

# **Report and Recommendations**

## **on**

# **Student Satisfaction Survey Analysis**

**2023-24**

### **Introduction**

The Indian Institute of Space Science and Technology (IIST) located in Thiruvananthapuram is recognized as a Deemed to be University under Section 3 of the University Grants Commission (UGC) Act of 1956. It is an autonomous academic research institute under the Department of Space, Government of India. IIST is committed to continuous improvement in educational standards, and as part of this commitment, it regularly submits the Annual Quality Assurance Report (AQAR) while preparing for its forthcoming second cycle of accreditation by the National Assessment and Accreditation Council (NAAC), scheduled for 2024. The NAAC Peer Team Visit is anticipated to occur in 2025. In accordance with NAAC's guidelines, IIST conducts a mandatory Student Satisfaction Survey (SSS), which is designed to gather feedback from all students who participate in the end-of-semester examinations during the academic year. Prior to the survey, students receive detailed notifications outlining the schedule, including time slots, dates, and venues, along with guidelines and web links for easy access.

The SSS is conducted alongside feedback collection concerning various programs, courses, teaching methods, and other essential elements of the educational experience. The SSS survey aims to capture a broad spectrum of student opinions regarding critical aspects such as teaching effectiveness, learning experiences, evaluation processes, and the level of student support provided by the institution.

To ensure a thorough and accurate analysis of the collected data, a committee established by the Internal Quality Assurance Cell (IQAC) meticulously reviews the survey results. Following this analysis, a comprehensive report, along with specific recommendations, is prepared and submitted to the Director of IIST. This robust process plays a vital role in upholding and enhancing the quality of education offered at IIST. The report and its recommendations for the academic year 2023-2024 are hereby presented. A summary of basic information on students for the last 3 academic years are given below as a table.

### A comparative table of basic information on students during the period 2021-24

	Student Details	2021-2022	2022-2023	2023-2024
*	Total number of students(B.Tech/M.Tech/Ph.D) in the roll list of the institute	1097	1170	883
*	Total number of students(B.Tech/M.Tech/Ph.D) appearing for End semester(Even) Examinations.(Mandatory requirement for those who appear for exam)	568	855	741
*	Total number of students(B.Tech/M.Tech/Ph.D) who have given feedback	568	855	741
*	Percentage of students who responded to feedback	100%	100%	100%

## The Report

### Teaching

- The syllabus coverage is high at **98%** in 2021-2022 and 2022-2023. It is reduced to **89.1%** in 2023-24, still indicating that the institute maintains an effective curriculum management system.
- Teachers' Preparedness is **74.8%**, showing teachers' commitment to preparing lectures for better understanding students.
- The communication skill of faculty is very high and it is marked as 98 by the students showing the focused communication abilities of instructors.
- Teaching Effectiveness is very high, with **91%** indicating the potential of faculty members in teaching.
- The percentage of information dissemination is **79.7%**, which shows a better level of communication about students' expected competencies and outcomes to them.
- The percentage of teachers who illustrate concepts through examples and applications jumped to **94.5%** from **79%**, showing the efforts put forth by teachers in teaching and learning methodologies. Here

- Student-centric methods are high, but only **62%**, indicating a need for innovative teaching strategies to enhance student engagement.
- The use of ICT tools in teaching is also at **69.6%**, demanding further improvements in the Technology-based methodologies.
- Overall, Teaching-Learning Quality is very high, with **68.9%**, but there is enough room for improvement in specific areas as it is reduced by nearly **10%** compared to the last year.

### **Evaluation**

- Fairness in Evaluation is high, with **80.2%**, underlining students' faith in the assessment process.
- The percentage of teachers who promote discussion on students' performance is average and it is **48.8%**, emphasising the need to improve further student-teacher interaction on students' performance in assignments.
- Recognition of Student Strengths by teachers is only **53.7%**, indicating a need for teachers to identify, nurture and improve students' strengths.

### **Learning**

- The promotion of internships and field visits is average (**48.9%**) and hence demands efforts to enhance practical learning experiences.
- Teaching and Mentoring for Growth is average (**49.8%**), necessitating a holistic student development approach.
- Multiple Learning Opportunities are at **63.1%**, showing diverse learning avenues.
- Mentor Follow-Up and engagement with students is **57.2%**, demanding improvements in mentorship strategies.

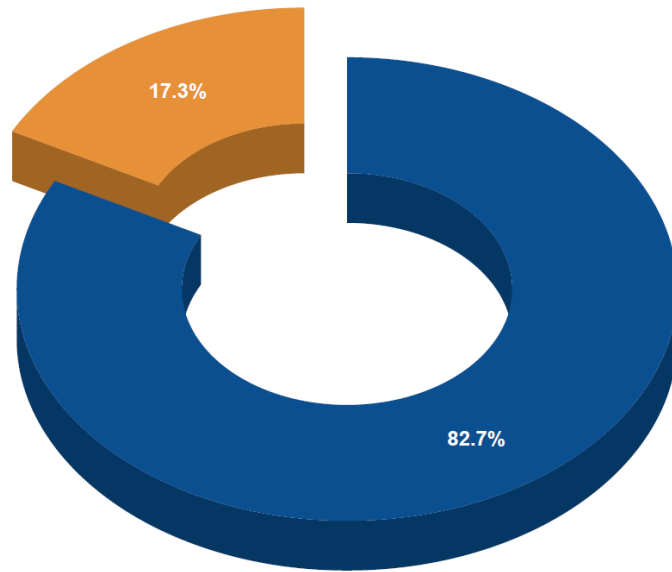
### **Student Support**

- Students' satisfaction with identifying weaknesses and the support to overcome them is precisely **45.4%**, and hence, a better support system is needed to address student weaknesses and remedies for them.
- Student Participation in Quality Improvement is pretty good (**56.8%**), but measures must be taken to enhance teaching-learning processes.
- Encouragement of Extracurricular Activities is average (**45.5%**) and must address students' overall development in future.
- The inculcation of soft skills in teaching-learning is at **54.7%** and has to be improved significantly.

The above statements are made from the data collected from the students who write the end semester examination in December 2024. The graphical representation from the data is given below.

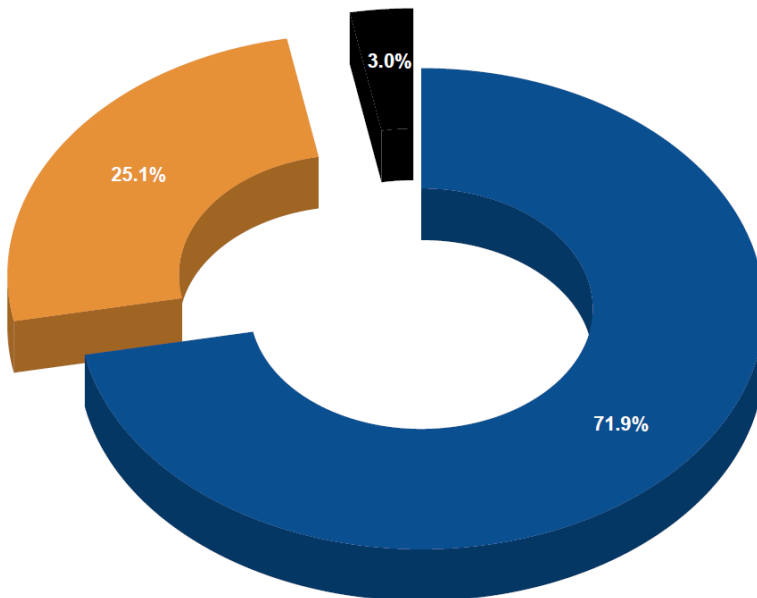
## General

### Gender



- Male
- Female

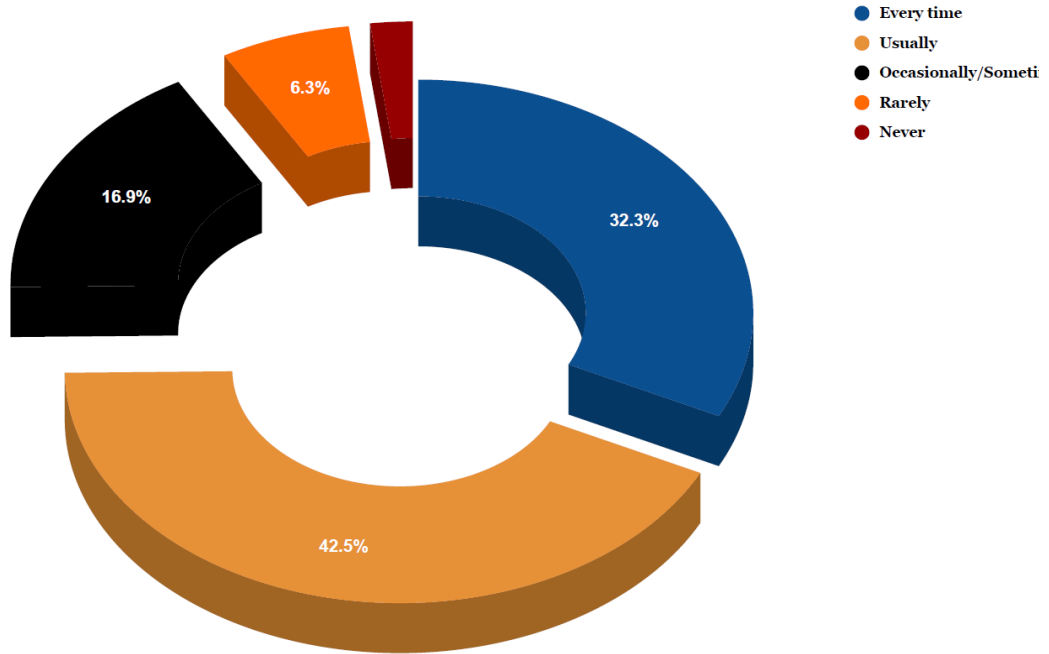
### Pursuing Degree



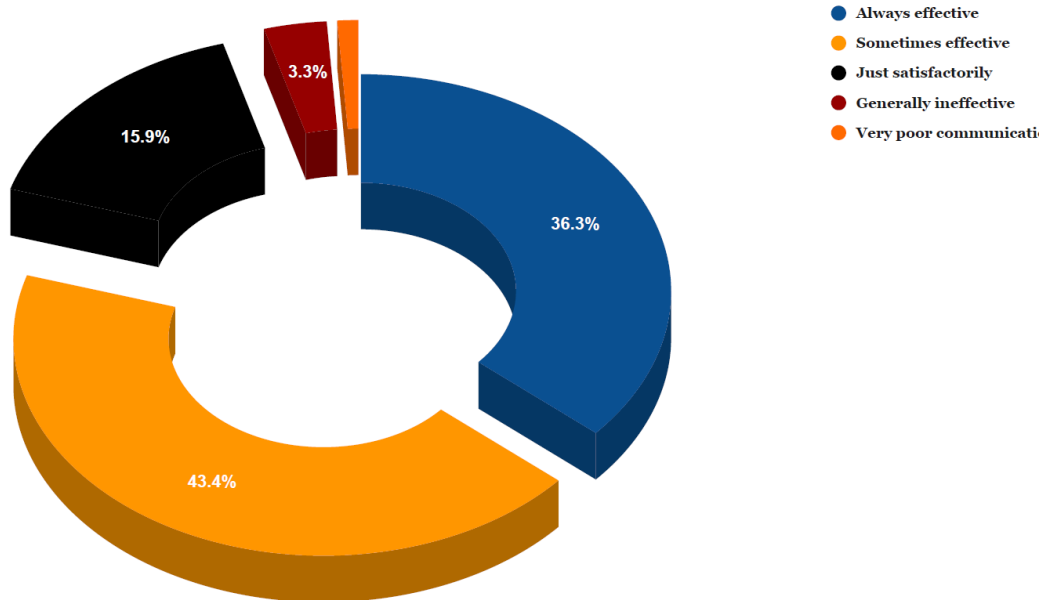
- Bachelors
- Master's
- Doctorate

## Teaching

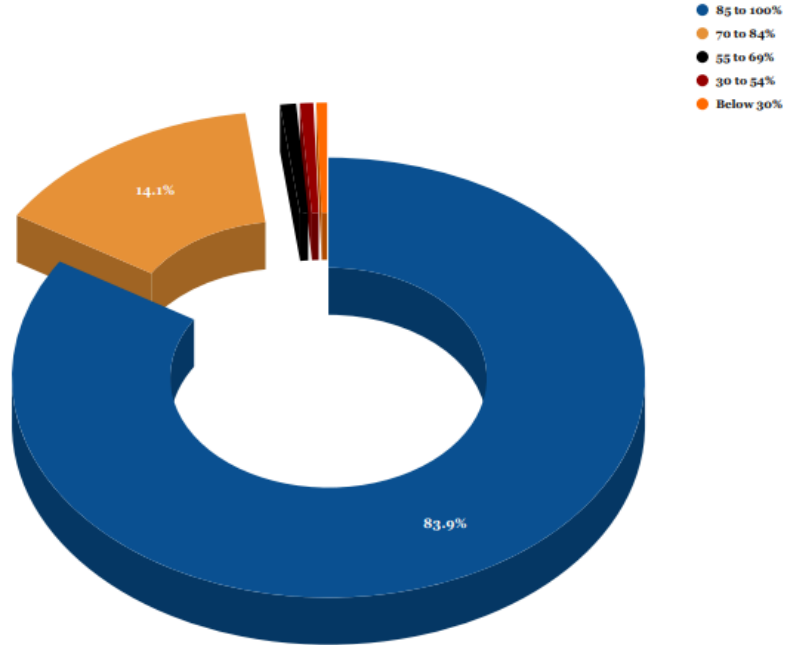
Illustration of concepts through examples and application by teachers



