogue, institutions validate faculty perspectives and foster collaborative cultures beyond disciplinary limits. This comprehensive approach ensures that professional development initiatives remain pertinent and responsive, ultimately enhancing medical education quality while equipping faculty to meet modern healthcare demands effectively.

Furthermore, to improve faculty development programs, institutions should incorporate peer mentoring and collaborative teaching models that utilize the expertise of seasoned educators. Such initiatives create opportunities for less experienced faculty to learn from peers while fostering a supportive community that promotes ongoing professional development. Research indicates that mentorship significantly enhances job satisfaction and retention among faculty, fostering a sense of belonging and shared purpose within academia.⁸ Moreover, by integrating competency-based training within these collaborative frameworks, institutions can align faculty development with individual goals and institutional objectives, leading to enhanced educational outcomes across various academic disciplines.⁷ This comprehensive approach to faculty development will address immediate training needs identified by surveys and nurture a lasting culture of excellence in medical education.

CONCLUSION

This needs assessment survey offers crucial insights regarding faculty training requirements, highlighting the necessity for structured faculty development programs. Medical institutions should implement a comprehensive strategy combining qualitative insights and collaborative methods to promote the professional development of faculty and staff. By nurturing an inclusive faculty development environment, medical institutions can elevate teaching effectiveness and enhance educational outcomes. The study significantly contributed to developing annual faculty training needs for the College of Medicine, King Faisal University, Al-Ahsa.

Although executed at the College of Medicine, King Faisal University, Al-Ahsa, this needs assessment survey can inform similar institutions in their Faculty Training Needs formulation. This survey provides valuable insights into the training necessities of faculty members in medical settings. The findings stress the

importance of creating targeted faculty development programs that address identified competency gaps. By concentrating on areas such as large group teaching, assessment and learning, and educational research, institutions can improve medical education quality and better equip faculty for field challenges.

We also conclude that the needs assessment survey is pivotal in shaping faculty development in medical education by pinpointing specific training needs and professional growth avenues. Nonetheless, its limitations must be recognized to ensure a well-rounded approach to faculty development. While surveys yield valuable quantitative data, they may neglect broader systemic issues and unique faculty experiences, potentially causing a disconnect between training programs and actual educational requirements. To improve faculty development effectiveness, educational institutions should incorporate qualitative methods like focus groups and in-depth interviews, fostering dialogue and collaboration among faculty. Moreover, integrating peer mentoring and competency-based training can build a supportive community that addresses diverse needs while encouraging continuous professional growth. By embracing a multifaceted approach that merges quantitative and qualitative insights, institutions can foster a culture of excellence in medical education, effectively preparing faculty to tackle the complexities of contemporary healthcare education and practice.

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Specific Roles for teamwork:

Dr Abdulmohsen Alomair: Generated the original idea, Study Design and drafting of questionnaires, Providing Inside of Medical education concepts while drafting manuscript.

Dr Imran Sabri: Data Gathering, Creating Google form,

Data collection and Analysis, Drafting manuscript.

Dr Syed Ziaurrahman: Reviewing, Modifying the manuscript as per journal Requirement, Submitting the manuscript on behalf of Authors.

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Table 1: Mean Ratings of Competency Importance

| Competency | Mean Rating |
|--|-------------|
| Teaching large and small groups | 4.5 |
| Teaching in clinical setting | 4.2 |
| Facilitating and managing learning | 4.3 |
| Planning Curriculum Development | 4.1 |
| Developing learning resources | 4.0 |
| Assessing learners | 4.2 |
| Evaluating courses and conducting research | 4.1 |
| Understanding of educational principles | 4.0 |
| Developing managerial and communication skills | 3.8 |

Table 2: Areas Requiring Further Training

| Area | Percentage of Faculty Reporting Need |
|----------------------------|--------------------------------------|
| Large group teaching | 65% |
| Small group teaching | 45% |
| Assessment and Learning | 60% |
| E-learning | 50% |
| Educational research | 55% |
| Blackboard | 40% |
| Blueprinting | 35% |
| Item analysis | 30% |
| Quality assurance | 25% |
| Dealing with slow learners | 20% |
| Others | 10% |

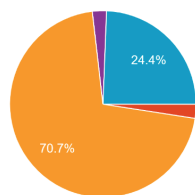
Table 3: Question Please rate the competencies listed below, in terms of their importance and your needs in that area on a Five point scale given below.

| Q | | 1 | 2 | 3 | 4 | 5 |
|---|--|----|---|---|----|----|
| 1 | Teaching large and small groups | 4 | 1 | 3 | 8 | 24 |
| 2 | Teaching in clinical setting | 10 | 5 | 1 | 7 | 17 |
| 3 | Facilitating and managing learning | 2 | 5 | 1 | 13 | 19 |
| 4 | Planning Curriculum Development | 2 | 2 | 8 | 15 | 13 |
| 5 | Developing learning resources | 0 | 5 | 7 | 13 | 15 |
| 6 | Assessing learners | 3 | 3 | 3 | 15 | 16 |
| 7 | Evaluating courses and conducting research | 1 | 2 | 5 | 20 | 12 |
| 8 | Understanding of educational principles | 2 | 3 | 4 | 13 | 18 |
| 9 | Developing managerial and communication skills | 3 | 2 | 4 | 15 | 16 |

Table 4: Which of the following areas do you need more training.

