



FEEDBACK ANALYSIS AND ACTION PLANNING-2018-19

Computer Training for Paper - IVB

POST GRADUATE MATHEMATICS - Netaji Subhas Open University

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1. Introduction:

This document elaborates the feedback analysis and action generation process for Computer Training Programme conducted every year as a mandatory pre-requisite of fulfillment of M.Sc. degree in mathematics from Netaji Subhas Open University. This process uses a random sample of students who attend the training and examine the quality of teaching learning process, instructional effectiveness on the basis of evaluation done by the students. The goal is to identify appropriate action that may be used in future for betterment of teaching learning process in the relevant field. Table -1 shows all the brief description of the process.

Name of the school	School of Sciences
Name of the course	Post Graduate Mathematics
Paper/Unit	Computer Programming and its application to numerical analysis(IV-B)
Year	2018-2019
Type of the Paper (Theory/Practical)	Practical
Type of Feedback (Online/Offline)	Online
Data Collection Method	Sample Survey
Instrument of Survey (Questionnaire\Interview)	Questionnaire
Type of Survey (Cross-sectional\Longitudinal)	Cross-sectional
Root Cause Analysis Tool	5 - Why Analysis, Brainstorming

Table - 1

2. Brief overview of the data collection procedure:

A set of 35 questions have been prepared to measure the quality of teaching learning process of Post Graduate Computer Training. Total 22 key performance indicators(KPI) were identified as quality metric for teaching learning process. These metrics are given in table - 2.

Serial No	Key Performance Indicator
1	Helps Students Irrespective of Gender
2	Helps Students Facing Physical, Emotional and Learning Challenges
3	Helps Students in Realizing Their Strengths and Developmental Needs
4	Uses of Teaching Aids (Projector/Blackboard /PPT)
5	Tendency Of Inviting Opinion And Question On Subject Matter From Students
6	Punctuality in Class

7	Conducting The Classroom Discussions
8	Refers to Latest Developments in The Field
9	Helps Student in Providing Material Through e-Resources, e-Journals, Reference Books, Open Course wares etc.
10	Black-board/White-board Work in Terms of Legibility, Visibility and Structure
11	Helps Students Irrespective of Ethnicity And Culture/Background
12	Helps Students in Realizing Career Goals
13	Communication Skills
14	Teaching The Subject Matter
15	Skill of Linking Subject to Life Experience and Creating Interest in The Subject
16	Helping Approach Towards Varied Academic Interests of Students
17	Inspires Students for Ethical Conduct
18	Self-confidence
19	Makes Sure That the Student Is Being Understood
20	Approach Towards Developing Professional Skills Among Students
21	Acts as A Role Model
22	Focus on Syllabus

Table - 2

The students were asked to evaluate every KPI in a 5-point scale (Excellent, Very Good, Good, Average and Below Average). Apart from that few other demographic information like Gender, Age-Range, Educational Background, Income Range, Occupation, Marital Status were also gathered to do further analysis of the data. Initially the students were asked to fill up an online form(Google Form) (https://drive.google.com/open?id=13EGYlcPTg_bPSITVBVrDanB16CFJZZNYP63-ydWfshQ) comprised of 35 questions through email. Out of 541 students, 72 students were chosen randomly who submit their responses through the form. The response file of these students has been attached in the Annexure-1:

3. Data Analysis and Report

The collected data was then uploaded into Oracle-12g database and analyzed through SQL (Structured Query Language). For each of the metric the quality threshold value was decided as 15%. Therefore, whenever the no of students, rated any KPI as average or below reaches to 15% or more, the cell is to be highlighted. Table -3 summarizes the responses for all 22 KPIs.