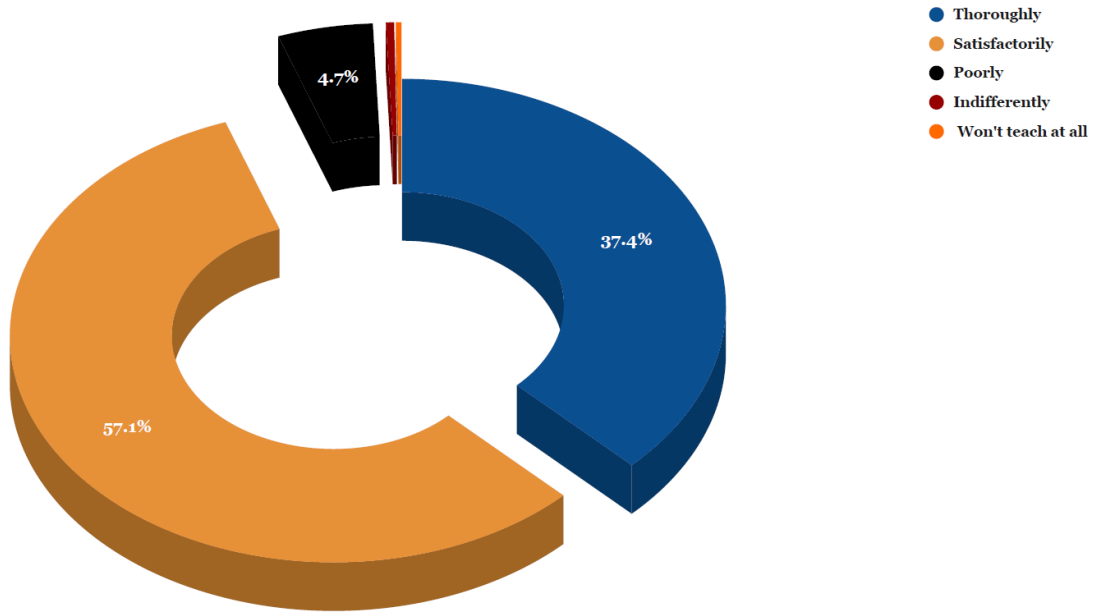
Communication skills of teachers



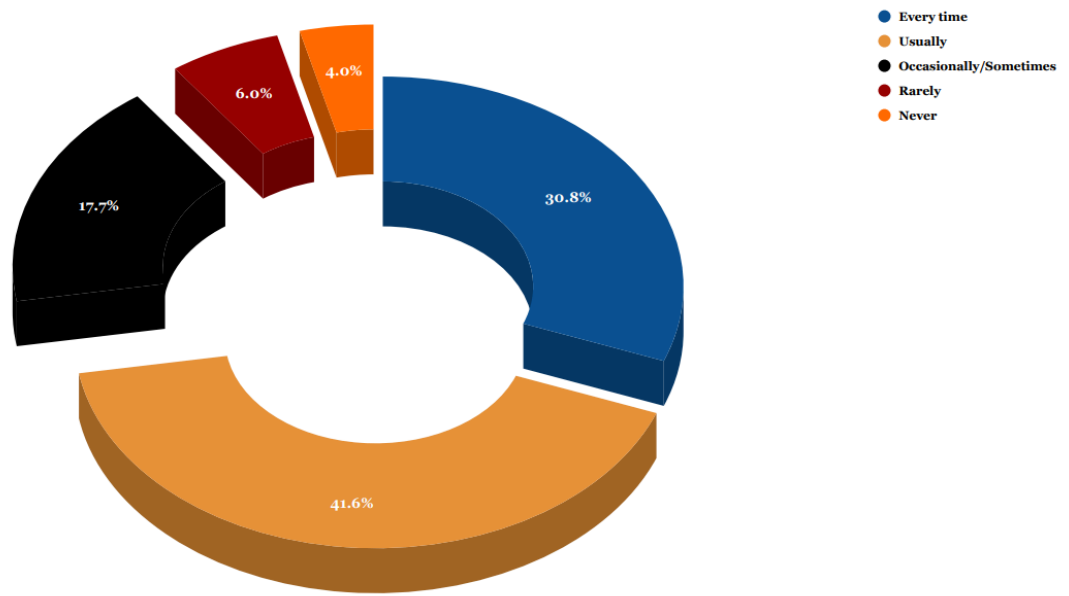
Percentage of syllabus covered



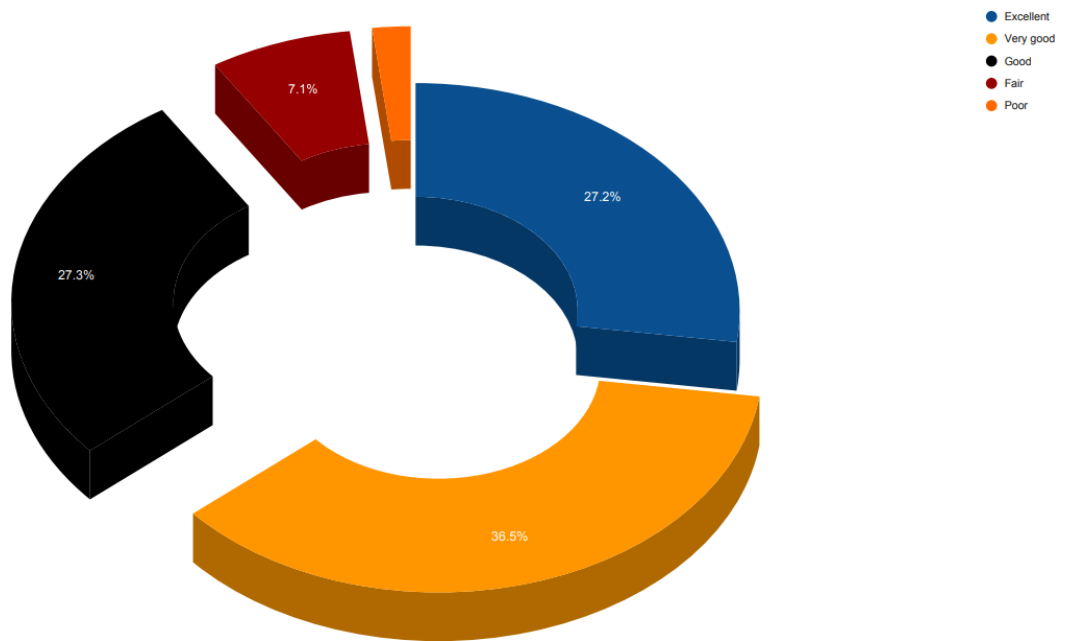
Preparedness of teachers for classes



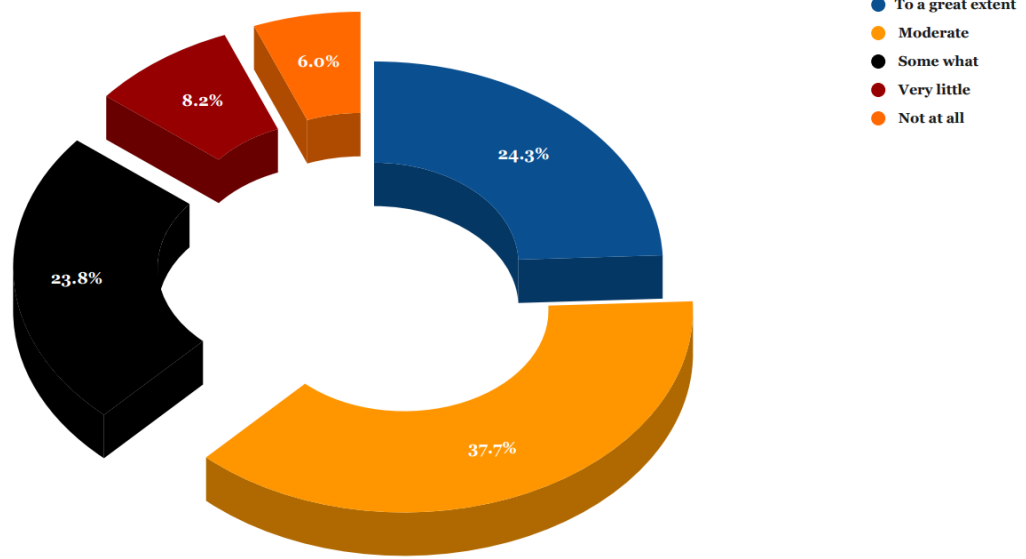
**Information shared with students about their expected competencies, course outcomes and program outcomes by teachers.**



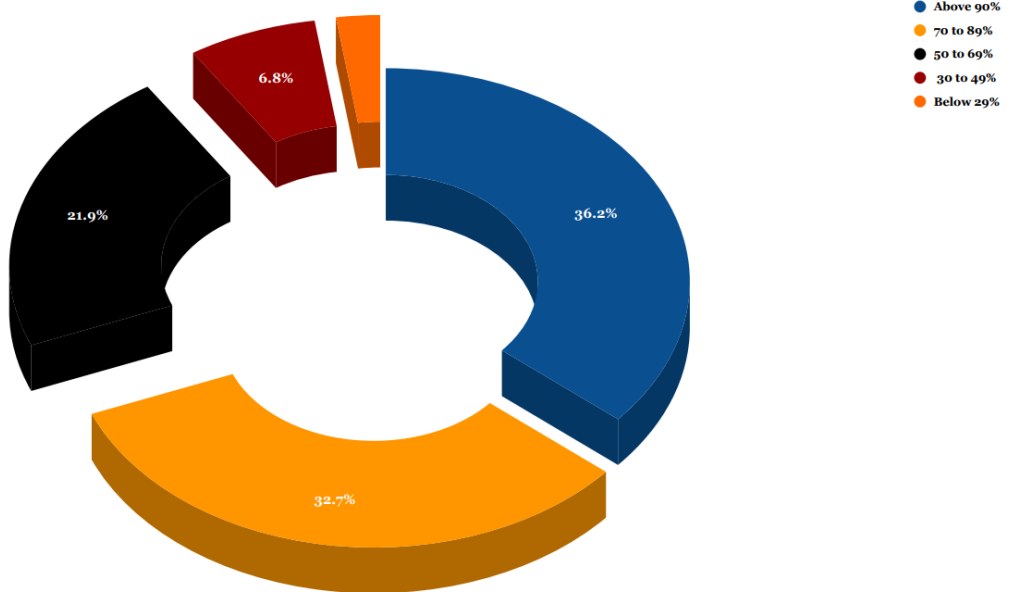
**Teaching effectiveness**



**The institute or teachers use student centric methods, such as experiential learning, participative learning and problem solving methodologies for enhancing learning**

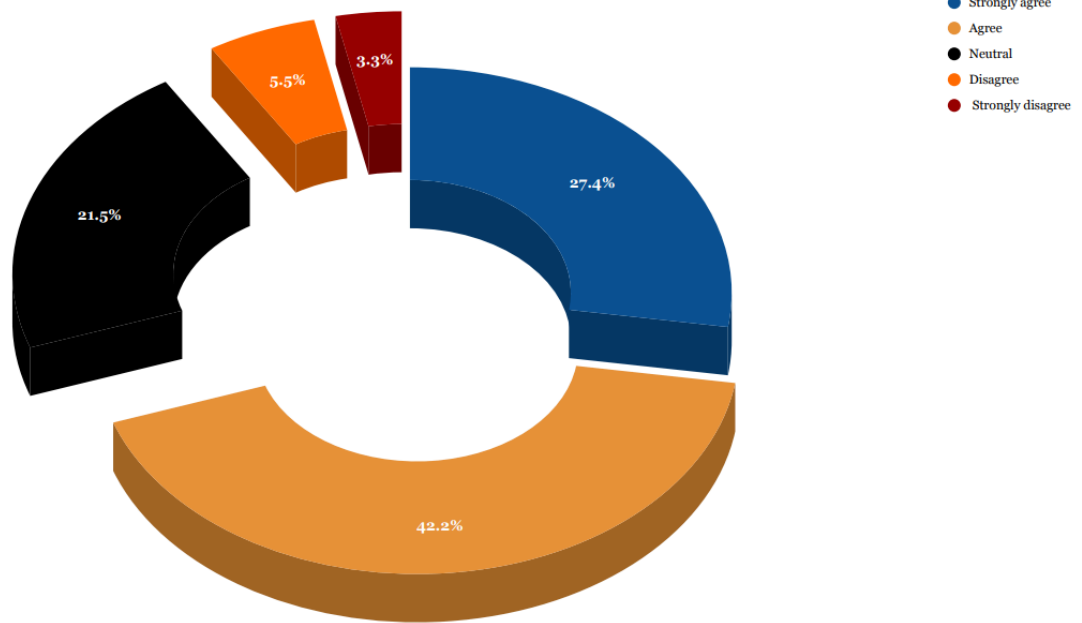


**What percentage of teachers use ICT tools such as LCD projector, Multimedia, etc. while teaching.**



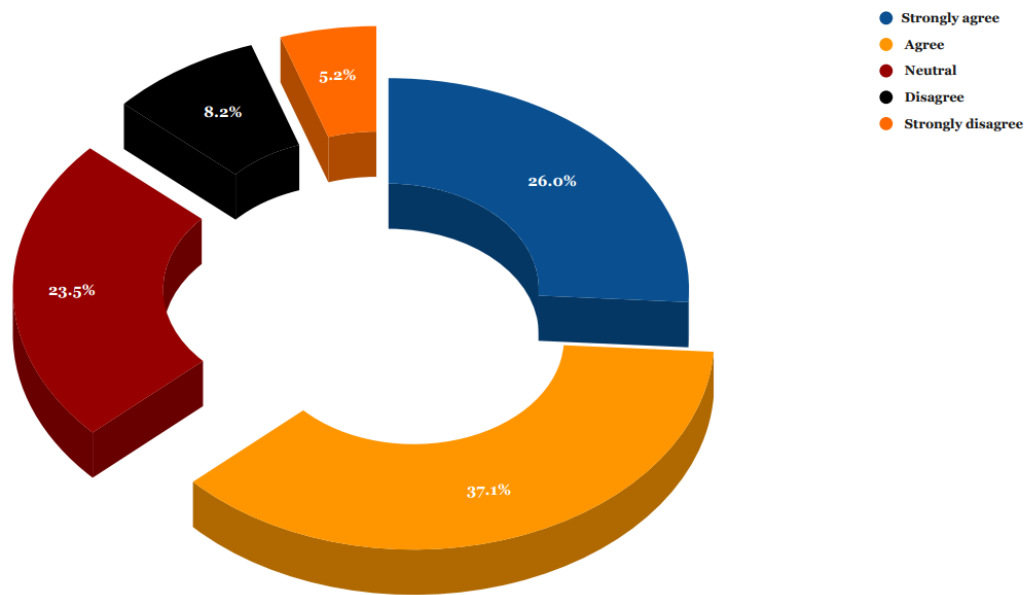


The overall quality of teaching-learning process in your institute is very good.

