

Creating teaching dynamics with In-house Faculty conclaves – a longitudinal study

Dr. Anitha D¹, Dr. Jeyamala C², Dr. Abirami A M³, Dr. Thiruvengadam S J⁴

¹Department of Applied Mathematics and Computational Science, Thiagarajar College of Engineering, Madurai, Tamil Nadu

^{2,3}Department of Information Technology, Thiagarajar College of Engineering, Madurai, Tamil Nadu

⁴Department of Electronics and Communication Engineering, Thiagarajar College of Engineering, Madurai, Tamil Nadu

¹anithad@tce.edu

²jeyamala@tce.edu

³abiramiam@tce.edu

⁴sjtece@tce.edu

Abstract— Faculty conclaves serve as critical platforms for academic discourse and networking, making them pivotal in shaping the future of educational institutions. These conclaves enable the sharing of best practices and introduction of innovative academic practices. The method of conduct of the faculty conclaves plays important role in their impact on the participants. Hence, it is mandatory to do an impact analysis of these conclaves to analyse the changes created in teaching learning practices. This research paper presents a comprehensive analysis of two consecutive faculty conclaves held in 2022 and 2023 in our institution, aiming to discern the evolving dynamics in teaching among the teachers participated in the same. This study employs a quantitative analysis incorporating surveys and observations to investigate the dynamic created by the faculty conclaves over time. In the first conclave (2022), we identified several prominent themes including Technology enabled Active & Collaborative learning, Experiential learning, innovative assessment, and virtual lab conduct. These discussions laid the foundation for the subsequent year's conclave (2023) with more focused theme of Project Based Learning (PBL), innovative assessment and new initiatives in lab conduct. Our findings reveal a shift towards more collaborative and technologically oriented discussions in the second conclave, emphasizing the importance of adaptability and innovation in higher education. This research highlights the importance of faculty conclaves as spaces for continuous improvement in higher education institutions and underscores their role in responding to the ever-changing educational landscape. Furthermore, the paper discusses the recommendations received in specific teaching areas and thereby creating an insight for the next conclave in year 2024.

Keywords— Faculty conclave; New Pedagogy ; Teaching dynamics; Faculty expertise; Collaboration.

JEET Category—Research

I. INTRODUCTION

In the continuous improvement process adopted in higher education, academic institutions face an unceasing demand for innovation, excellence, and adaptability. The faculty, as the backbone of these institutions, are entrusted with their role that extends beyond traditional teaching; they are also researchers, mentors, and guides. In this dynamic environment, where knowledge is constantly expanding and pedagogical methods are evolving, faculty members need to implement effective pedagogical activities, constantly update their teaching skills and develop pedagogical professionalism (Ridei, 2021), which are termed collectively as teaching dynamics. A platform is necessary for them to develop the teaching dynamics, where they can come together to share ideas, engage in meaningful discourse, and take up ideas to implement in future. They need to get trained in the evolving teaching learning frameworks and innovative pedagogical techniques. A Faculty Conclave is such a structured gathering of faculty members, administrators, and sometimes external experts with the aim of fostering collaboration, sharing research findings, and discussing critical issues in academia. Azorin (2020) has pointed out that many education systems are turning their attention to networking as a way of improving teaching and learning. One of the paramount benefits of Faculty Conclaves is their ability to promote collaboration among faculty members from diverse disciplines. The multidisciplinary approach to problem-solving is increasingly crucial in addressing complex societal challenges. Faculty Conclaves offer an ideal space for educators to share best practices, discuss pedagogical innovations, and learn from each other's successes and failures. This professional development aspect not only benefits faculty members but also translates into improved learning experiences for students.

This paper was submitted for review on August 31, 2023. It was accepted on November 15, 2023.

Corresponding author: Anitha D, Department of Applied Mathematics and Computational Science, Thiagarajar College of Engineering, Tamil Nadu, India.

Address: Thiagarajar College of Engineering, Thiruparankundram, Madurai, India. Pin: 625 015 (e-mail: anithad@tce.edu).

Copyright © 2024 JEET.