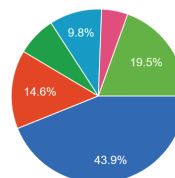
| | | Yes | May Be | No | Needed |
|----|-------------------------------------|-----|--------|----|--------|
| 1 | Large group teaching | 4 | 7 | 29 | 11 |
| 2 | Small group teaching | 3 | 7 | 30 | 10 |
| 3 | Assessment and Learning | 8 | 15 | 17 | 23 |
| 4 | E-learning | 15 | 15 | 10 | 30 |
| 5 | Educational research | 18 | 18 | 4 | 36 |
| 6 | Blackboard | 12 | 14 | 14 | 26 |
| 7 | Blueprinting | 22 | 15 | 3 | 37 |
| 8 | Item analysis | 24 | 12 | 4 | 36 |
| 9 | Quality assurance | 19 | 15 | 6 | 34 |
| 10 | Dealing with slow learners | 12 | 19 | 9 | 31 |
| 11 | Others [Please specify in comments] | 2 | 8 | 30 | 10 |

Designation
41 responses



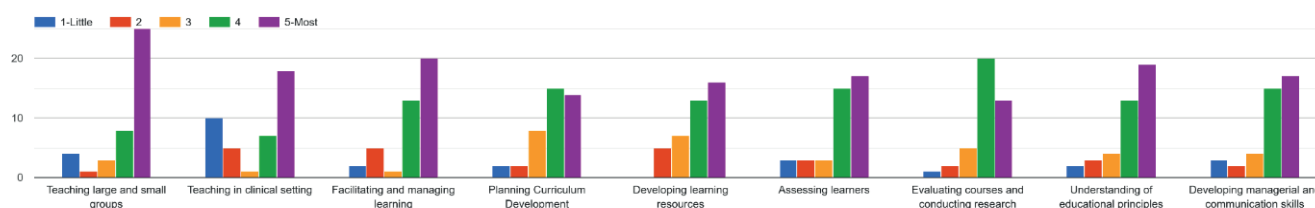
● Demonstrator
 ● Lecturer
 ● Assistant Professor
 ● Associate Professor
 ● Professor
 ● Associate Professor

Department/Specialty
41 responses

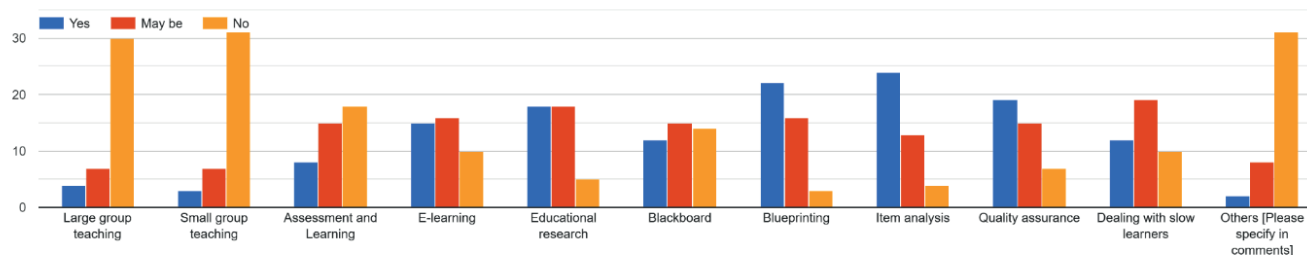


● Biomedical Sciences
 ● Clinical Neurosciences
 ● Family and Community Medicine
 ● Internal Medicine
 ● Medical Education
 ● Obstetrics and Gynecology
 ● Pediatrics
 ● Surgery