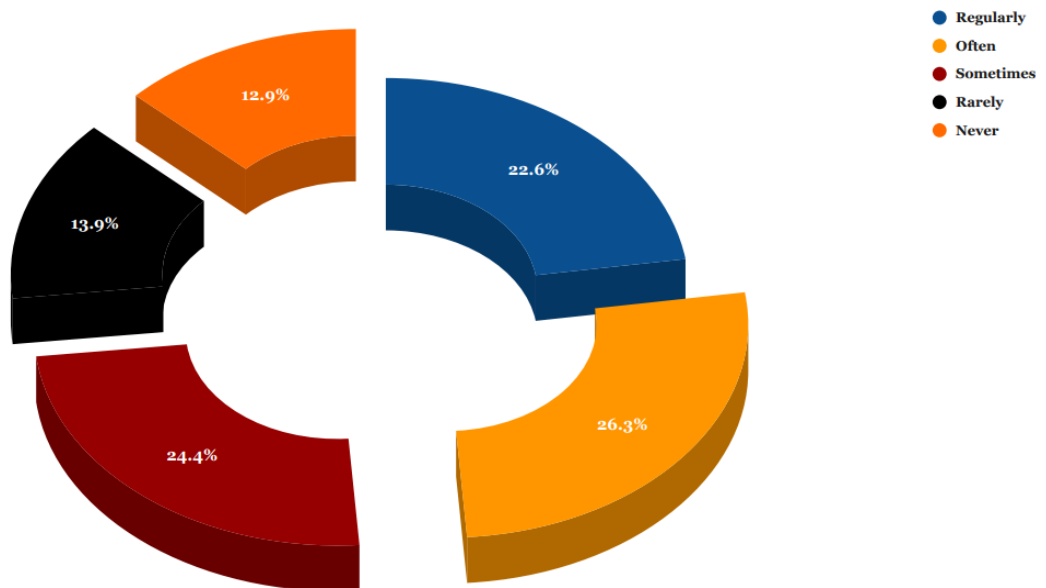


## Learning

**The institution provides multiple opportunities to learn and grow**

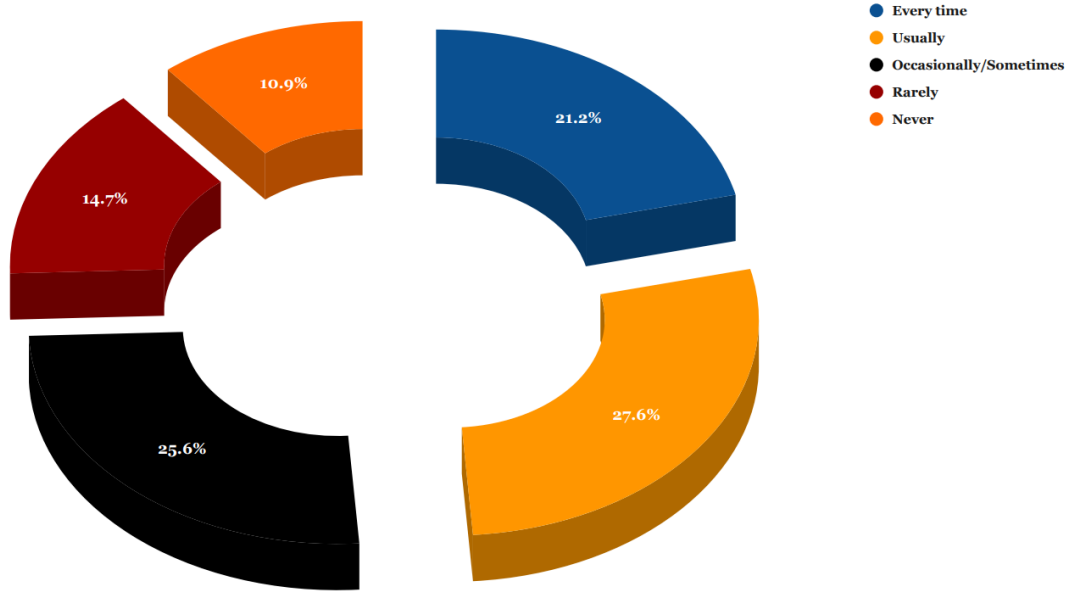


**Initiatives by the institute for promoting internship, students exchange, field visiting etc for students**

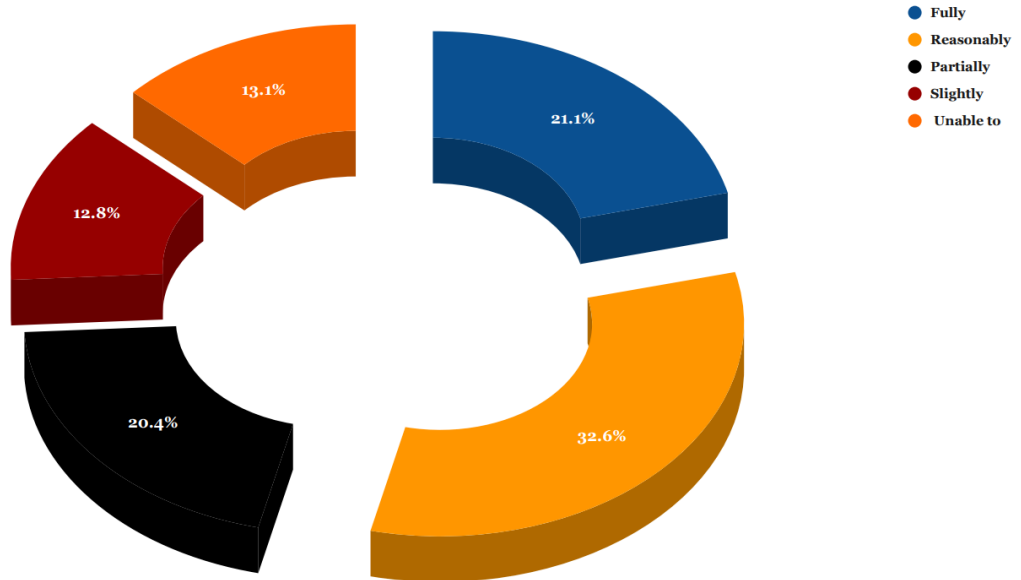


# Evaluation

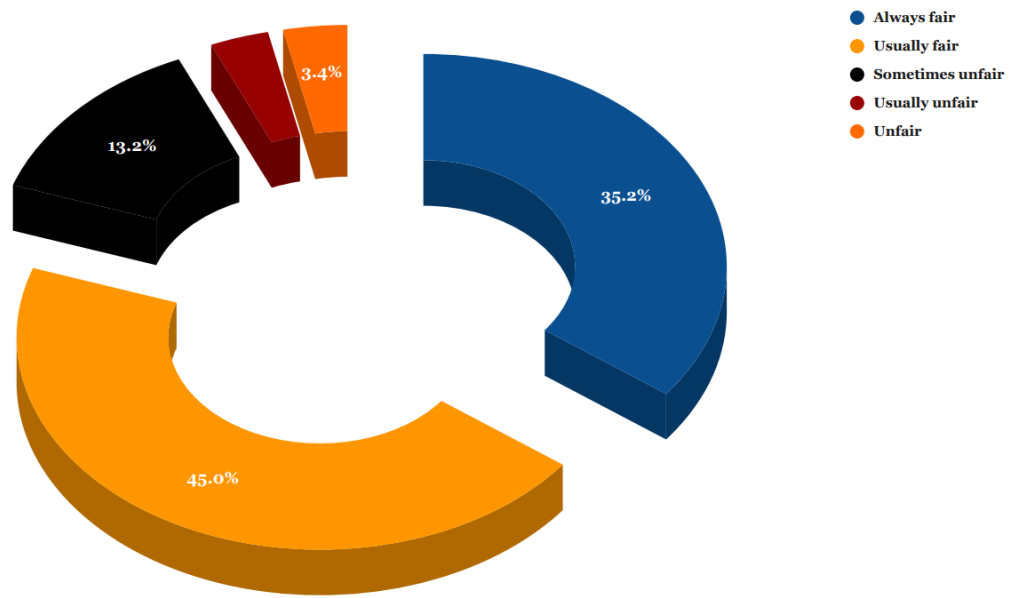
### Discussion on performance in assignments with students