Further, these conclaves pave the way for mentorship in achieving teaching learning excellence. As outlined by Mullen & Klimaitis (2021) in their review on mentorship, mentorship is a fundamental aspect of academic life and faculty members, especially early-career researchers, benefit immensely from interactions with experienced colleagues. Faculty conclaves promote leadership and communication skills among the faculty. They contribute significantly to the development and quality assurance of academic institutions. They serve as a platform for evaluating existing programs, discussing accreditation standards, and aligning institutional goals with evolving educational trends. Recent studies by Neumann et al. (2021) highlight the importance of ongoing quality assurance mechanisms in higher education. Faculty Conclaves, through their discussions and deliberations, facilitate the implementation of effective quality assurance measures. The Faculty Development Committee of BILPOC institution facilitates the establishment of mentoring clusters with faculty conclaves and has realized that faculty who never crossed paths before are now collaborating on major grants and the institution is becoming a well-known and highly recognized community and university organization. (Serrano et al., 2023).

It is obvious that faculty conclaves are important in the context discussed earlier. However, the method of conduct of such conclaves has a greater impact on the effect that these forums create. Methodical conduct of any faculty development programmes shall result in best outcomes in terms of learning by the participants and the satisfaction index (Thiruvengadam et al., 2021). The conclaves are expected to create teaching dynamics among faculty members in the perspective of good high satisfaction in attending the conclaves and improved teaching learning. There shall be good practices in conducting any FDPs including the design of outcomes, measurement of outcomes, followed by the analysis of assessment and feedback (Chuchalin et al., 2016). It was concluded from a research study that the willingness of the faculty members for knowledge sharing was affected by work culture and organizational commitment (Pietsch, Tulowitzki & Cramer, 2022). These type of collaborative training opportunities enables the faculty to acquire leadership skills and subsequently leads to institutional growth (Lee et al., 2021). The ideas that are presented in the faculty conclaves shall be realized and the fairness of this realization stands as evidence to prove that these programs lead to continuous improvement in creating teaching dynamics among faculty. This paper is such a reflection that ensures the improvement of teaching learning process as a result of having a methodical conduct of faculty conclaves.

II. RESEARCH QUESTIONS

As per the discussion on the need of this study, the following research questions have been formulated for the research.

RQ1. How can the responses be interpreted to find the teaching dynamics created after the two faculty conclaves?

RQ2. How can the responses from the participants be interpreted for finding satisfaction of participants and recommending changes in the future programs to enhance the faculty competence?

III. METHODS AND MATERIALS

The two faculty conclaves are conducted in subsequent years, first in March 2022 and the second in March 2023. This article refers these conclaves with the year in the subsequent sections. Faculty members who have teaching experience less than 5 years inside the institution are nominated to be mandatory participants of the conclave in addition to the senior faculty members in both the conclaves. Table I gives the number of participants from each department. Table II gives a comparison of method of conduct followed for both the conclaves. Ideas and suggestions received in conclave'2022 have been realized in conclave'2023 and the detailed discussion on the changes is presented in discussion section. Conclave'2022 has several prominent themes including Technology enabled Active & Collaborative learning, Experiential learning, innovative assessment, and virtual lab conduct. The discussions on the conclave laid the foundation for the subsequent year's conclave'2023 with more focused theme of Project Based Learning (PBL), innovative assessment and new initiatives in lab conduct.

TABLE I
PARTICIPANT DETAILS

| Department details | 2022 | 2023 |
|--|-------------|-------------|
| | Participant | Participant |
| AMCS | 4 | 6 |
| Arch | 11 | 10 |
| Chemistry | 1 | 3 |
| Civil | 13 | 4 |
| CSBS | 2 | 3 |
| CSE | 10 | 6 |
| EEE | 5 | 2 |
| ECE | 18 | 7 |
| Maths | 7 | 7 |
| IT | 10 | 8 |
| Mechanical | 8 | 1 |
| Mechatronics | 4 | 4 |
| English | 5 | 3 |
| Physics | 0 | 2 |
| No. of Total participants who attended | 98 | 66 |
| No. of papers presented | 28 | 19 |
| No. of submissions received | 28 | 35 |