Serial No	KPI	Excellent	Very Good	Good	Average Or Below
1	Helps Students Irrespective Of Gender	19.4	33.3	37.5	8.4
2	Helps Students Facing Physical, Emotional And Learning Challenges	15.3	38.9	30.6	12.5
3	Helps Students In Realizing Their Strengths And Developmental Needs	9.7	33.3	43.1	12.5
4	Uses of Teaching Aids(Projector/Blackboard /PPT)	27.8	41.7	23.6	6.9
5	Tendency Of Inviting Opinion And Question On Subject Matter From Students	11.1	40.3	40.3	6.9
6	Punctuality in Class	33.3	40.3	22.2	4.2
7	Conducting The Classroom Discussions	30.6	34.7	26.4	7
8	Refers to Latest Developments in The Field	15.3	23.6	50	8.3
9	Helps Student in Providing Material Through e-Resources,e-Journals,Reference Books,OpenCoursewares etc.	9.7	31.9	40.3	15.3
10	Black-board/White-board Work in Terms of Legibility, Visibility and Structure	27.8	41.7	25	5.6
11	Helps Students Irrespective Of Ethnicity And Culture/Background	13.9	31.9	34.7	16.7
12	Helps Students In Realizing Career Goals	15.3	30.6	37.5	15.3
13	Communication Skills	31.9	34.7	25	8.3
14	Teaching The Subject Matter	30.6	37.5	30.6	1.4
15	Skill of Linking Subject to Life Experience and Creating Interest in The Subject	20.8	30.6	41.7	7
16	Helping Approach Towards Varied Academic Interests of Students	15.3	41.7	31.9	11.1
17	Inspires Students For Ethical Conduct	9.7	30.6	47.2	11.1
18	Self-confidence	23.6	34.7	33.3	8.3
19	Makes Sure That The Student Is Being Understood	23.6	22.2	43.1	11.1
20	Approach Towards Developing Professional Skills Among Students	22.2	26.4	41.7	6.9
21	Acts As A Role Model	18.1	27.8	43.1	11.1
22	Focus on Syllabus	26.4	31.9	36.1	5.6

Table-3

Table -3 shows that three KPIs (Highlighted in red) failed to meet the threshold criteria where more than 15% of students felt that the quality of these three metrics are average or below. Therefore, proper action needs to be taken to improve the quality of these metrics. The graphical view of all 22 KPIs along with their quality measure are given in Figure - 1 and Figure - 2.