### The Teachers identify your strengths and encourage you with providing right level of challenges

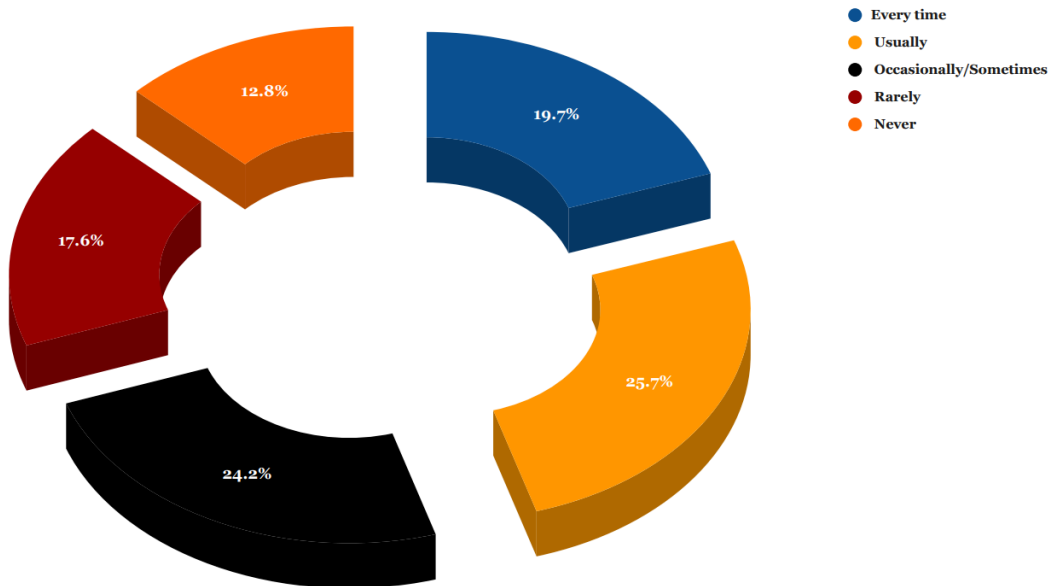


### Fairness of the Internal evaluation

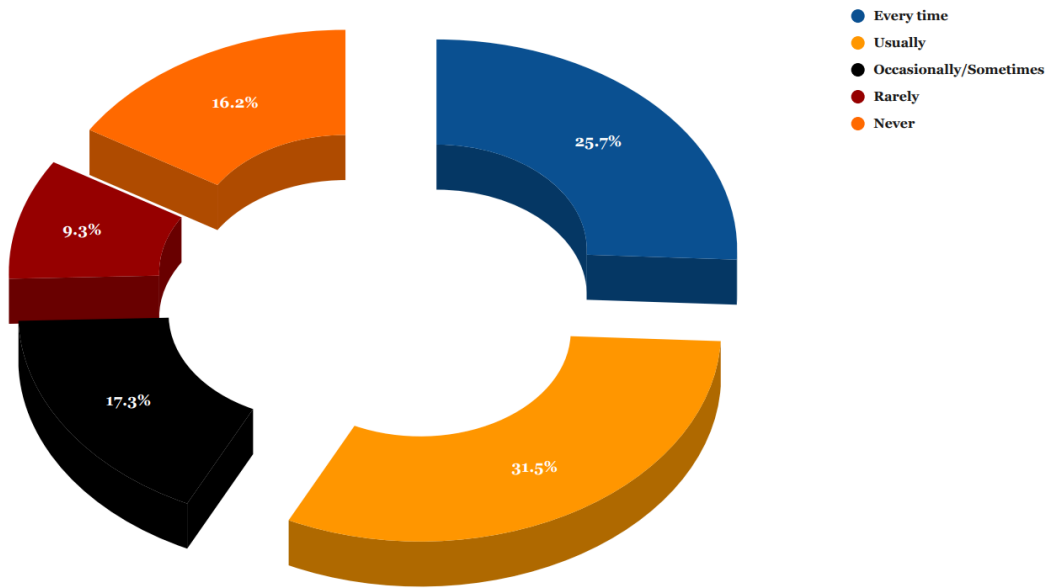


### Student Support

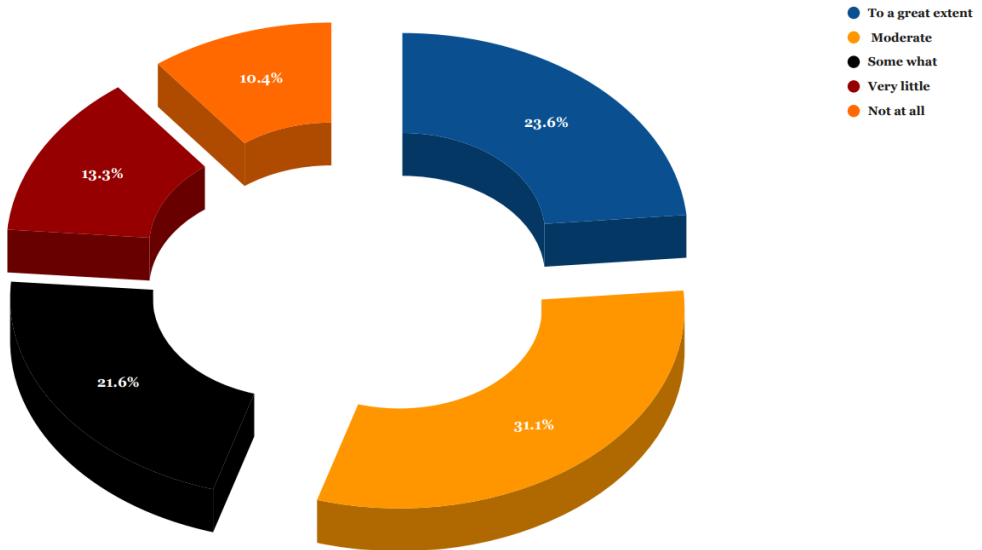
#### Teachers are able to identify your weaknesses and help you to overcome them



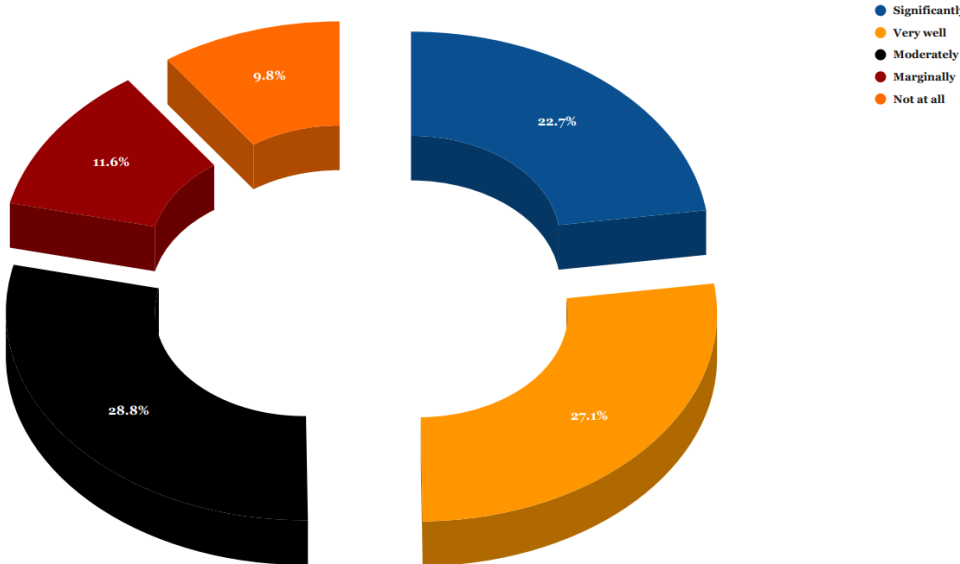
Follow-up by mentor in connection with an assigned task to students



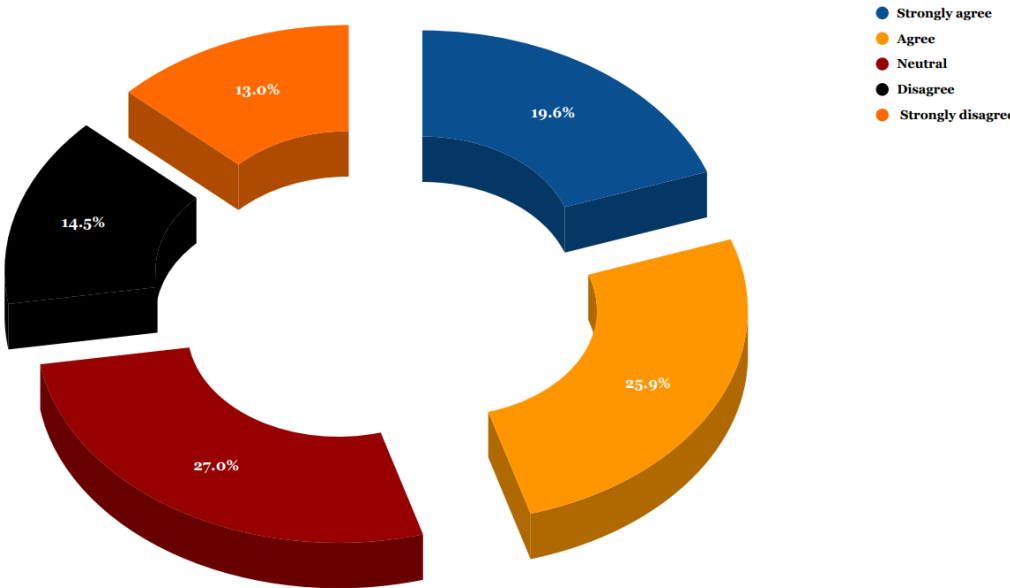
Efforts are made by the institute or teachers to inculcate soft skills, life skills and employability skills to make you ready for the world of work



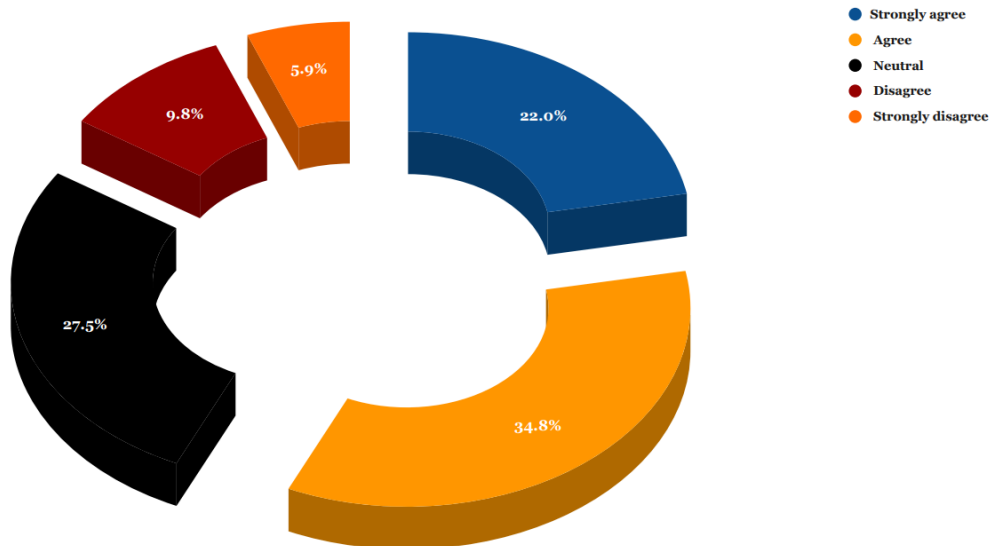
**Role of teaching and mentoring process of the institution for cognitive, social and emotional growth of students**



**Teachers encourage you to participate in extracurricular activities.**



**The institution makes effort to engage students in the monitoring, review and continuous quality improvement of the teaching learning process**



A comparative table and its graphical representations of the feedback data collected for the academic years 2021-22, 2022-23, and 2023-24 are given below for a comparative study.

**A comparative table in percentage for the last 3 years**

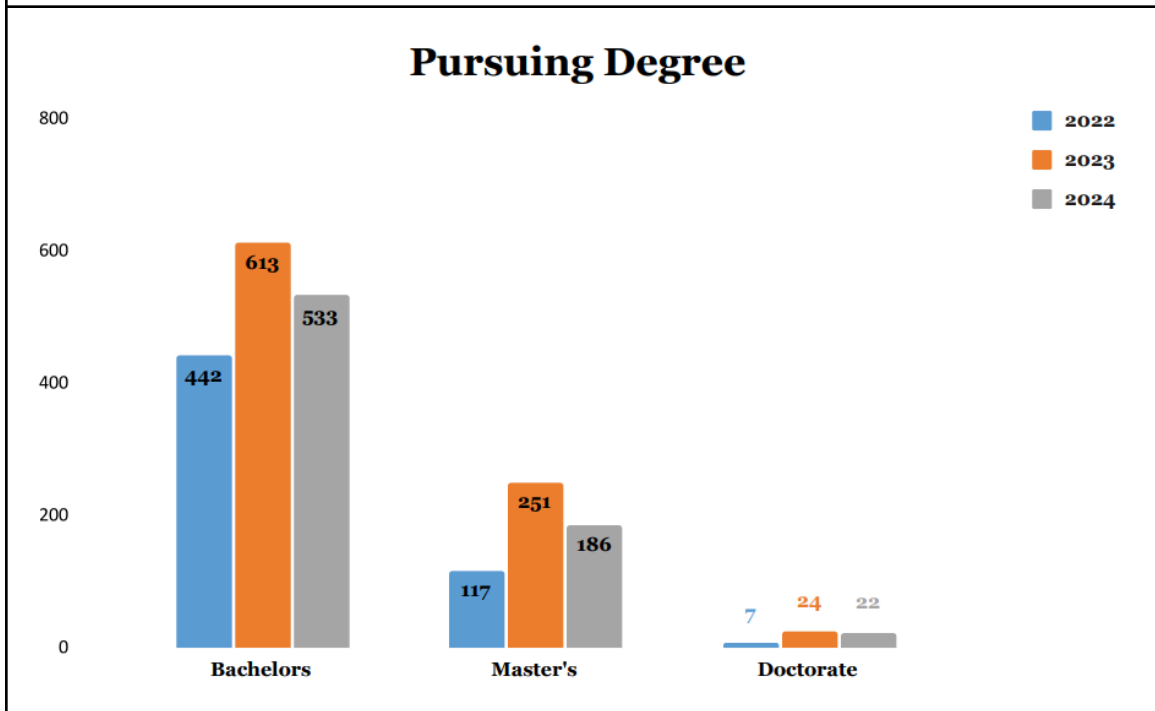
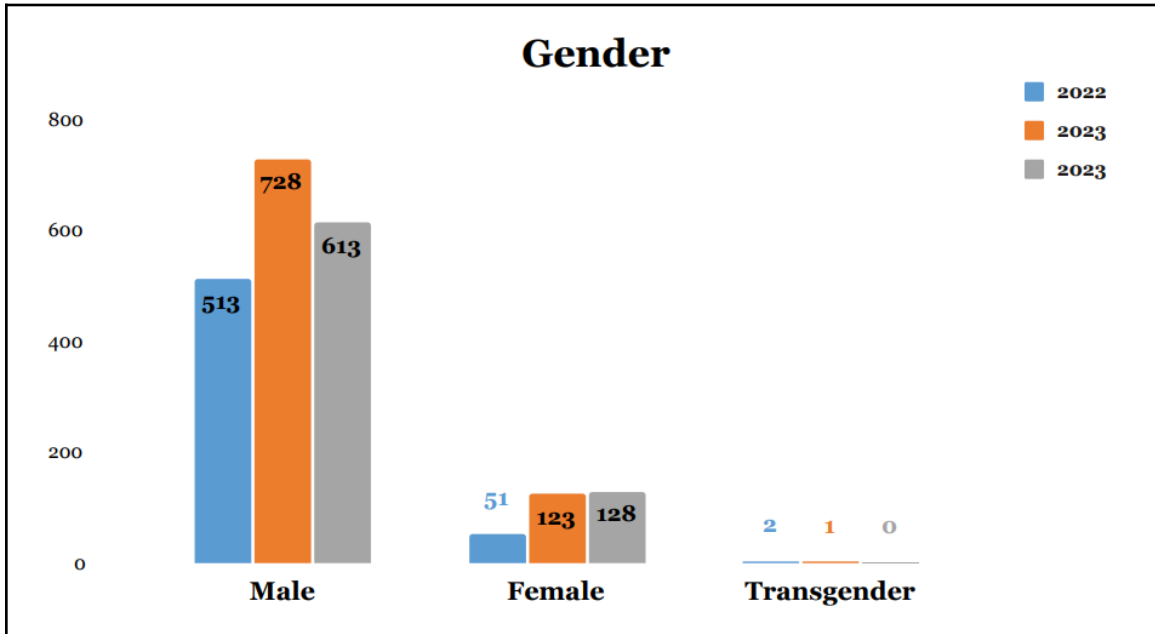
<b>The percentage of students who strongly agree on the role of the institute on the following aspects</b>				
<b>Sl No</b>	<b>Feedback Questions</b>	<b>Percentage</b>		
		<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
<b>*</b>	<b>The Percentage of Students who responded to feedback</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Teaching</b>				
1	Covering of syllabus Satisfactory	98%	98%	89.1%
2	Preparedness of teachers for delivering lectures	95%	96%	74.8%
3	Communication skills of teachers	83%	82%	98%
4	Effectiveness of teaching	93%	91%	91%
5	Information to students about their expected-competencies, course outcomes and programme outcomes	78%	75%	79.7%
6	Teacher's illustration of concepts through examples and applications	78%	79%	94.5%
7	Use of student centric methods such as experimental/participative learning and problem solving methodologies for learning enhancement	66%	66%	62%