TABLE II
IDEAS FOR THE PROGRAM CONDUCT IN 2022 AND 2023

| Idea/Conduct method | 2022 | 2023 |
|---|--|-------------------------------|
| Initial scrutiny of submissions | N | Y |
| Evaluators of presentation | Internal experts including Dean & HoDs | Internal experts and audience |
| Usage of ICT tool in creating engagement and evaluation | Nil | Mentimeter |
| Announcement of winners on the day | Y | Y |
| Cash Awards | Y | Y |
| Introduction of earlier achievements in academic process | N | Y |
| Common discussion session other than presentation time | N | Y |
| Discussion of opportunities to convert the presentation to Engineering Education Research (EER) paper | Y | Y |
| Feedback collection and analysis | Y | Y |

The presentations are evaluated with four major parameters in both the conclaves: 1. Organization 2. Content with

innovative experiment methodology and significant outcomes
3. Presentation skills 4. Ability to answer questions. Figure 1 presents the detailed rubrics for evaluation.

The feedback questionnaire for both the conclaves has been designed with three important factors that are essentially be addressed in any such academic gathering representing the teaching dynamics:

- 1) Organization of the programme
- 2) Learnings happened from the programme
- 3) Level of takeaways from the presentations shared.

These 3 factors are observed with 4-point Likert Scale (Excellent -4, Very Good-3, Good-2, Satisfied-1). Also, there are open response questions for getting the key take away from the programs, that shall be used to assess the teaching dynamics that the faculty has acquired and the suggestions for a better conduct of the programme. A Satisfaction Index percentage (SI) is calculated using the formula based on a research study (Kavitha & Anitha, 2016) with the formulated 4-point scale questionnaire.

THIAGARAJAR COLLEGE OF ENGINEERING, MADURAI
INTERNAL QUALITY ASSURANCE CELL AND OFFICE OF THE DEAN ACADEMIC PROCESS
FACULTY CONCLAVE - 2022
SCORING RUBRICS FOR PRESENTATIONS

| Level of Achievement | Excellent 16-20 points | Good 11-15 points | Marginal 6-10 points | Inadequate 0-5 points |
|---------------------------------|--|--|--|--|
| Organization | <ul style="list-style-type: none"> • Well thought out with logical progression • Significance clearly stated • Appropriate Content level | <ul style="list-style-type: none"> • Talk easy to follow • Significance clearly stated • Content level not always appropriate | <ul style="list-style-type: none"> • Talk somewhat disorganized • Significance somewhat unclear • Includes some inappropriate content | <ul style="list-style-type: none"> • Talk difficult to follow • Does not understand significance of work • Inadequate content |
| Technical Content of the report | <ul style="list-style-type: none"> • Has advanced understanding of the experimental approach • Critically evaluates results, methodology and conclusions | <ul style="list-style-type: none"> • Has basic understanding of the experimental approach • Limited evaluation of results, methodology and conclusions | <ul style="list-style-type: none"> • Description of experimental approach somewhat confusing • Results and conclusions stated but not critically evaluated | <ul style="list-style-type: none"> • Does not understand the experimental approach • Does not understand conclusions or recognize implications for future work |
| Style/Delivery | <ul style="list-style-type: none"> • Uses time wisely • Speaks with good pacing and enthusiasm • Does not read information • Uses engaging toward appropriate vocabulary | <ul style="list-style-type: none"> • Speaks well, but often repeats comments • Exhibits few disfluencies ("ahs", "uhms", etc.) • Uses good vocabulary and tone | <ul style="list-style-type: none"> • Presentation poorly timed • Some hesitation and uncertainty are apparent • Exhibits many disfluencies • Monotone and nonengaging delivery | <ul style="list-style-type: none"> • Presentation poorly timed • Hesitation and uncertainty are very apparent • Speaks too quietly or quickly for audience to hear and understand |
| Ability to Answer Questions | <ul style="list-style-type: none"> • Anticipates questions • Understands questions • Can integrate knowledge to answer questions • Thoroughly responds to questions | <ul style="list-style-type: none"> • Does not anticipate questions • Understands questions • Can integrate knowledge to answer questions • Thoroughly responds to most questions | <ul style="list-style-type: none"> • Does not answer questions • Makes an effort to address question • Can address some questions • Often responds poorly to questions | <ul style="list-style-type: none"> • Either makes no effort to respond to questions or does so poorly |

Fig. 1. Rubrics for evaluation

$$SI = \sum_{j=1}^4 \frac{\text{No. of feedback having } j\text{th scale } X j}{\text{Total no. of feedback } X 4} \times 100 \quad (1)$$

