

PLO ASSESSMENT REPORT



Ecopreneurship
Growing with character



UNDERGRADUATE PROGRAM IN SCIENCE EDUCATION
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
UNIVERSITAS NEGERI SURABABAYA
2020

Preface

The Undergraduate Program in Science Education (UPSE), Faculty of Mathematics and Natural Sciences, Universitas Negeri Surabaya is four-year bachelor program and designed to enable students to directly change over to a science education-oriented occupational field or to begin the Master program in science education. In particular, students are to acquaint themselves with the modern theoretical and experimental developments in the field of study in its entire breadth and moreover be enabled to develop strategies for solving complex issues individually and in teams and to act with scientific and social responsibility.

In order to realize the commitment to continuous quality improvement, the UPSE conducted a Program Learning Outcomes (PLO) Assessment. This process is coordinated by the Quality Assurance Unit of the UPSE and carried out together with all lecturers. The UPSE has 11 PLOs consisting of attitudes, knowledge and skills. The PLO assessment itself is for the learning process carried out in the 2019/2020 Academic Year. All modules/courses programmed by students in the 2019/2020 Academic Year are further analyzed to produce this report. We are fully aware that there are still a number of modules that need to be evaluated and improved learning approach and models so that student performance in the next Academic Year can be better.

Therefore, we hope that this brief report can trigger all components both within the UPSE and related stakeholders to jointly improve quality in a sustainable manner and focus on achieving the established Educational Objectives Program of the UPSE.

Table of Contents

Preface.....	ii
Table of Contents	iii
List of Tables	iii
List of Figures	iv
A. Overview.....	1
B. PLO of the UPSE	1
C. Assessment Result on Each PLO	2
D. Summary of the UPSE PLOs Assessment.....	22

List of Tables

Table 1 Program Learning Outcomes of the UPSE	1
Table 2 Descriptive Statistics of the PLO1.....	2
Table 3 Students' performance indicators on each course attached to the PLO1	3
Table 4 Descriptive Statistics of the PLO2.....	4
Table 5 Students' performance indicators on each course attached to the PLO2	6
Table 6 Descriptive Statistics of the PLO3.....	7
Table 7 Students' performance indicators on each course attached to the PLO3	8
Table 8 Descriptive Statistics of the PLO4.....	9
Table 9 Students' performance indicators on each course attached to the PLO4	10
Table 10 Descriptive Statistics of the PLO5.....	11
Table 11 Students' performance indicators on each course attached to the PLO5	12
Table 12 Descriptive Statistics of the PLO6.....	13
Table 13 Students' performance indicators on each course attached to the PLO6	14
Table 14 Descriptive Statistics of the PLO7.....	15
Table 15 Students' performance indicators on each course attached to the PLO7	15
Table 16 Descriptive Statistics of the PLO8.....	16
Table 17 Students' performance indicators on each course attached to the PLO8	17
Table 18 Descriptive Statistics of the PLO9.....	18
Table 19 Students' performance indicators on each course attached to the PLO9	18
Table 20 Descriptive Statistics of the PLO10.....	19
Table 21 Students' performance indicators on each course attached to the PLO10	20
Table 22 Descriptive Statistics of the PLO11.....	21
Table 23 Students' performance indicators on each course attached to the PLO11	21

List of Figures

Figure 1 Mean score of the PLO1	3
Figure 2 Achievement report of the PLO1	4
Figure 3 Mean score of the PLO2	6
Figure 4 Achievement report of the PLO2	7
Figure 5 Mean score of the PLO3	8
Figure 6 Achievement report of the PLO3	9
Figure 7 Mean score of the PLO4	10
Figure 8 Achievement report of the PLO4	11
Figure 9 Mean score of the PLO5	12
Figure 10 Achievement report of the PLO5	13
Figure 11 Mean score of the PLO6	14
Figure 12 Achievement report of the PLO6	14
Figure 13 Mean score of the PLO7	15
Figure 14 Achievement report of the PLO7	16
Figure 15 Mean score of the PLO8	17
Figure 16 Achievement report of the PLO8	17
Figure 17 Mean score of the PLO9	18
Figure 18 Achievement report of the PLO9	19
Figure 19 Mean score of the PLO10.....	20
Figure 20 Achievement report of the PLO10	20
Figure 21 Mean score of the PLO11.....	21
Figure 22 Achievement report of the PLO11	22
Figure 23 Comparison among Average of Mean and Mean of each PLO	22
Figure 24 PLOs Assessment of the UPSE (2019/2020 Academic Year).....	23