8	At least 70% of teachers use ICT tools such as LCD, multimedia etc while teaching	63%	72%	69.6%
9	The overall quality of teaching-learning process in IIST	78%	78%	68.9%
<b>Evaluation</b>				
10	Following Fairness of the internal evaluation	81%	81%	80.2%
11	Promoting discussion on performance in assignments with students	45%	51%	48.8%
12	The teachers identify your strengths and encourage you with providing right level of challenges	56%	55%	53.7%
<b>Learning</b>				
13	Promoting internship, student-exchange, field visit etc.	47%	51%	48.9%
14	Teaching and mentoring process for cognitive, social and emotional growth of students	49%	53%	49.8%
15	Providing multiple opportunities to learn and grow	68%	68%	63.1%
16	Mentor's follow-up in connection with an assigned task to students	58%	61%	57.2%
<b>Student Support</b>				
17	Teacher's ability to identify students' weakness and help extended to overcome them	50%	48%	45.4%
18	Participation of students in monitoring/reviewing/improving quality teaching learning process	60%	62%	56.8%
19	Encouragement of teachers to participate in extracurricular activities	48%	46%	45.5%
20	Institute' s efforts to inculcate soft/life/employability skills to make students ready for work	58%	58%	54.7%
Green=Very Good, Black=Average, Red=Needs attention				

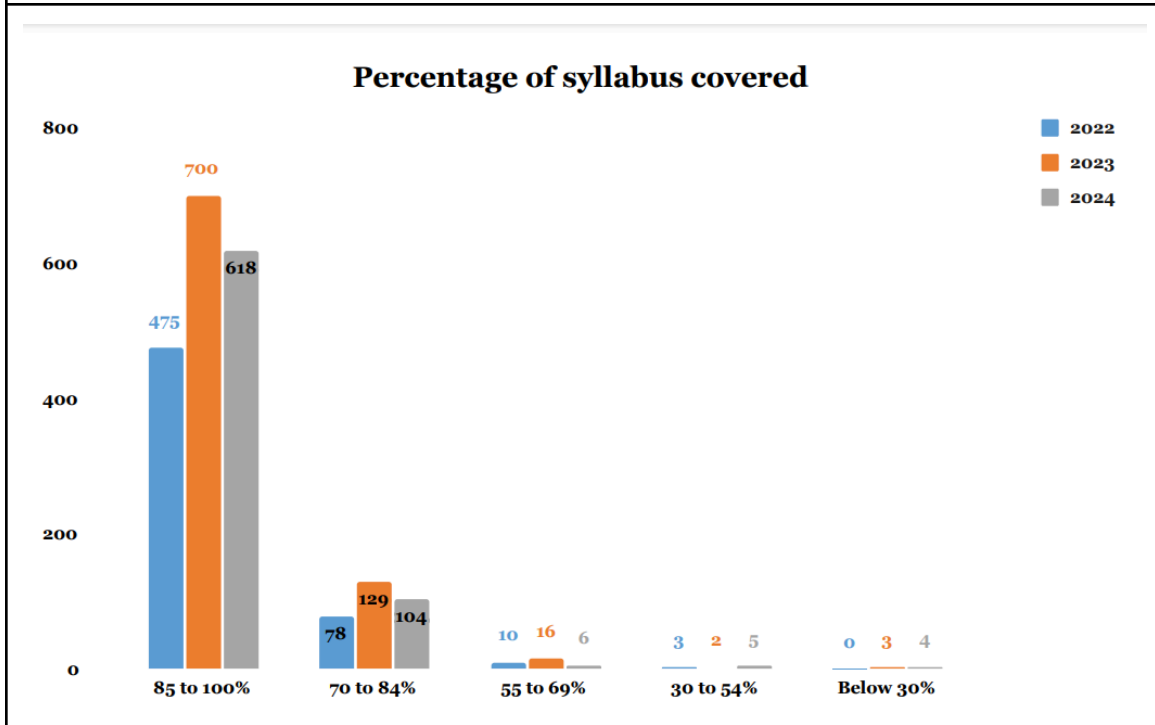
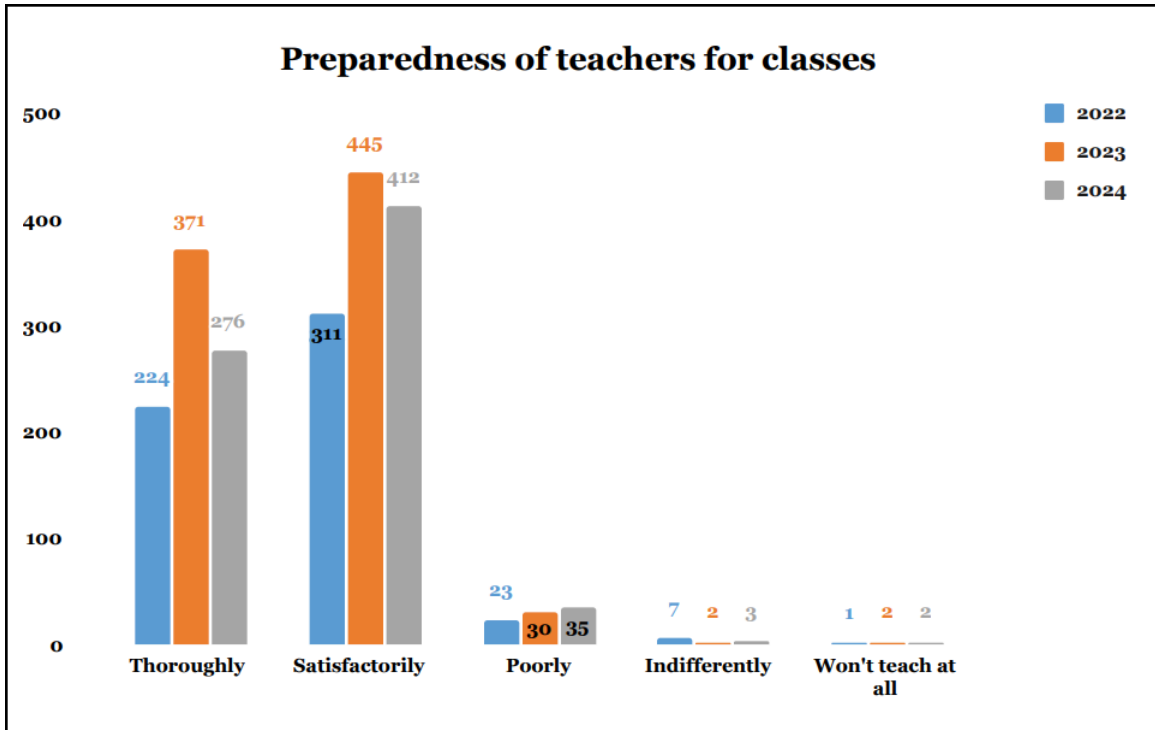
The respective graphs as per the data given above are presented below:



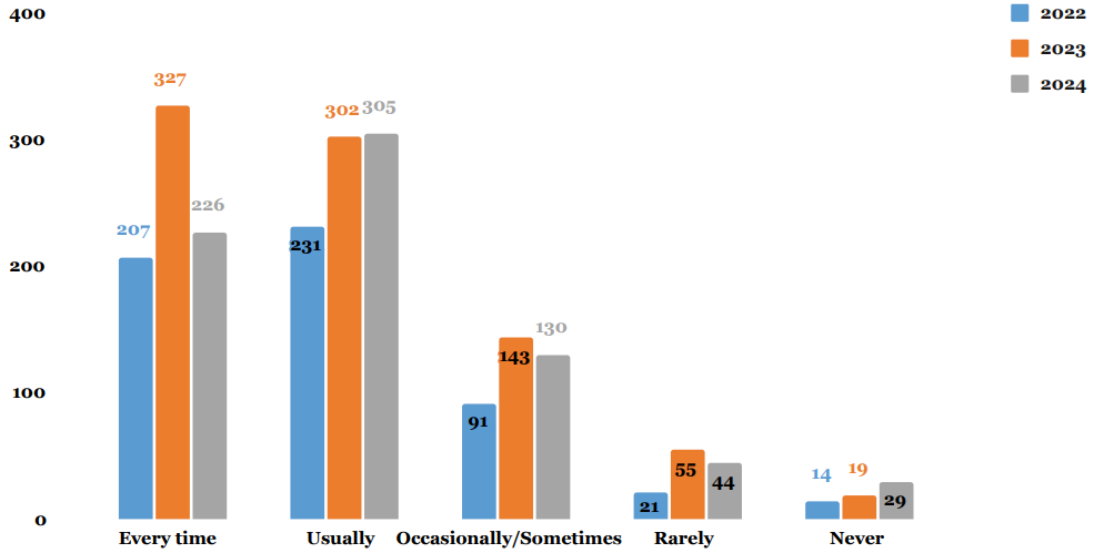
## General



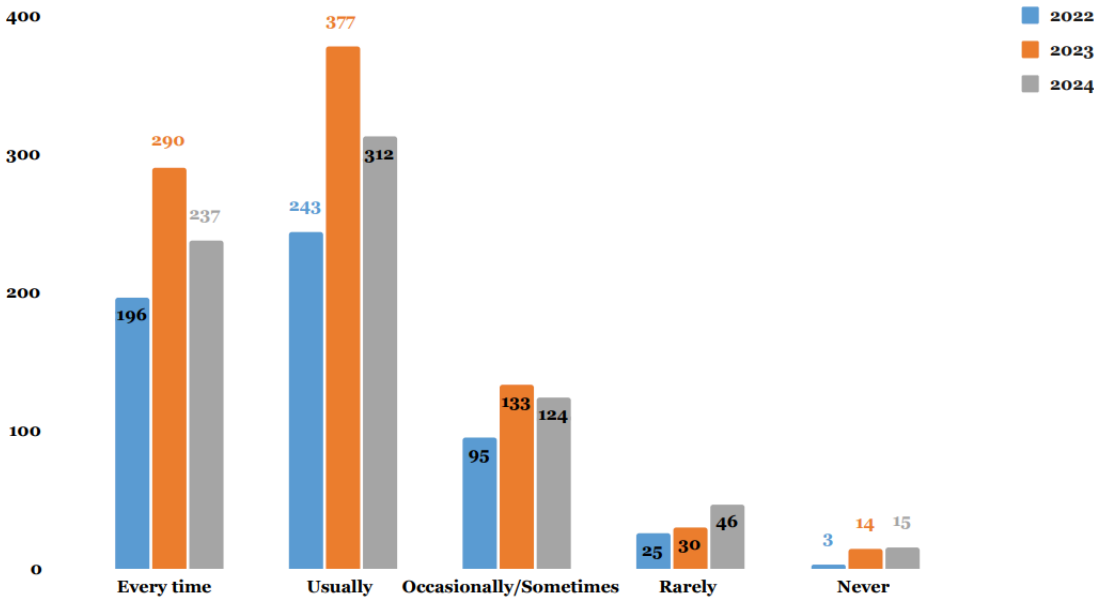
## Teaching

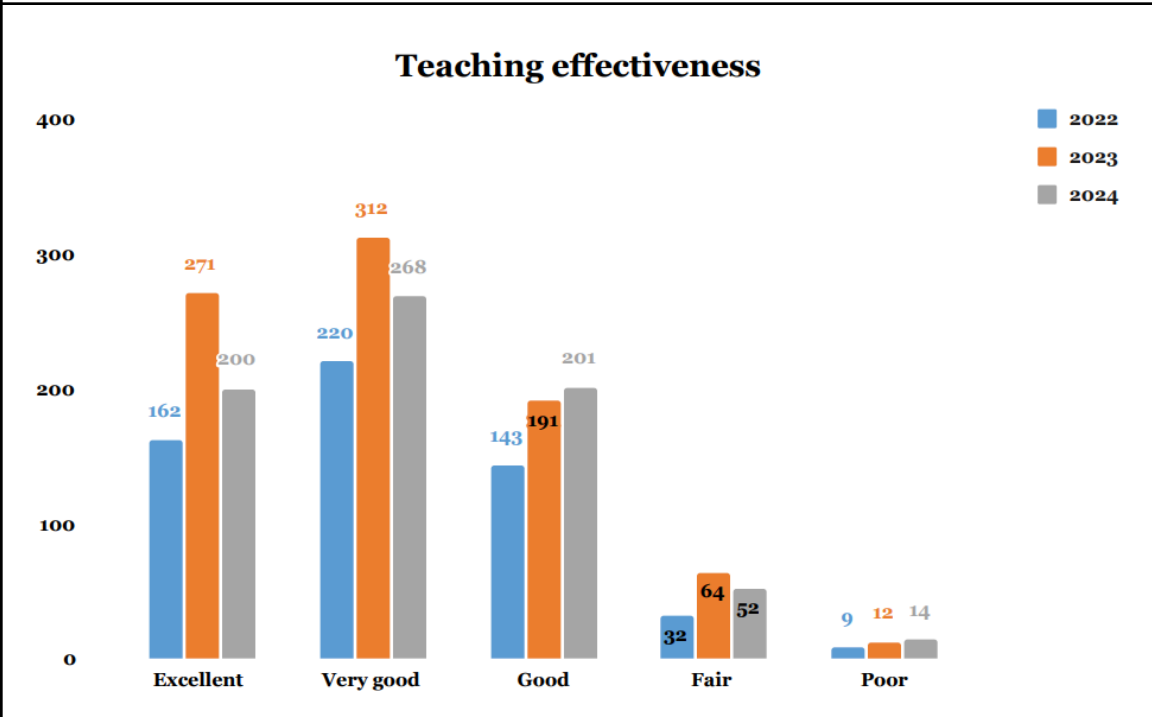
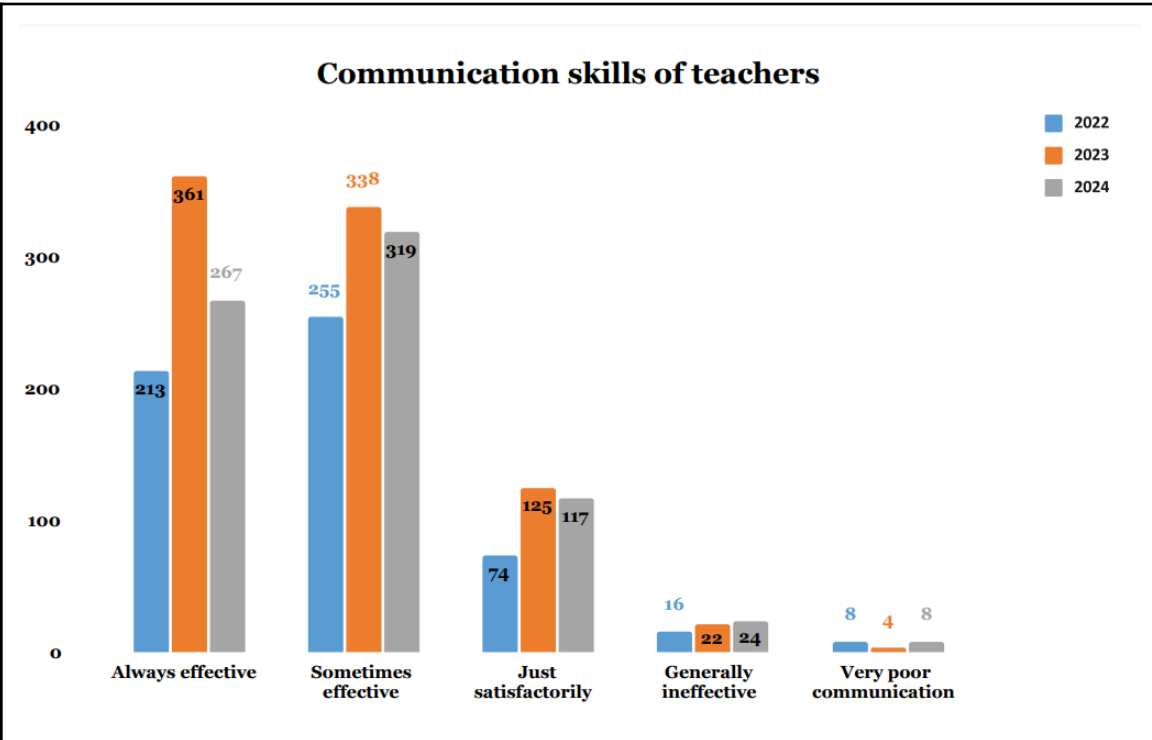


**Information shared with students about their expected competencies, course outcomes and program outcomes by teachers.**

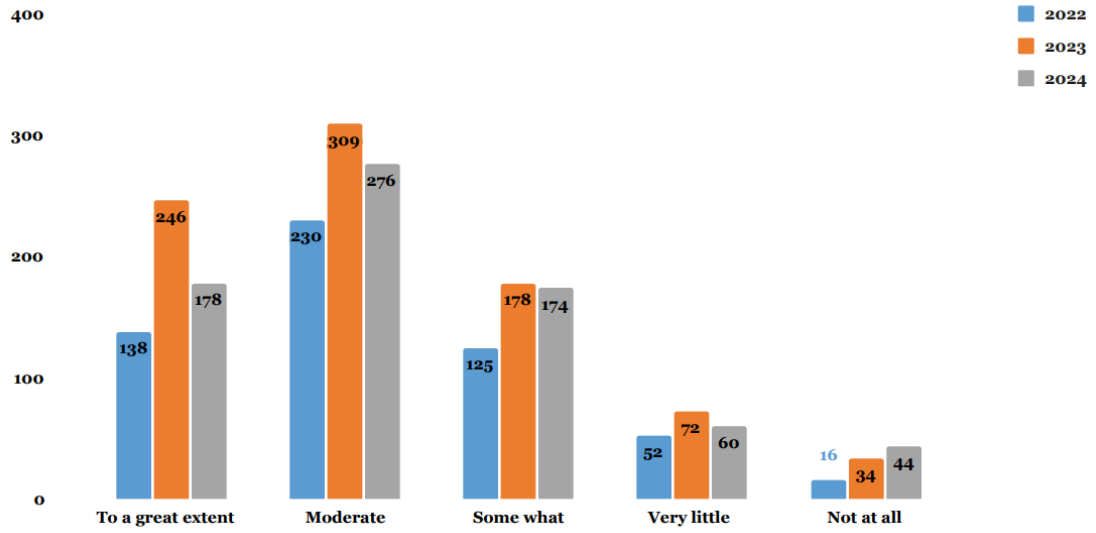


**Illustration of concepts through examples and application by teachers**

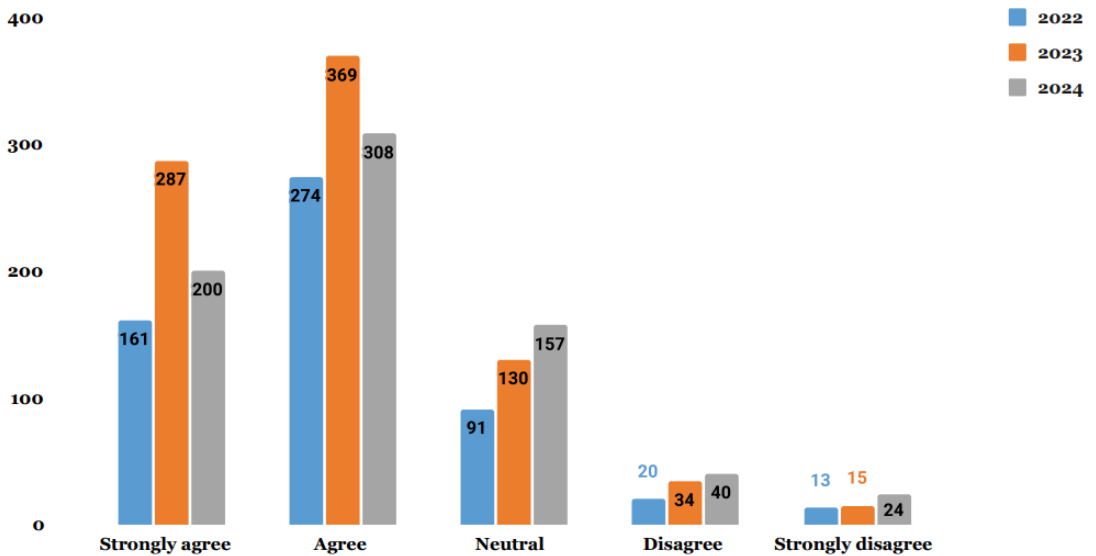


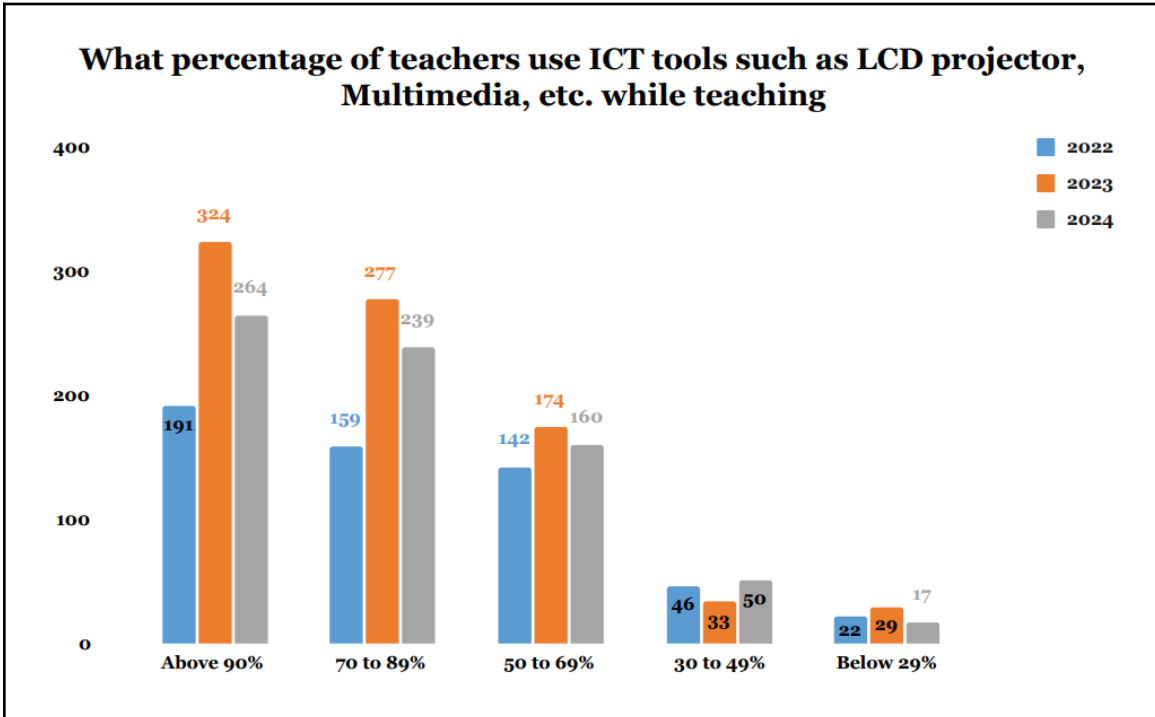


**The institute teachers use student centric methods, such as experiential learning, participative learning and problem solving methodologies for enhancing learning**