Analysis of the responses for the open-ended questions are done with NLP toolkit of python. The key take aways are represented with word clouds that shows the frequently occurring word or take away. Top 20 key take aways are selected to form the word cloud. From the suggestions provided by the participants, more frequently occurring bigrams (two continuous words) are taken as they provide more meaning than single words (Anitha et al., 2023). Sentiment analysis of open-ended responses (Elbagir & Yang, 2019) is performed to analyse the key take aways to understand whether the teaching dynamics created among the faculty is positive or negative. Sentiment analysis provides sentiment scores as a metric for measuring customer sentiment that can range from -100 to

+100, where 100 is the most positive possible outcome for a positive comment and -100 is for the most negative statement. All the statistical analysis and natural language processing are performed with python.

In addition to the feedback obtained from the conclave participants, a survey was given to the participants to get feedback from their respective students. The survey covers the basic aspects of teaching learning process with the parameters as mentioned in Table III with a Likert scale of 1 to 4 where 1 is low and 4 is high. There were 1896 responses in year 2022 and 1859 responses in year 2023 from the undergraduate students. Similarly, 169 post graduate students recorded their responses in 2022 and 199 of them recorded in 2023. Satisfaction index is calculated for the student survey as per Equation 1 and normalized to a maximum value of 4.

TABLE III
SURVEY QUESTIONNAIRE FOR STUDENTS

| S. No. | Parameter |
|--------|--|
| 1 | How much of the syllabus was covered in the class? |
| 2 | The instructors adopt active and collaborative learning strategies like Think Pair Share, Flipped Classroom, Problem Based Learning etc. |
| 3 | The instructors use a variety of ICT Tools and Learning Management Systems like Moodle, Canvas, Google Classroom are effectively used for sharing of resource materials, conducting assignments, discussions and quizzes |
| 4 | Instructors are readily available for clarification of doubts and for personal mentoring. |
| 5 | The tasks given in assignments have helped in enhancing your problem solving and communication skills. |
| 6 | The assessments are designed and evaluated appropriately to assess higher order thinking skills |
| 7 | The assessments provided the right level of challenge and an opportunity for collaborative/co-operative learning |
| 8 | Communication, Critical thinking, Collaboration, Creativity are given importance in assessments |

Research Question 1 is answered with all the above-mentioned natural language processing techniques. Further extraction of data relevant to teaching learning practices in student satisfaction survey obtained from the students from staff achievements. In addition to these, the faculty achievements in terms of Education practices are accounted. Research Question 2 is answered with the feedback survey analysis and the observations from the open-ended response.

IV. RESULTS

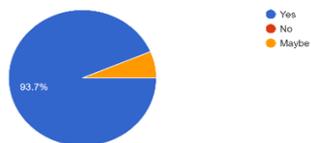
As this research study is quantitative, the results from the feedback questionnaire are considered to get the teaching dynamics created among teachers after the conclave. The responses for the closed and open-ended questions are considered to obtain interpretable results and get into meaningful discussion. Table IV shows the feedback responses for the two programmes.

TABLE IV
FEEDBACK RESPONSES

| Particulars | 2022 | 2023 |
|---|-------|-------|
| No. of total participants | 98 | 66 |
| No. of total participants who gave feedback | 63 | 57 |
| % responded for feedback | 64.29 | 86.36 |

From the feedback survey of the two conclaves, the responses are recorded as shown in Figures 2 to 5. Figures 2 to 5 contain the responses for the same parameter for both the conclaves, in which conclave'2022 had 63 responses and conclave'2023 had 57 responses.