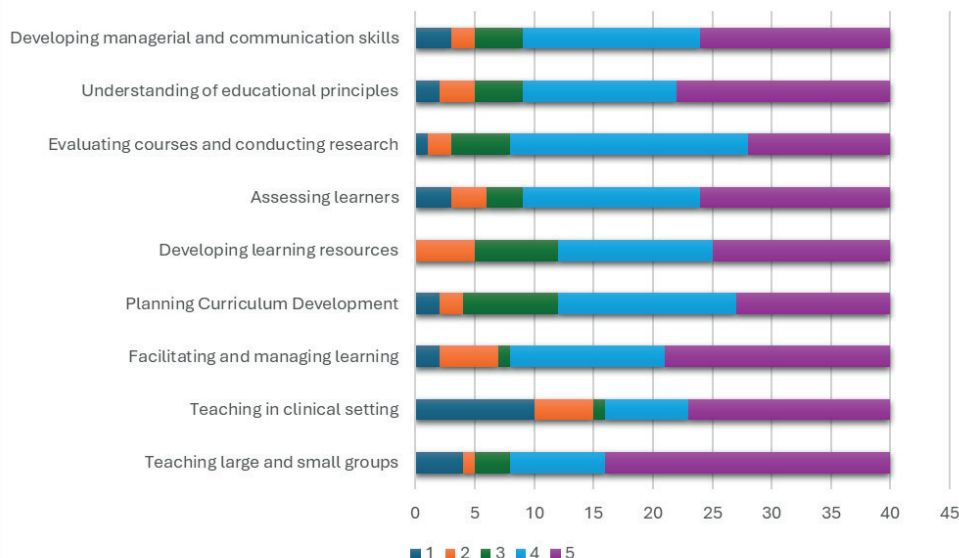
Please rate the competencies listed below, in terms of their importance and your needs in that area on a Five point scale given below.

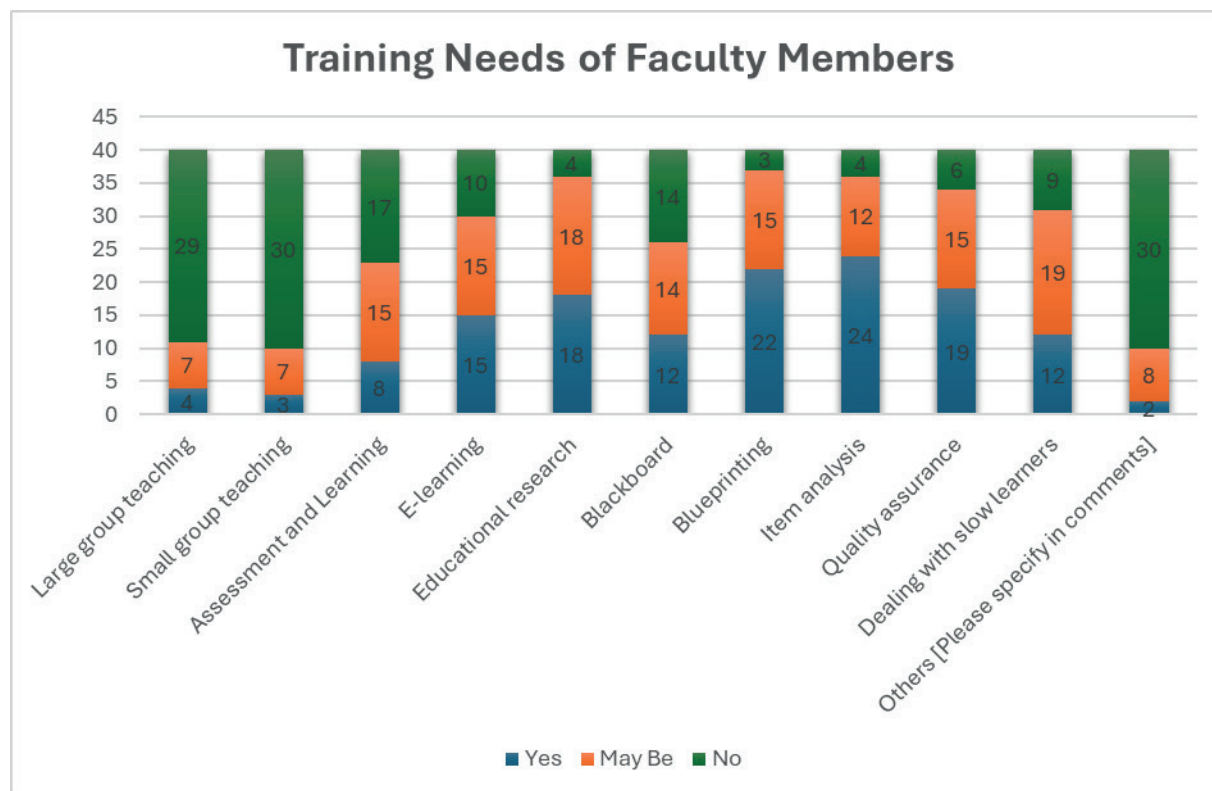


Which of the following areas do you need more training.



Important and needed





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