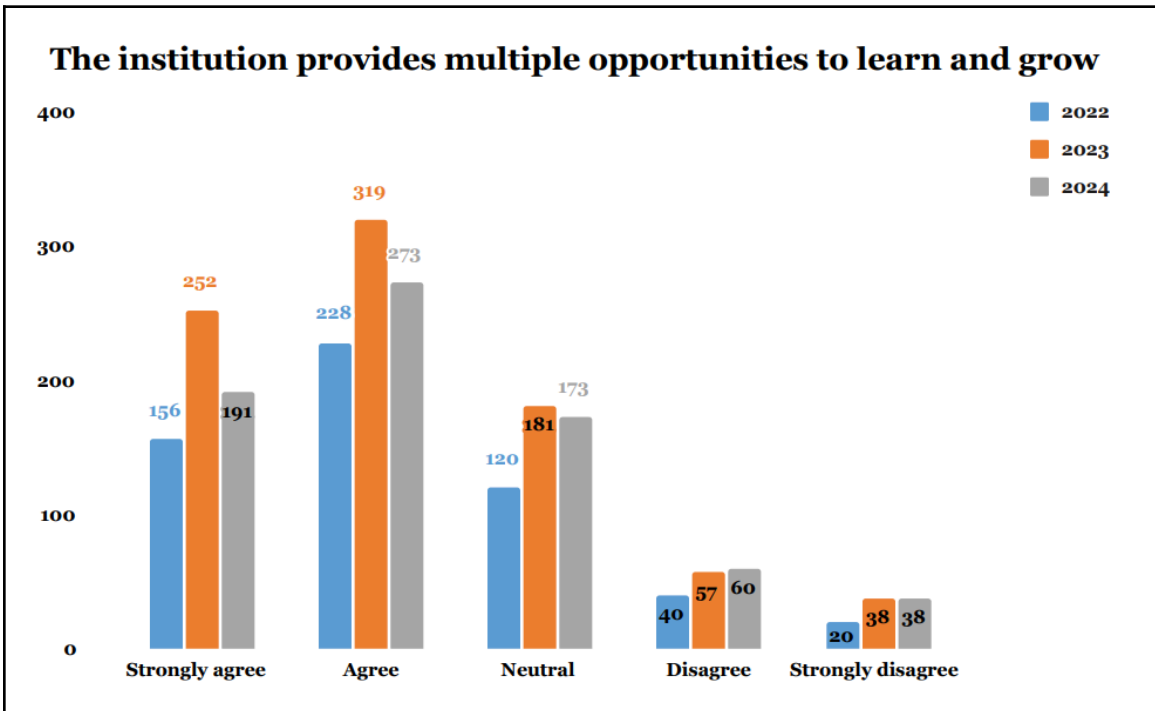


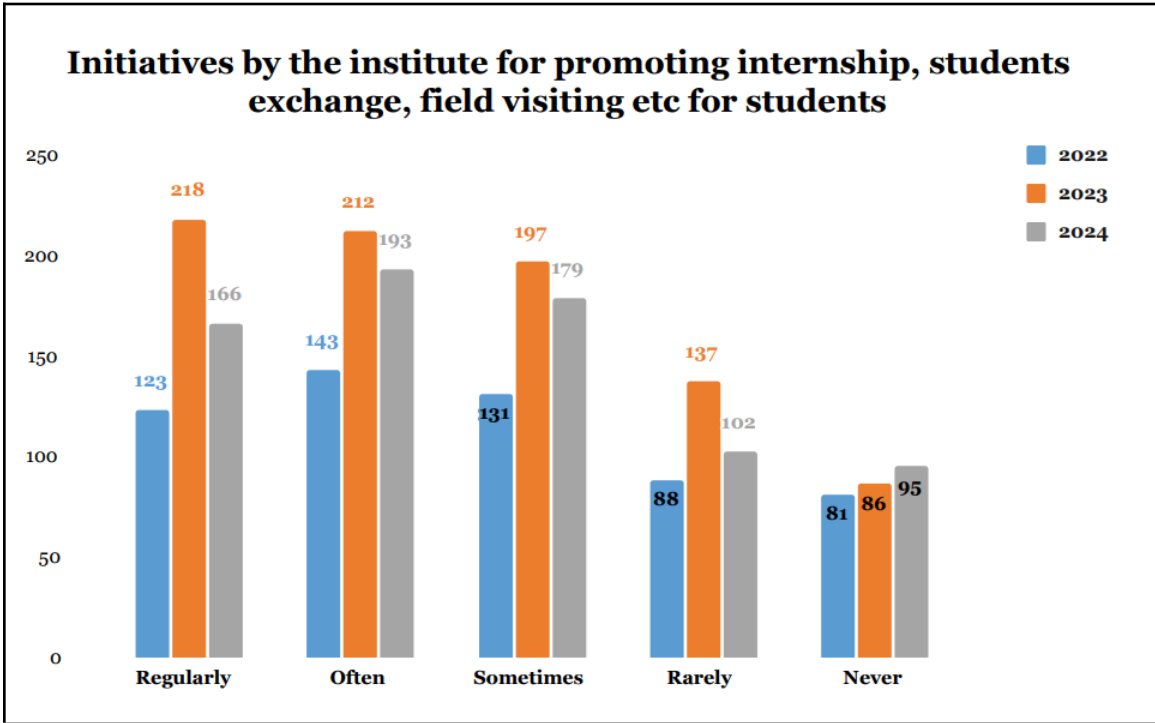
**The overall quality of teaching-learning process in your institute is very good.**