Would you recommend faculty conclave in future to your colleague
63 responses



Would you recommend Faculty Conclave in future to your colleague
57 responses

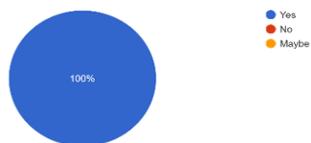
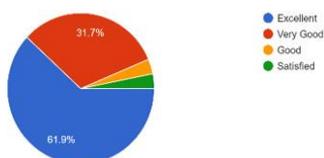


Fig. 2. Recommendation of the faculty

Organization of Faculty Conclave
63 responses



How would you rate the arrangements made for Faculty Conclave
57 responses

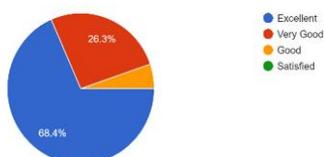
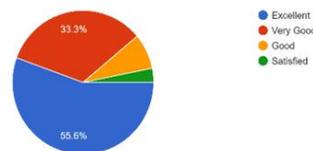


Fig. 3. Feedback of conclave organization

How would you rate the session
63 responses



How would you rate the presented topics
57 responses

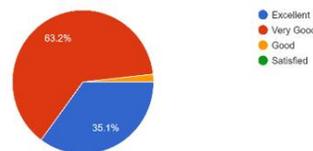
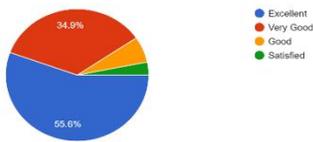


Fig. 4. Feedback on the presented topics

How would you rate your expectations from the Faculty Conclave
63 responses



How would you rate your learning from the Faculty Conclave
57 responses

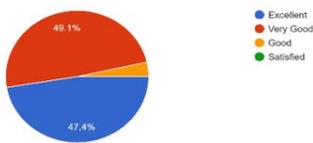


Fig. 5 Learning from the conclaves

The most positive responses are labelled as Excellent and Very Good. Table V shows the consolidated most positive responses posted for both the conclaves considering only the top two positive responses (Excellent and very good). The percentage of positive responses are listed in Table V. A satisfaction index for the three major parameters is calculated according to Equation 1 and is listed in Table VI for the three major parameters taken.

TABLE V
PERCENTAGE OF POSITIVE RESPONSES

| Feedback Parameter having positive responses | 2022 | 2023 |
|--|------|------|
| Recommendation of faculty conclave | 93.7 | 100 |
| Organization of faculty conclave | 93.6 | 94.7 |
| Usefulness of presented topics | 88.9 | 98.3 |
| Expectations satisfied | 90.5 | 96.5 |

TABLE VI
SATISFACTION INDEX FOR PARAMETERS

| Parameters | 2022 | 2023 |
|-------------------------|-------|-------|
| Organization | 88.09 | 90.79 |
| Learnings | 85.71 | 85.96 |
| Rating of presentations | 85.31 | 83.33 |

Average 86.37 86.7

Next to the Likert scale questions, the responses for the open-ended responses are processed with NLP toolkit. The key take aways obtained from the participants of both the conclaves are processed and represented as a word cloud in figures 6 and 7. Further, Sentiment analysis is performed from the suggestions for improvement. Labelling of positive, negative, and neutral is recommended for the statements. The sentiment analysis scores for 2022 conclave suggestions is -5.3 and for 2023, it is 14.4.

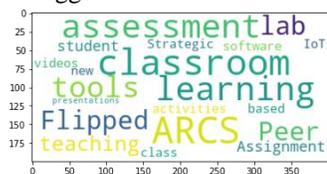


Fig.6 Open-end responses for key takeaways from 2022 conclave

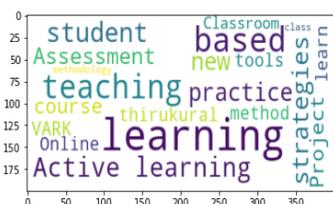


Fig. 7 Open-end responses for key takeaways from 2023 conclave

Also, the open-end responses for Suggestions are taken for generating bi-grams. The top 10 bigrams are identified and tabulated in Table VII.

TABLE VII
TOP 10 BIGRAMS FROM SUGGESTIONS

| S. No | 2022 | 2023 |
|-------|---------------------|-----------------------|
| 1 | Presentation time | Dedicated FDP |
| 2 | Innovative methods | Interactive sessions |
| 3 | 30 presentations | Newcomers session |
| 4 | Every semester | Journal writing |
| 5 | Parallel Sessions | Active learning |
| 6 | Single stretch | Best Practices |
| 7 | Engaging schedule | Every year |
| 8 | Laboratory sessions | Education conference |
| 9 | Best Practices | Poster presentations |
| 10 | Reduce number | Collection repository |

In addition to all these results from the participants' feedback, the student satisfaction index on teaching learning process is calculated and tabulated in Table VIII.