A. Overview

The Undergraduate Program in Science Education (UPSE), Faculty of Mathematics and Natural Sciences, Universitas Negeri Surabaya has implemented outcome-based Education (OBE) Curriculum. The UPSE conduct Program Learning Outcomes (PLO) assessment for the 2019/2020 Academic Year. This process involving the Quality Assurance Unit and all the academic staffs in the UPSE. This report reflecting the current PLO Achievement of the UPSE as the result of the OBE Curriculum implementation.

Establishing and monitoring progress towards PLOs is an iterative process taking place at course/module level. Although success of students in accomplishing the PLOs is an indicator of success in achieving the PLOs, progress towards PLOs can be most directly evaluated during and at or near the time of completion of the formal instructional/learning process. Currently, The PLOs of the UPSE can be assessed by using the direct and indirect assessment during the teaching and learning processes. The procedure of the PLO assessment, i.e.:

1. Performance indicators on each CLO and PLO attributed to the Assessment Components (Assignment, Mid-semester test, and Final-semester test). The Assessment Component is depending on type of course/module workload according to the National Standards of Higher Education;
2. Percentage of weight each component toward CLOs and PLOs established in the Module and Curriculum;
3. Percentage of weight calculated based-on contribution of each Assessment Component to each CLO and PLO charged to the courses. Weights' formula: $\% \text{Contribution} \times \% \text{performance indicator on each assessment component}$; and
4. Interpretation of students' performance indicators on each PLO divided into four categories, i.e.: (1) Excellent (≥ 80); (2) Good (≥ 70); (3) Satisfy (≥ 55); and (4) Fail (< 55).

B. PLO of the UPSE

The PLO of the UPSE, Faculty of Mathematics and Natural Sciences, Universitas Negeri Surabaya as shown in Table 1.

Table 1 Program Learning Outcomes of the UPSE

Competency SSC-ASIIN	Aspect	PLO	DESCRIPTION
Specialist competences	Knowledge	PLO1	Demonstrate basic knowledge of physics, chemistry, and biology.
		PLO2	Demonstrate knowledge of integrated science (physics, chemistry, and biology).
		PLO3	Demonstrate pedagogical knowledge of designing, implementing, and evaluating integrated science learning.
		PLO4	Demonstrate knowledge related to science education research.
	Specific Skills	PLO5	Design, implement, and evaluate science learning using ICT.
		PLO6	Design and conduct research about learning of integrated science, and acquire, analyze, and interpret the research data.

Competency SSC-ASIIN	Aspect	PLO	DESCRIPTION
Social competences	General Skills	PLO7	Communicate ideas and research results effectively both in oral and written forms.
		PLO8	Make decisions based on data / information in order to complete tasks and evaluate the performance that has been done.
		PLO9	Work effectively both individually and in groups, and have entrepreneurial spirits and environmental awareness.
	Attitude	PLO10	Demonstrate scientific, critical, and innovative attitudes in integrated science learning, laboratory activities, and professional-related tasks.
		PLO11	Demonstrate religious and cultural values as well as academic ethics in carrying out their professional-related duties.

C. Assessment Result on Each PLO

1. PLO1 Assessment Result

The result of the PLO1 Assessment Result from the modules attached to the PLO1 explained in Table 2, Figure 1, Table 3, and Figure 2.