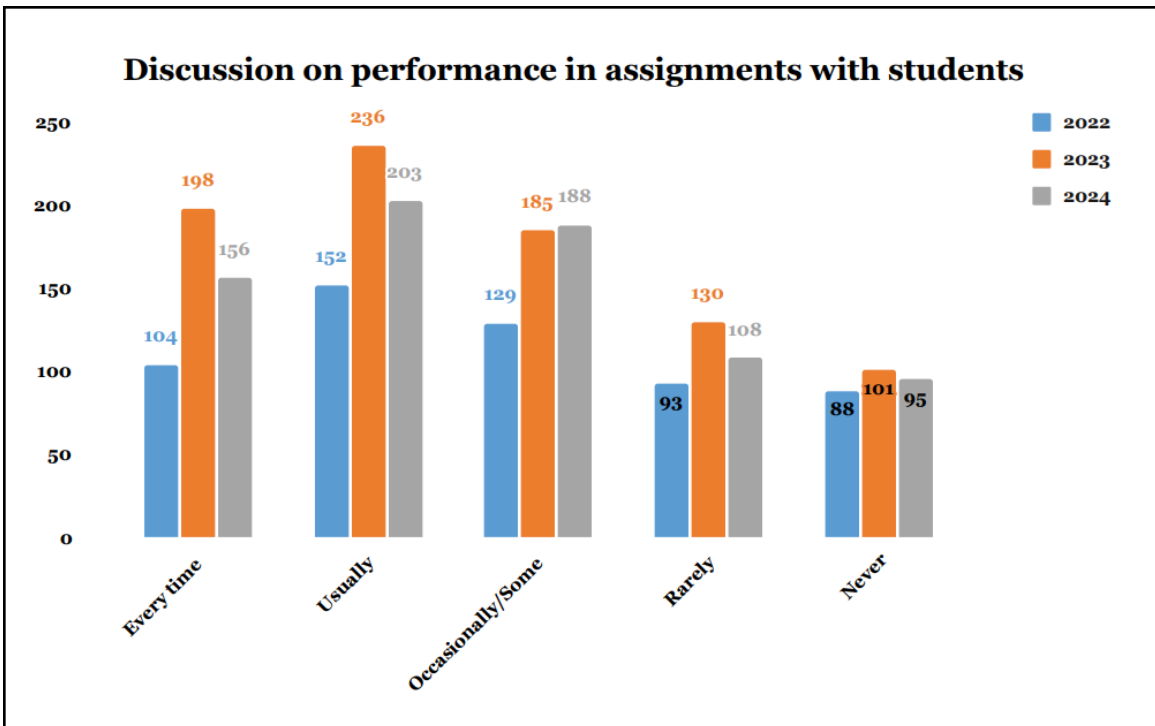


## Learning

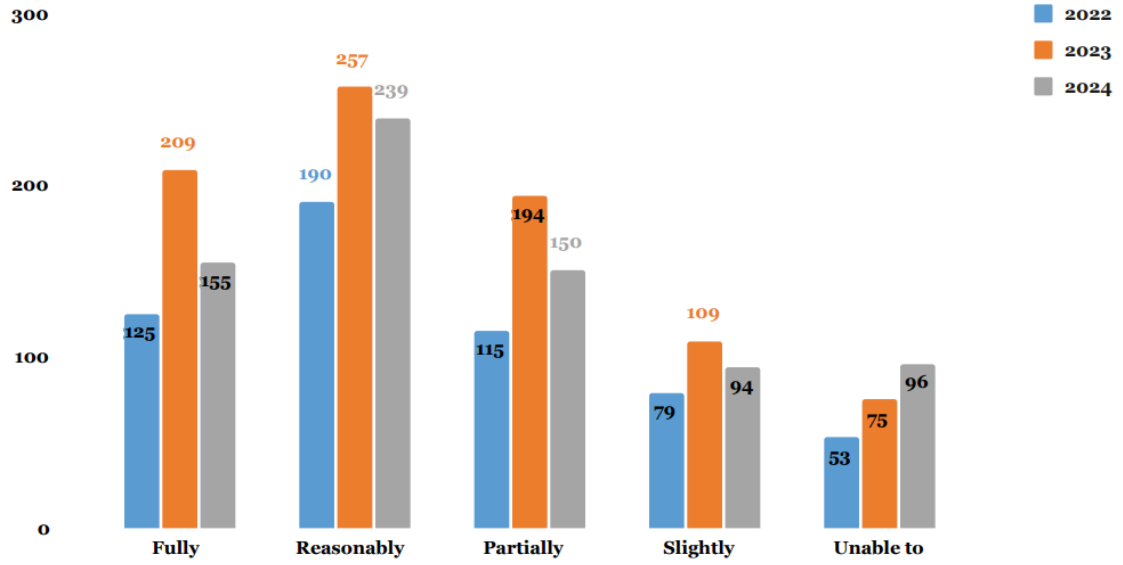




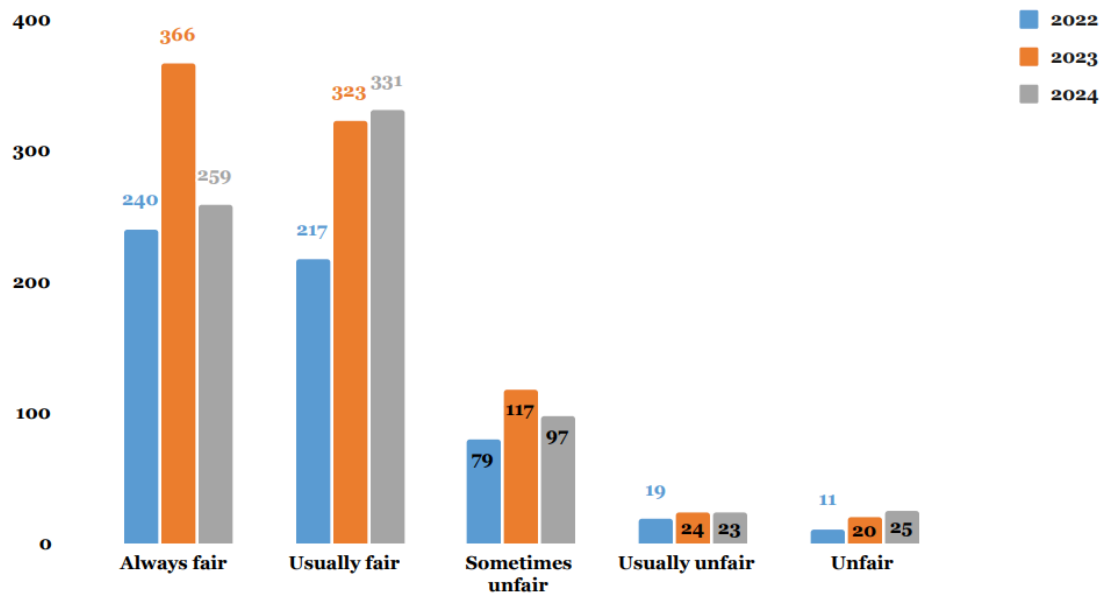
### Evaluation



### The Teachers identify your strengths and encourage you with providing right level of challenges

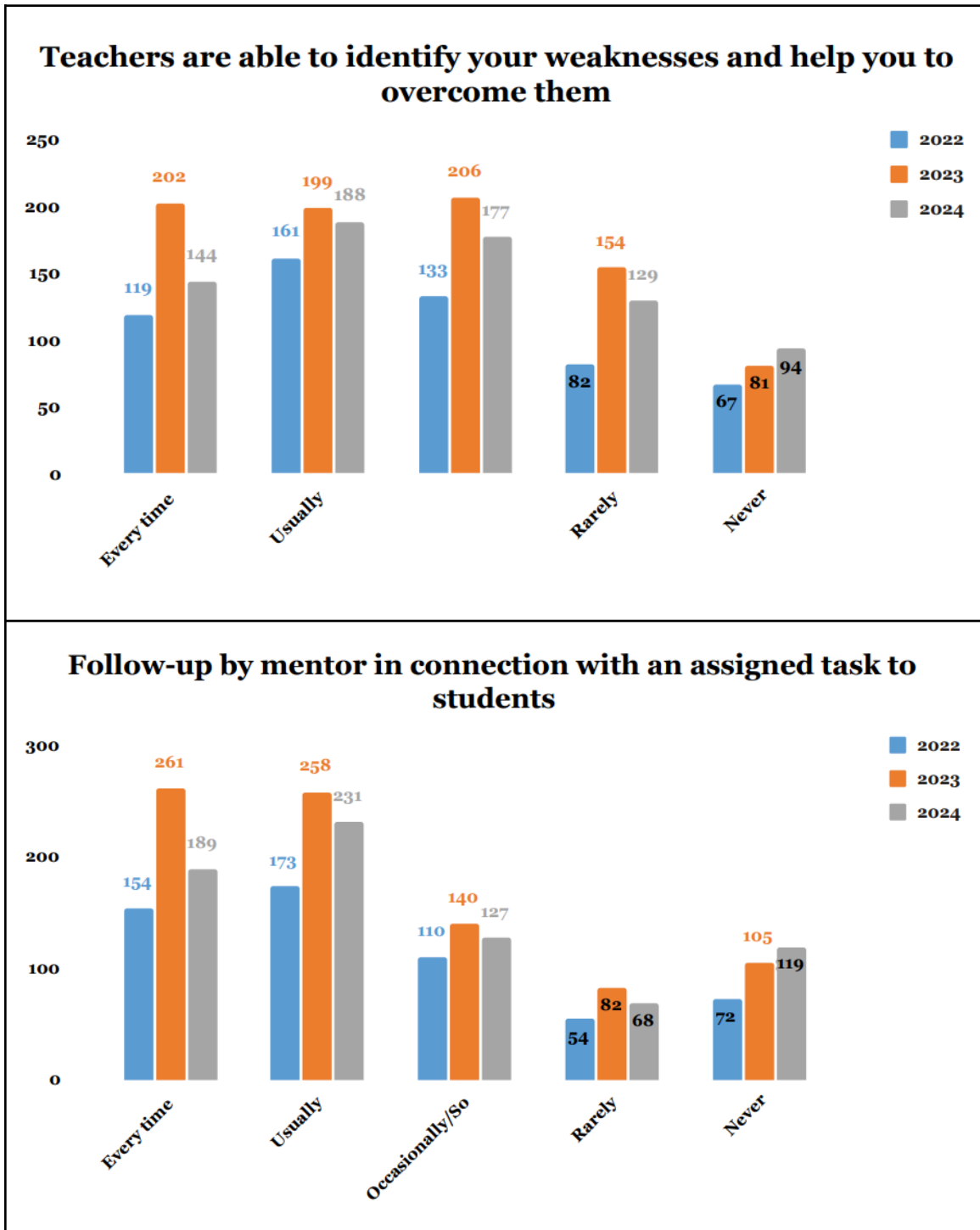


### Fairness of the Internal evaluation

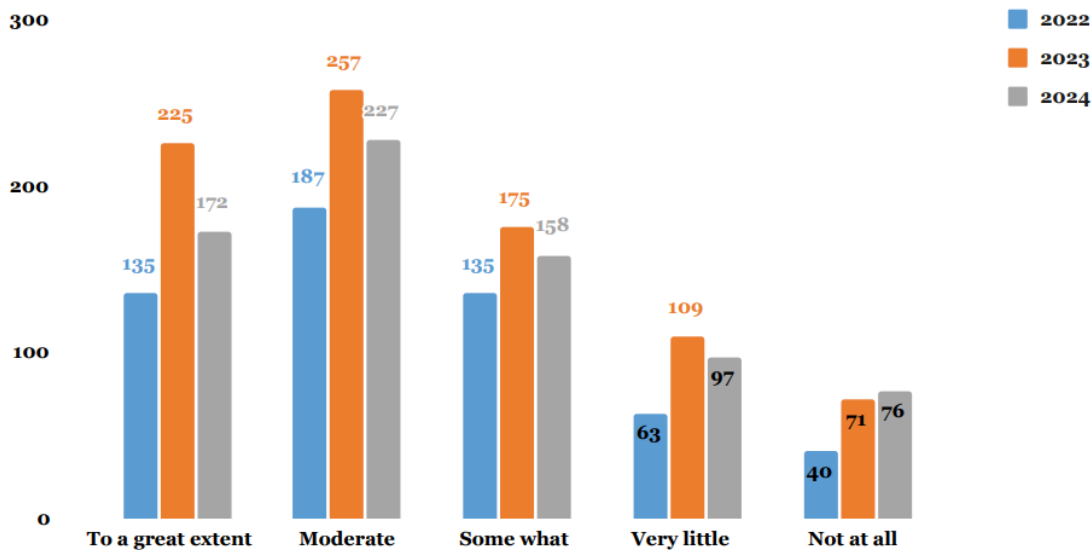




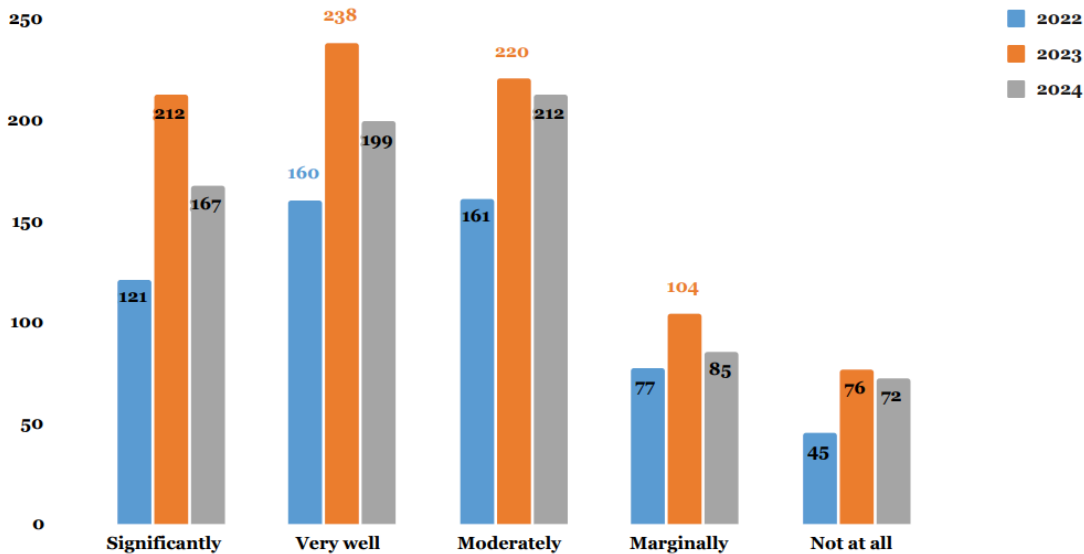
## Student Support



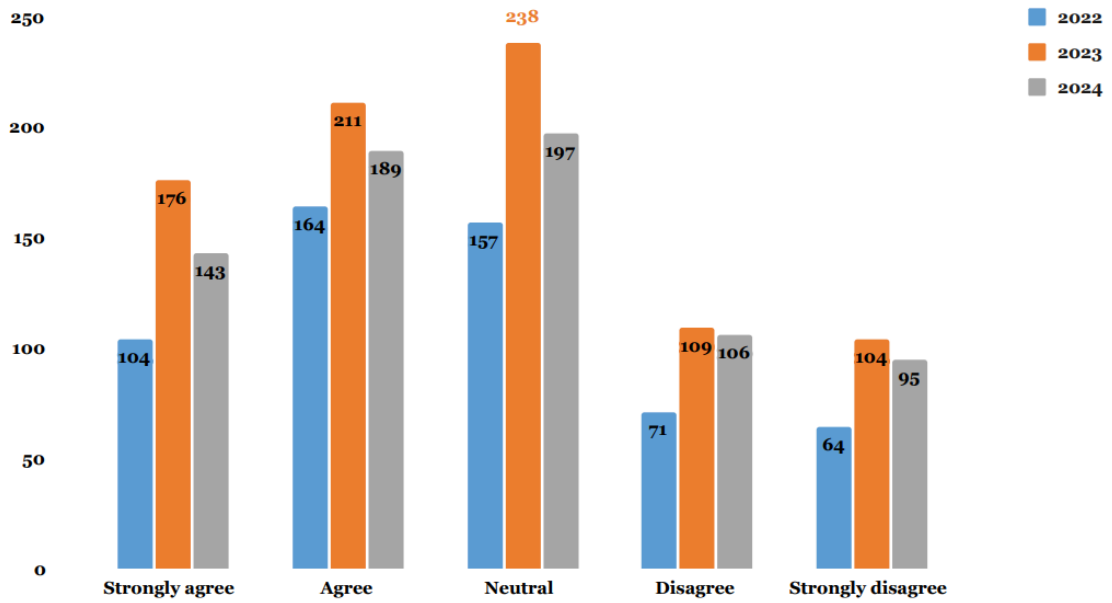
### Efforts are made by the institute or teachers to inculcate soft skills, life skills and employability skills to make you ready for the



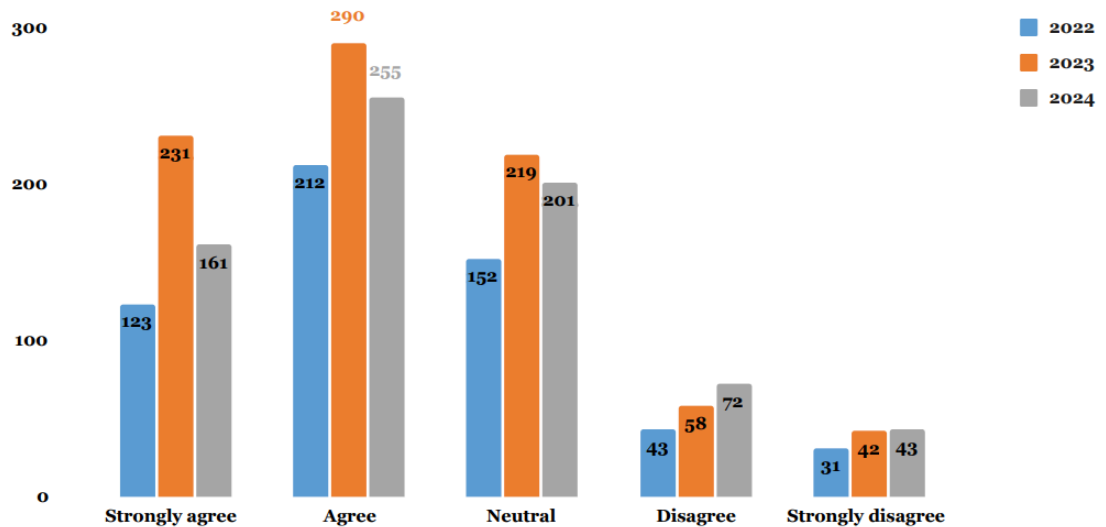
### Role of teaching and mentoring process of the institution for cognitive, social and emotional growth of students



**Teachers encourage you to participate in extracurricular activities.**



**The institution makes effort to engage students in the monitoring, review and continuous quality improvement of the teaching learning process**



## Conclusion

The student feedback from the Student Satisfaction Survey for the academic year 2023–24 has been tabulated and analyzed. The percentage of students who strongly agree with the institute's role in the specified aspects has been computed. A rating of 'Very Good' is assigned if this percentage exceeds 60% and is highlighted in green in the table. Percentages between 50% and 60% are categorized as 'Average' and displayed in black. If the percentage falls below 50%, it is classified as 'Needs Improvement' and marked in red and black, indicating areas requiring further attention. However, the major comments and recommendations are given below.

## Major Comments

- The syllabus coverage remains consistent and effective, with an impressive 98% for two years, and 89.1% in 2023-24, showing curriculum consistency in the last three years.
- The communication abilities of instructors are rated high (98%), reflecting effective interaction and teaching.
- Teaching effectiveness of 91% highlights faculty competency in delivering quality education.
- An increase in concept explanation through examples and applications to 94.5% from 79% is a significant achievement.
- Students recognize fairness in evaluation at 80.2%, showing confidence in the assessment processes.
- The availability of diverse learning opportunities is relatively good, rated at 63.1%.
- The score of 68.9% indicates a student perception of teaching and learning processes.
- The score of 62% satisfaction for the student-centric methods is recorded.
- Usage of ICT tools is at 69.6%, and hence the technology-based methodologies in teaching.
- The score, 48.8% for discussions on performance points to inadequate interaction and feedback mechanisms in student-teacher interactions.
- At 53.7%, the ability of teachers to identify and nurture students' strengths needs attention.
- Mentor follow-up and engagement stand at 57.2%, indicating limited mentor involvement in students' academic and personal growth.
- Promotion of internships and field visits is rated at 48.9%, which is below expectations for experiential learning.
- Only 45.4% satisfaction regarding the identification and support of weaknesses calls for robust support systems.
- Student satisfaction with extracurricular encouragement is at 45.5%, which needs enhancement.
- The inculcation of soft skills is at 54.7%, suggesting a gap in preparing students for broader career challenges.

## Recommendations

1. **Student-Teacher Interaction:** Conduct at least two sessions per semester where faculty members discuss student performance and provide individualized, constructive feedback. These sessions should focus on academic progress, addressing concerns, and bringing student confidence.
2. **Nurture Student Strengths:** Implement a structured approach for faculty to assess student strengths and weaknesses based on academic performance and classroom interactions. Maintain a documented evaluation system online or offline to track student progress and provide personalized learning strategies.
3. **Mentorship:** Develop a documentation of a well-defined mentorship framework with clear objectives, measurable outcomes, and regular progress assessments. Assign mentors to students based on academic needs and career aspirations, ensuring consistent guidance and support throughout their studies.
4. **Practical Learning:** Mandate at-least one internship for every student during their academic program. Expand collaborations with industry partners to facilitate internships, field visits, and hands-on learning experiences to bridge the gap between theory and practice.
5. **Student Support System:** Create a structured academic counseling system to identify struggling students early. Implement targeted intervention strategies, including remedial classes, peer tutoring, and one-on-one guidance sessions, to improve academic performance.
6. **Promotion of Extra & Co-curricular Activities:** Advise all students to participate in extra and co-curricular activities every academic year. Organize regular events to encourage student participation and personal growth.

Prepared by

डॉ. दीपक टी जी/Dr. Deepak T G  
आचार्य/Professor  
गणित विभाग/Department of Mathematics  
भारतीय अंतरिक्ष विज्ञान एवं प्रौद्योगिकी संस्थान  
Indian Institute of Space Science and Technology  
अंतरिक्ष विभाग, भारत सरकार  
Department of Space, Government of India  
तिरुवनंतपुरम/Thiruvananthapuram - 695 547

Prof. Kuruvilla Joseph  
Coordinator, IQAC

प्रोफ. कुरुविला जोसफ/Dr. Kuruvilla Joseph  
समन्वयक/Coordinator  
आंतरिक गुणवत्ता आश्वासन प्रकोष्ठ (आई क्यू ए सी)  
Internal Quality Assurance Cell (IQAC)  
भारतीय अंतरिक्ष विज्ञान एवं प्रौद्योगिकी संस्थान (आईआईएसटी)  
Indian Institute of Space Science and Technology (IIST)

डॉ. अनिल कुमार सी. वी./Dr. Anil Kumar C V  
आचार्य / Professor  
गणित विभाग / Department of Mathematics  
भारतीय अंतरिक्ष विज्ञान एवं प्रौद्योगिकी संस्थान  
Indian Institute of Space Science and Technology  
अंतरिक्ष विभाग, भारत सरकार  
Department of Space, Government of India  
तिरुवनंतपुरम/Thiruvananthapuram - 695 547

Prof. Anil Kumar C V  
Associate Coordinator, IQAC

D. Banerjee

Prof. Dipankar Banerjee  
Chairman, IQAC

प्रोफ. दिपांकर बनेरजी  
Prof. Dipankar Banerjee  
निदेशक, आईआईएसटी  
Director, IIST