TABLE VIII
STUDENT SATISFACTION INDEX

| S. No. | Parameter | 2022 | | 2023 | |
|--------|---|------|------|------|------|
| | | UG | UG | PG | PG |
| 1 | How much of the syllabus was covered in the class? | 3.64 | 3.64 | 3.64 | 3.8 |
| 2 | The instructors adopt active and collaborative learning strategies like Think Pair Share, Flipped Classroom, Problem Based Learning etc. | 3.32 | 3.32 | 3.32 | 3.48 |
| 3 | The instructors use a variety of ICT Tools and Learning Management Systems like Moodle, Canvas, Google Classroom are effectively used for | 3.6 | 3.52 | 3.6 | 3.64 |

| | | | | | |
|---|--|------|------|------|------|
| | sharing of resource materials, conducting assignments, discussions and quizzes | | | | |
| 4 | Instructors are readily available for clarification of doubts and for personal mentoring. | 3.6 | 3.6 | 3.6 | 3.72 |
| 5 | The tasks given in assignments have helped in enhancing your problem solving and communication skills. | 3.48 | 3.52 | 3.48 | 3.56 |
| 6 | The assessments are designed and evaluated appropriately to assess higher order thinking skills | 3.48 | 3.52 | 3.48 | 3.56 |
| 7 | The assessments provided the right level of challenge and an opportunity for collaborative/co-operative learning | 3.44 | 3.48 | 3.44 | 3.56 |
| 8 | Communication, Critical thinking, Collaboration, Creativity is given importance in assessments | 3.4 | 3.04 | 3.4 | 3.6 |

V. DISCUSSION

From the results presented in the previous section, an extensive discussion can be made. Table I shows the list of participants from every department. Though the total number of participants is lesser in 2023 than 2022, it is because of the strategy of filtering the initial submission of the papers to be presented in the conclave. From the top bigrams represented in Table VI, 2022 participants have expressed their concern over long stretching presentations and need parallel presentations. Hence, conclave 23 is planned to be conducted with lesser number of presentations and so, an initial filtering of submissions has been made. Also, there is a representation from each department in 2023 but this is not the case in 2022, where there is no contribution from Physics department. Also, an introductory session of introducing earlier teaching learning achievements including EER papers, online course development, completion of International Engineering Educator Certificate programme and Ing.Paed.awards is created for 2023 which is not in 2022 to motivate the faculty towards developing effective teaching learning process. In the 2022 conclave, the entire time was contributed to presentations which are evaluated by an expert panel with a rubrics for evaluation. But in 2023, to showcase the ICT tools for effective student engagement, mentimeter is used to accommodate the entire audience as evaluators of the presentations in addition to the expert panel. Figure 8 illustrates a sample usage of mentee in evaluating the one of the presentations. These are the highlighting changes that are made from 2022 to 2023.



Fig. 8 Mentimeter evaluation by audience

This section provides the necessary answers to the research questions framed for this research study.

RQ1. How can the responses be interpreted to find the teaching dynamics created after the two faculty conclaves?

To answer to this research question, this research study takes different instances of feedback responses. The feedback response percentage is one of the indicators that faculty liked to have such programs and be updated in improving their teaching dynamics. As mentioned in Table III, 2022 conclave had feedback responses from 64.29% of participants while 2023 had feedback responses from 86.36% of participants. This shall be treated as one of the indicators of the success of any program as mentioned by a research work that considers the feedback count as a part of success of MOOCs (Rodriguez, 2020). From the key take aways of the faculty conclaves as represented pictorially in figures 6 and 7 it is evident that there many takeaways which are closely related to effective teaching learning processes. The keywords that are very commonly mentioned in 2022 are *Flipped, ARCS, Peer assignment, lab assessment* while the keywords mentioned in 2023 are *active learning, VARK, assessment, tools, new tools, Project based learning*. These keywords are most relevant to the pedagogical techniques that are always on the limelight. Hence, it is understood that the participants are familiarized with the presentations and are ready to practice these techniques in their classrooms. From the sentiment analysis scores for key take-aways, -5.3 received for conclave'2022 indicates that the response of the participants is neutral. While the sentiment analysis score for conclave'2023 is 14.4, showing the positive alignment of the participants.