Table 2 Descriptive Statistics of the PLO1

No.	Module	Type	Mean	Median	Mode	Maximum	Minimum	SD
1	General Physics	Compulsory	73.70	73.54	74.15	89.77	67.62	3.50
2	General Chemistry	Compulsory	76.55	76.25	68.00	98.50	0.00	12.49
3	General Biology	Compulsory	74.87	75.55	75.10	81.60	0.00	8.58
5	Basic Mathematics	Compulsory	67.96	68.02	80.00	96.19	0.00	13.40
6	Mathematics for Science	Compulsory	88.84	89.33	93.27	93.96	79.81	3.19
7	Introductory of Natural Science	Compulsory	84.63	85.00	87.00	87.00	75.00	2.22
8	Biodiversity	Compulsory	82.31	82.90	83.80	88.90	66.00	4.16
9	Conservation of Natural Resources and Environment	Compulsory	82.22	82.30	80.20	86.90	57.40	3.37
10	Solution	Compulsory	76.16	77.94	-	91.20	0.00	10.05
11	Science School Analysis	Compulsory	74.49	74.70	71.60	86.30	64.00	3.68
12	Introductory of Biotechnology	Elective	85.61	85.72	82.56	93.63	79.19	2.88
13	Ethnoscience	Elective	84.18	84.50	83.10	88.30	78.60	2.25
14	Introductory of Electronics	Elective	86.78	87.00	86.13	92.25	79.63	2.67

No.	Module	Type	Mean	Median	Mode	Maximum	Minimum	SD
15	Introductory of Electronics	Elective	81.47	81.19	81.00	88.88	71.88	3.19
PLO1			79.92	81.50	85.00	98.50	0.00	8.82