KPI ANALYSIS

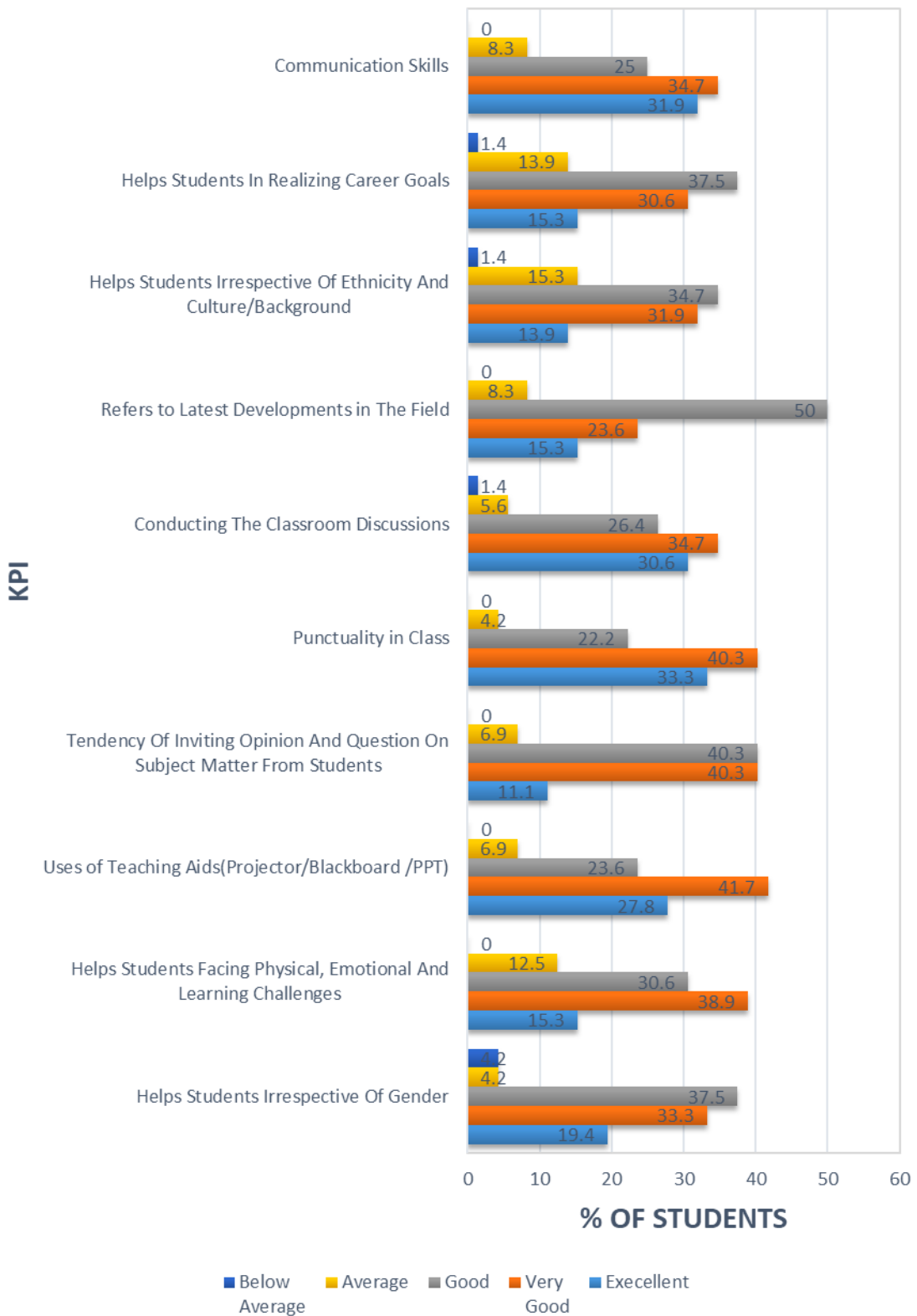


Figure 1

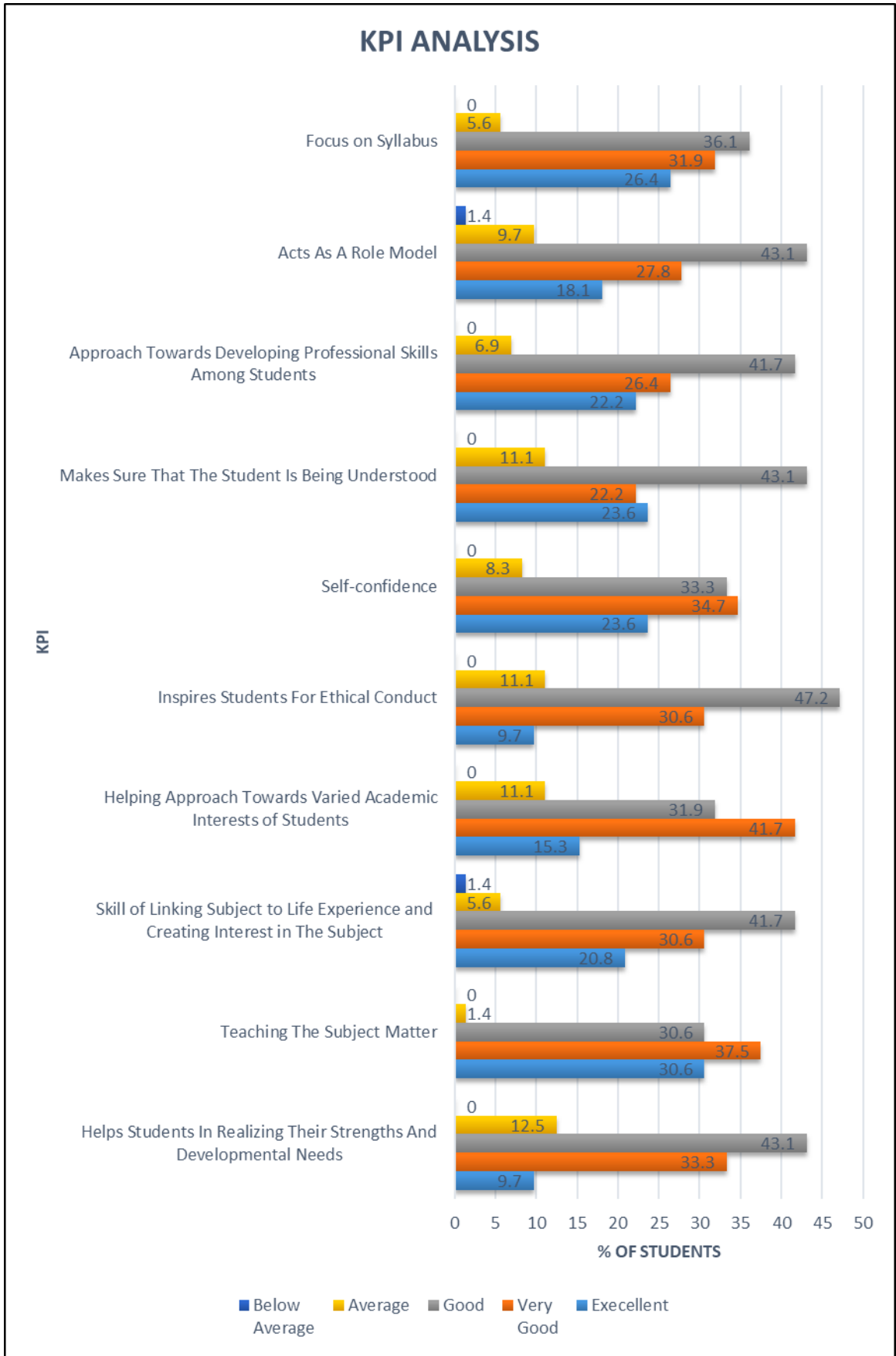


Figure 2

4. Root Cause analysis of low performance of three quality KPIs

After identifying the low performing KPIs a 5-why analysis is done to find out the actual root cause. Table -5 shows the result of 5-why analysis.

KPI	Why-1	Why-2	Why-3	Why-4	Action
Helps Student in Providing Material Through e-Resources, e-Journals, Reference Books, Open Course wares etc.	The lecture material doesn't contain enough information about the e-resources relevant to the topics.	Most of the lecture contents was primarily focused to the core syllabus of the subject.	Lesson plan doesn't include time to discuss detail information of e resources of different topics	Improper lesson plan.	Action1: Lesson plan needs to be modified. It should contain additional information for e-resources.
Helps Students Irrespective Of Ethnicity And Culture/Ba ckground.	Teaching assistance was not adequate for some of the students while practicing the hands on session.	The students didn't have necessary pre-requisite to attend the training.	Few students didn't have enough scope to learn basic programmi ng before attending the training as they stay in remote area/villag es.	Lack of facilities to acquire the pre-requisite	Action2: Special tutorial sessions need to be organized for students who doesn't have prior knowledge in programmi ng before the final training .
Helps Students In Realizing Career Goals	Lecture content doesn't contain adequate coverage of career opportunity or goal in the relevant field.	Most of the lecture contents was primarily focused to the core syllabus of the subject.	Limited duration of the training program.	Limited duration of the training program.	Action 3: Duration of the training program need to be increased to accommodate the session on career counselling

Table-5

5. Current Action Plan and Status:

Three actions were identified to achieve the desired quality for the effected KPIs highlighted in Table -3. These actions will be applied in future and the effected KPIs will be re-measured to check the efficiency of the actions. Table - 6 shows the list of actions plan along with their status.