In addition to the data obtained from the feedback, the student satisfaction index is analyzed as given in Table VIII. All the parameters are rated high by the students. Only on collaboration and creativity, the staff members are given lesser index (3.04). As 2022 is much filled with the impact of online classes of 2021, the scores of students are higher in 2022 than 2023 in collaborative activities. Hence in future, the focus may be on building collaborative project-based learning capacity among the faculty members. It is found that there is a mild decline in the index from 3.6 to 3.52 for the integration of ICT tools and Learning Management Systems in teaching. The same reason shall be perceived for this too. However, this decline gives an indication of shifting the focus to reviving the use of ICT tools. Interestingly, the postgraduate students find every aspect to be promising with good satisfaction index. This satisfaction index is again taken as a helpful indirect indicator for the teaching dynamics created with the faculty conclaves. Further there are additional developments in these two years on creating institutional online courses. 20 online courses have been developed and are offered to the institution students as a part of academic credit transfer scheme. Faculty conclaves provide a forum for sharing the best practices on creating such courses and project-based learning. These practices are also realized in the form of EER with an increase in number of papers published in EER. Nine papers are published in the year 2021-22 and 12 papers are published in the year 2022-23. Among these 7 papers have been conferred as best papers in

different presentation forums. The student satisfaction, EER publications and development of new pedagogical initiatives like online courses are considered as indirect parameters to show the teaching dynamics acquired in the institution via the conclaves and other supporting programs.

RQ2. How can the responses from the participants be interpreted for finding satisfaction of participants and recommending changes in the future programs to enhance the faculty competence?

This research question is answered with the results tabulated in Table V and Table VI. From Table V, it can be understood that the percentage of the most positive responses (Excellent / Very Good) is increased from 2022 conclave to 2023 conclave in all the feedback parameters that shows the increasing interest and satisfaction among the faculty members attending the conclave. 93.7% of the participants of 2022 conclave has recommended the program for the next year while 100% of participants of 2023 conclave has recommended the same. This is a direct indicator of the satisfaction reached by the participants. From the satisfaction index listed in Table VI, it is evident that the satisfaction index represents a highly satisfied state as mentioned in a work that uses satisfaction index to measure employee satisfaction (Shak & Noviza, 2019). Satisfaction index is much high in the parameter *organization of conclave* that shows a high confidence on conducting such programs followed by the learnings in the session. This depicts a high satisfaction rate in the learnings created by the conclaves.

When organizing such programs, continuous improvement becomes a necessity. From Table VII that shows the top 10 bigrams of the suggestions for both the conclaves, the discussion shall be taken to the next level for recommending appropriate measures to be improved according to the expectations of the participants. From the bigrams obtained for the conclave'2022, it shall be inferred that the participants are more concerned about the larger number of presentations which consumed most of their time without any interactivity. It was a long stretching exercise for them which was suggested to be avoided. Also, they have suggested for parallel sessions to avoid such long exercises. They also specified the need of laboratory sessions for the ICT based tools and request for methodical lab conduct. They had a demand of organizing it every semester to introduce innovative methods. With these considerations, the conclave'2023 has been organized with lesser selective presentations in the theme of Project-based learning, assessments and lab conduct. The audience were completely engaged with Mentimeter. Parallel sessions are not planned as every presentation may give meaningful take aways from the presentation. While analyzing the bigrams of conclave'2023, there is a different perspective. There is a demand for sessions, especially for newcomers for active learning and journal writing. In addition to the paper presentations, poster presentations are recommended which shall be realized in conclave'2024. The need of having a collection repository of all these presentations is emphasized which is immediately done by sharing the proceedings of the conclave presentations. Mentorship on preparing EER articles for education conferences is solicited and the same shall be extended by forming EER group within the institution. Further

from the local interactions in the conclave, the challenges of incorporating new pedagogy in mathematics and programming papers are discussed leading to an interesting theme for the next conference.

From the discussion of the results, it is evident that the conclaves create the teaching dynamics and with appropriate organization and mentoring, the teaching learning process of any institution can be scaled up to the next level.