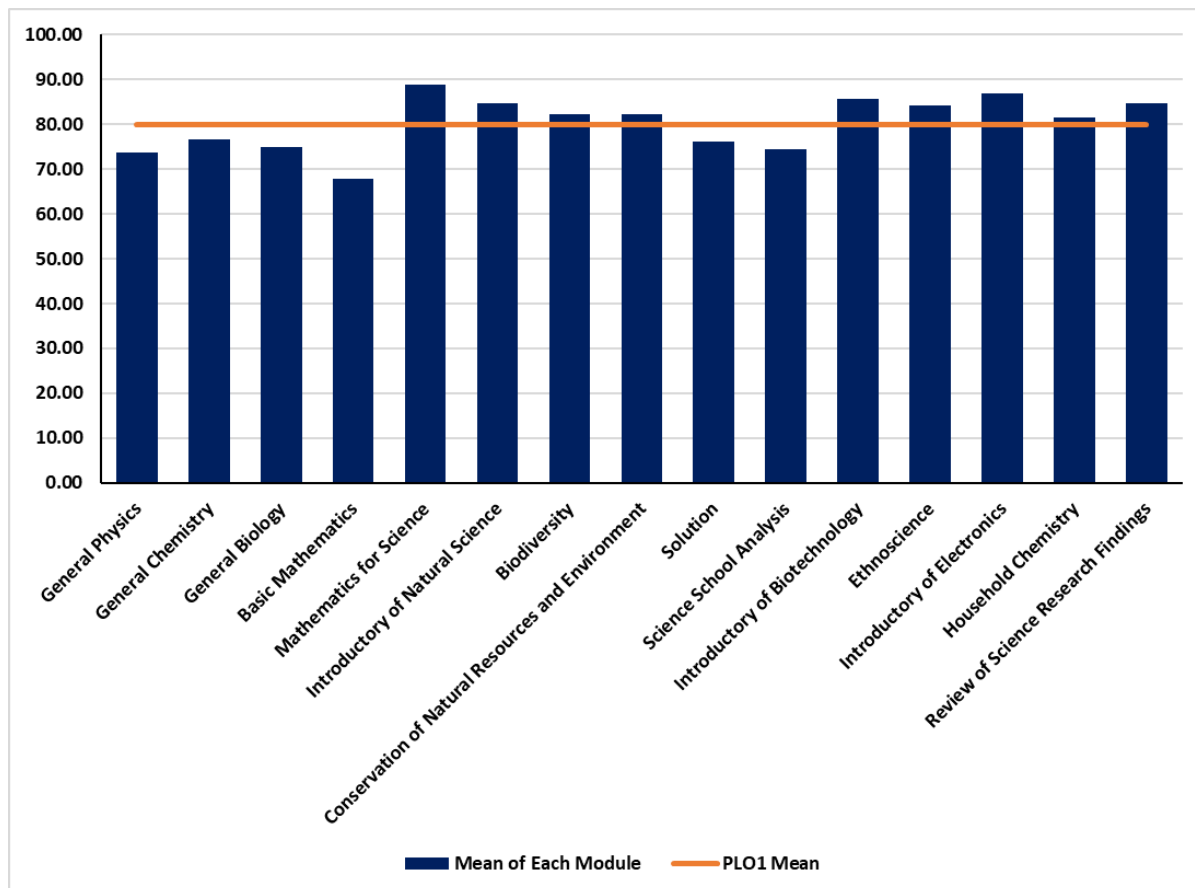


Figure 1 Mean score of the PLO1

The distribution of the interpretation of students' performance indicators on each course/module attached to the PLO1 reported in Table 3 and Figure 2.

Table 3 Students' performance indicators on each course attached to the PLO1

No.	Module	Excellent	Good	Satisfy	Fail
1	General Physics	3.45	85.06	11.49	0.00
2	General Chemistry	38.64	37.50	21.59	2.27
3	General Biology	14.77	84.09	0.00	1.14
5	Basic Mathematics	19.32	26.14	43.18	11.36
6	Mathematics for Science	98.89	1.11	0.00	0.00
7	Introductory of Natural Science	93.10	6.90	0.00	0.00
8	Biodiversity	75.00	23.86	1.14	0.00
9	Conservation of Natural Resources and Environment	90.11	8.79	1.10	0.00
10	Solution	30.77	55.13	12.82	1.28
11	Science School Analysis	5.19	89.61	5.19	0.00

No.	Module	Excellent	Good	Satisfy	Fail
12	Introductory of Biotechnology	98.89	1.11	0.00	0.00
13	Ethnoscience	96.63	3.37	0.00	0.00
14	Introductory of Electronics	98.72	1.28	0.00	0.00
15	Household Chemistry	70.51	29.49	0.00	0.00