Serial No	Action Plan	Year of initiation	Paper Name	Course Name	Status
1	Lesson plan needs to be modified. It should contain additional information for e-resources.	2018-19	Computer Training for Paper(IV-B)	Post Graduate Mathematics	Open
2	Special tutorial sessions need to be organized for students who doesn't have prior knowledge in programming before the final training.	2018-19	Computer Training for Paper(IV-B)	Post Graduate Mathematics	Open
3	Duration of the training program need to be increased to accommodate the session on career counselling	2018-19	Computer Training for Paper(IV-B)	Post Graduate Mathematics	Open

Table - 6

6. Previous Action Plan and Status:

The students' feedback was also organized in 2016-17 for the same course. The data was collected randomly from the student in offline mode. Few scanned copy of sample responses are attached in Annexure-2: After analyzing the data a feedback report was published with action plans. The feedback report "PGMT Computer

training report-2016-17” is attached in Annexure-3: The action plans of this report are listed in Table-7 along with their status.

Serial No	Action	Year of initiation	Paper Name	Course Name	Status
1	Power backup system needs to be installed to mitigate the electric problem in computer laboratory.	2016-17	Computer Training for Paper(IV-B)	Post Graduate Mathematics	Closed
2	Computer laboratory needs to be enabled with adequate sound system to mitigate the sound problem.	2016-17	Computer Training for Paper(IV-B)	Post Graduate Mathematics	Closed
3	Regional centers needs to be operational with its own infrastructure and resources to reduce the cost incurred by the students	2016-17	Computer Training for Paper(IV-B)	Post Graduate Mathematics	Closed

Table - 7

Table - 7 shows that all the previous action plan has been implemented and closed. After implementing these action plans the infrastructure of laboratory in different regional centers have improved and this can be easily visible in the current photograph of the laboratory attached in Annexure-4:. This actions had reduced the problem of sound and electricity in the laboratory raised by the students in 2016-17. This is clearly reflected by the current rating of following two KPIs given in Table-3 which mainly depends on the laboratory infrastructure

1. “Uses of Teaching aids (Projector/Blackboard /PPT)” (serial no 4 in Table -3) has been rated as average or below only by 6.9% students which is much lower than the threshold limit (15%) in 2018-19 session.

2. “Black-board/White-board Work in Terms of Legibility, Visibility and Structure” (serial no 10 in Table -3) has been rated as average or below only by 5.6% students which is much lower than the threshold limit (15%) in 2018-19 session.

Thus above 2 KPIs indicate that the action taken from the feedback in 2016-17 was effective and improve the process in 2018-19.

7. Annexure-1:



PGMT Feedback
Responses 2018-19.:

8. Annexure-2:



PGMT Feedback
Responses 16-17.pd

9. Annexure-3:

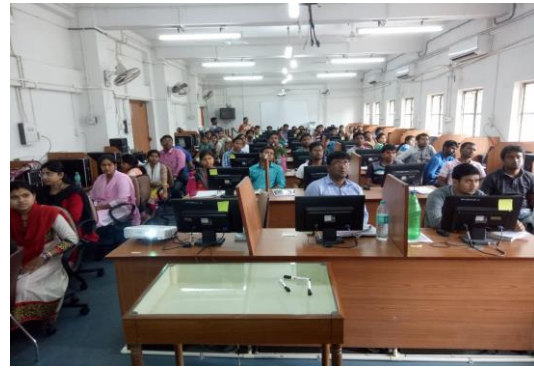


PGMT Computer
training report-2016

10. Annexure-4:



PGMT Laboratory at Regional Campus Durgapur



PGMT Laboratory at Regional Campus Kalyani



24/7 Power Supply and Online UPS at Regional Campus Kalyani