VI. CONCLUSION

This research study is performed to find the impact of faculty conclaves in creating teaching dynamics among the faculty participants. Two research questions on ensuring the teaching dynamics and the satisfaction of the participants have been answered with statistical analysis and natural language processing methods. The results are very promising that these conclaves, when organized methodically, result in fruitful interactions and continuous improvement. Also, the responses can be processed to get meaningful recommendations to incorporate in the subsequent programs. Mentorship and leadership skills are fine tuned with such conclaves along with the pedagogical skills. Hence the conduct of such conclaves always results in productive growth. The recommendations observed from such conclaves shall be seriously considered in the organization of subsequent programs and hence, they serve to address the needs of the faculty members.

The future conclaves shall be conducted considering the suggestions obtained from bigrams. Major changes that shall be undertaken are inclusion of poster presentations and exclusive interactive sessions focused on different themes identified.

ACKNOWLEDGMENT

We thank all our faculty members and students who participated in this research study and recorded their responses in the survey

REFERENCES

- Anitha, D., Kavitha, D., Jeyamala, C., & Sharmila, P. (2023). Lessons from a Blended Learning Implementation—What to do and what not to do?. *Journal of Engineering Education Transformations*, 36
- Azorín, C. (2020). Leading networks. *School Leadership & Management*, 40(2-3), 105-110.
- Elbagir, S., & Yang, J. (2019, March). Twitter sentiment analysis using natural language toolkit and VADER sentiment. In *Proceedings of the international multiconference of engineers and computer scientists* (Vol. 122, p. 16).
- Harris, A., & Jones, M. (2019). Teacher leadership and educational change. *School Leadership & Management*, 39(2), 123-126.
- Ishak, A., & Noviza, M. B. (2019, May). Analysis of employees satisfaction index to management of transportation facilities office using importance performance analysis (IPA): case study. In *IOP Conference Series: Materials Science and Engineering* (Vol. 505, No. 1, p. 012019). IOP Publishing.
- Kausar, S., Mohsin, M. N., & Saadi, A. M. (2022). Willingness to Knowledge Sharing: Intervention of Work Culture and Organizational Commitment. *Pakistan Journal of Distance and Online Learning*, 6(1).
- Kavitha, D., and D. Anitha. "Project Based Learning Using ICT Tools to Achieve Outcomes for the Course' Microcontrollers Based System Design': A Case Study." 2016 IEEE 4th International Conference on MOOCs, Innovation and Technology in Education (MITE). IEEE, 2016
- Lee, A., Corneille, M., Jackson, K. T., Banks, B., & Allen, S. (2021). Pathways to institutional transformation at HBCUs: recommendations from HBCU Black women STEM Faculty. *SN Social Sciences*, 1, 1-18.
- Mullen, C. A., & Klimaitis, C. C. (2021). Defining mentoring: a literature review of issues, types, and applications. *Annals of the New York Academy of Sciences*, 1483(1), 19-35.
- Pietsch, M., Tulowitzki, P., & Cramer, C. (2022). Innovating teaching and instruction in turbulent times: The dynamics of principals' exploration and exploitation activities. *Journal of Educational Change*, 1-33.
- Ridei, N. (2021). Analysis of professional competencies in the characteristics of the teacher of the future: global challenges of our time. *Futurity Education*, 1(1), 22-32.
- Rodriguez, B. C. P. (2020, July). Success Indicators for Massive Open Online Courses (MOOCs). In *2020 IEEE 20th International Conference on Advanced Learning Technologies (ICALT)* (pp. 39-41). IEEE.
- Serrano, C. A., Vasquez, E., Bennett Gayle, D., Enriquez, J., Dirlam, J., & Yuan, X. J. (2023). Creating a Model for Faculty Success: Faculty Advancement Initiative for Black, Indigenous, Latinx, and People of Color at the University at Albany. *Journal of Indigenous Research*, 11(1), 2.
- Thiruvengadam, S. J., Baskar, S., Perumaal, S. S., Jeyamala, C., Anitha, D., & Prakash, R. R. (2021). Analysis of In-house training workshops for enhancing faculty competence in CDIO Implementation-A case study. *Journal of Engineering Education Transformations*, 34, 615-619.
- Wellford-Slocum, R. S. (2003). The Law School Student-Faculty Conference: Towards a Transformative Learning Experience. *S. Tex. L. Rev.*, 45, 255.