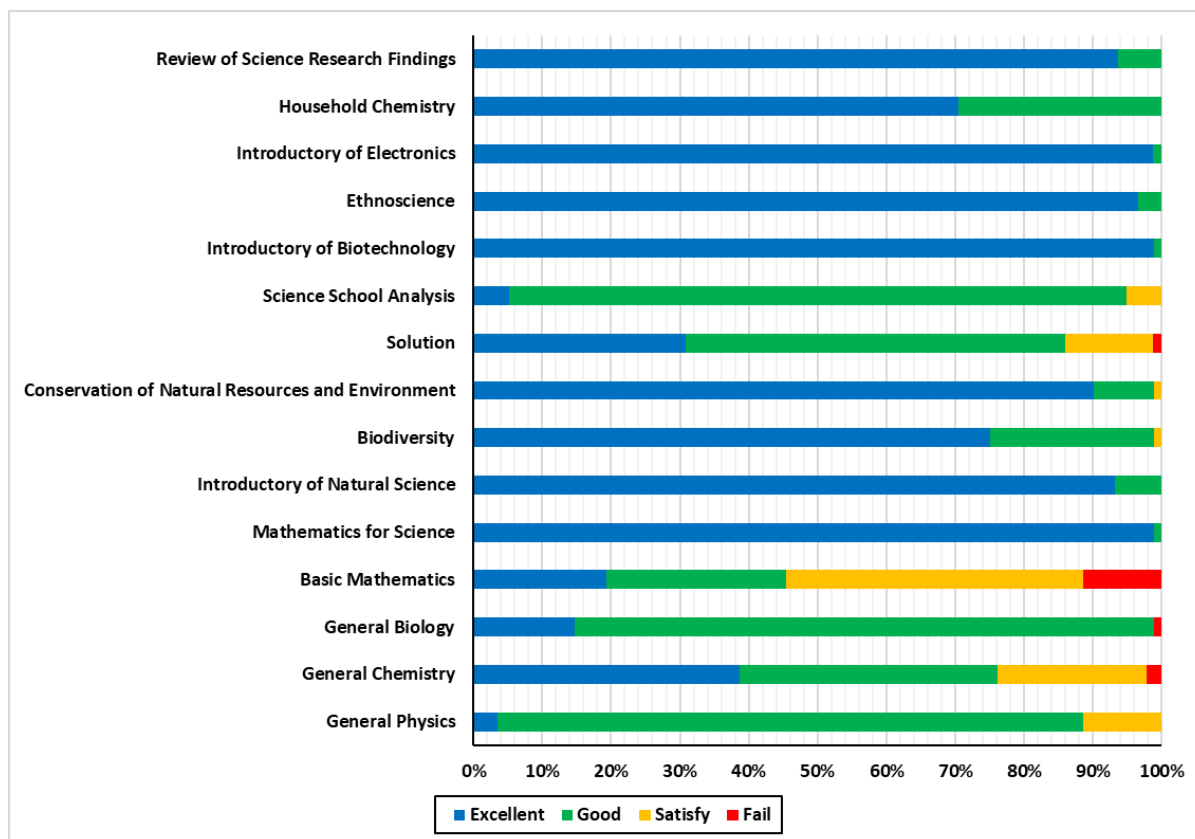


Figure 2 Achievement report of the PLO1

2. PLO2 Assessment Result

The result of the PLO2 Assessment Result from the modules attached to the PLO2 explained in Table 4, Figure 3, Table 5, and Figure 4.

Table 4 Descriptive Statistics of the PLO2

No.	Module	Type	Mean	Median	Mode	Maximum	Minimum	SD
1	General Physics	Compulsory	74.09	74.22	74.67	89.00	67.61	3.44
2	General Chemistry	Compulsory	75.27	78.38	80.31	88.45	37.75	8.83
3	General Biology	Compulsory	74.87	75.55	75.10	81.60	0.00	8.58
5	Basic Mathematics	Compulsory	67.96	68.02	80.00	96.19	0.00	13.40
6	Mathematics for Science	Compulsory	88.88	89.39	93.06	93.83	79.17	3.27

No.	Module	Type	Mean	Median	Mode	Maximum	Minimum	SD
7	Introductory of Natural Science	Compulsory	82.22	83.18	83.18	94.09	67.91	5.12
8	Biodiversity	Compulsory	82.31	82.90	83.80	88.90	66.00	4.16
9	Biomechanics	Compulsory	76.75	76.38	74.88	91.75	65.25	5.11
10	Plant Anatomy and Physiology	Compulsory	77.50	77.65	80.15	87.70	66.20	4.78
11	Matter and Energy	Compulsory	79.45	79.63	77.38	89.50	67.63	5.09
12	Animal Anatomy and Physiology	Compulsory	77.93	77.50	77.19	87.31	67.81	4.29
13	Fluids	Compulsory	72.75	73.25	69.63	86.25	26.25	7.27
14	Introduction to Biochemistry	Compulsory	78.66	79.00	75.00	90.13	0.00	9.51
15	SETS	Compulsory	85.03	87.63	87.63	88.75	76.63	3.27
16	Ecology	Compulsory	82.58	82.70	81.40	89.20	70.90	3.63
17	Live at Cellular Level	Compulsory	80.58	81.90	81.00	89.50	0.00	10.68
18	Electricity and Magnetism	Compulsory	68.61	67.67	65.94	81.50	65.44	3.13
19	Science School Analysis	Compulsory	74.49	74.70	71.60	86.30	64.00	3.68
20	Waves and Optics	Compulsory	88.85	88.65	91.40	94.40	82.50	2.39
21	Earth and Planetary Science	Elective	80.38	80.13	80.13	85.88	77.00	2.06
PLO2			79.92	81.50	85.00	98.50	0.00	8.82

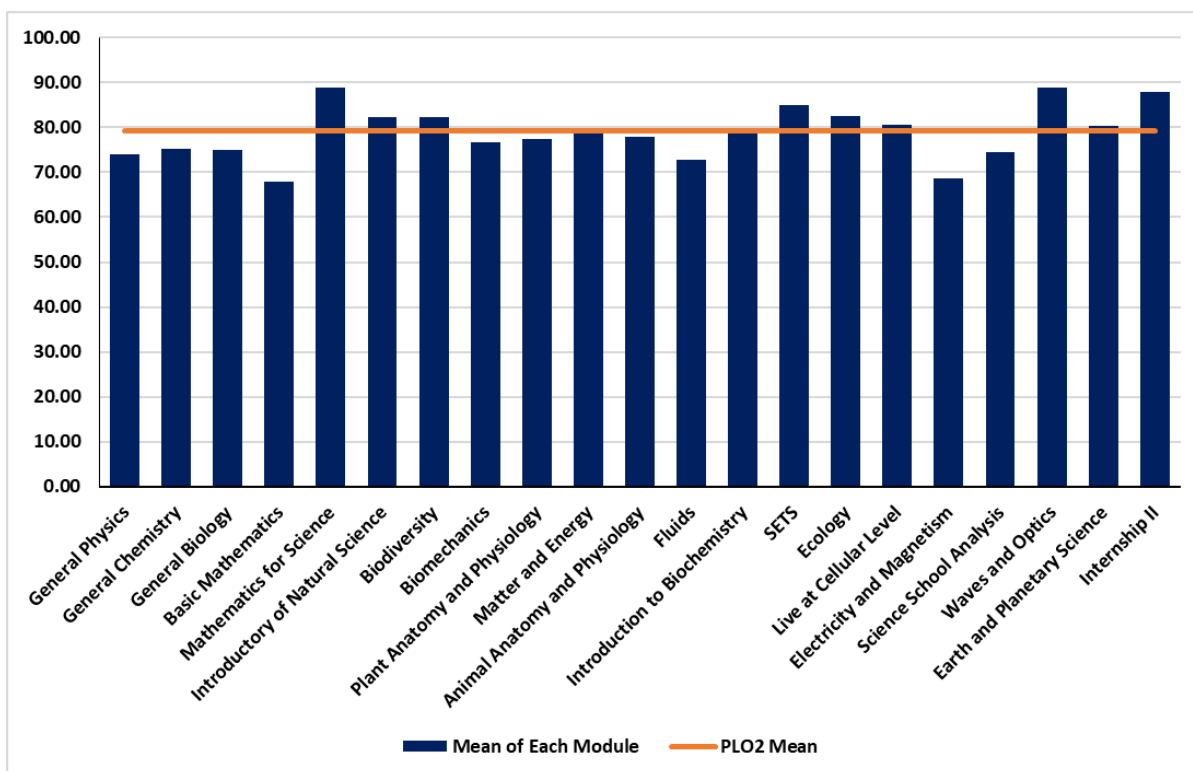


Figure 3 Mean score of the PLO2

The distribution of the interpretation of students' performance indicators on each course/module attached to the PLO2 reported in Table 5 and Figure 4.

Table 5 Students' performance indicators on each course attached to the PLO2

No.	Module	Excellent	Good	Satisfy	Fail
1	General Physics	3.45	85.06	11.49	0.00
2	General Chemistry	35.23	36.36	27.27	1.14
3	General Biology	14.77	84.09	0.00	1.14
5	Basic Mathematics	19.32	26.14	43.18	11.36
6	Mathematics for Science	98.89	1.11	0.00	0.00
7	Introductory of Natural Science	70.11	28.74	1.15	0.00
8	Biodiversity	75.00	23.86	1.14	0.00
9	Biomechanics	24.44	516.67	10.00	0.00
10	Plant Anatomy and Physiology	38.89	54.44	6.67	0.00
11	Matter and Energy	48.31	46.07	5.62	0.00
12	Animal Anatomy and Physiology	31.11	65.56	3.33	0.00
13	Fluids	8.79	60.44	29.67	1.10
14	Introduction to Biochemistry	41.76	57.14	0.00	1.10
15	SETS	98.70	1.30	0.00	0.00
16	Ecology	77.63	22.37	0.00	0.00
17	Live at Cellular Level	64.47	32.89	1.32	1.32
18	Electricity and Magnetism	1.30	18.18	80.52	0.00
19	Science School Analysis	5.19	89.61	5.19	0.00

No.	Module	Excellent	Good	Satisfy	Fail
20	Waves and Optics	100.00	0.00	0.00	0.00
21	Earth and Planetary Science	66.22	33.78	0.00	0.00

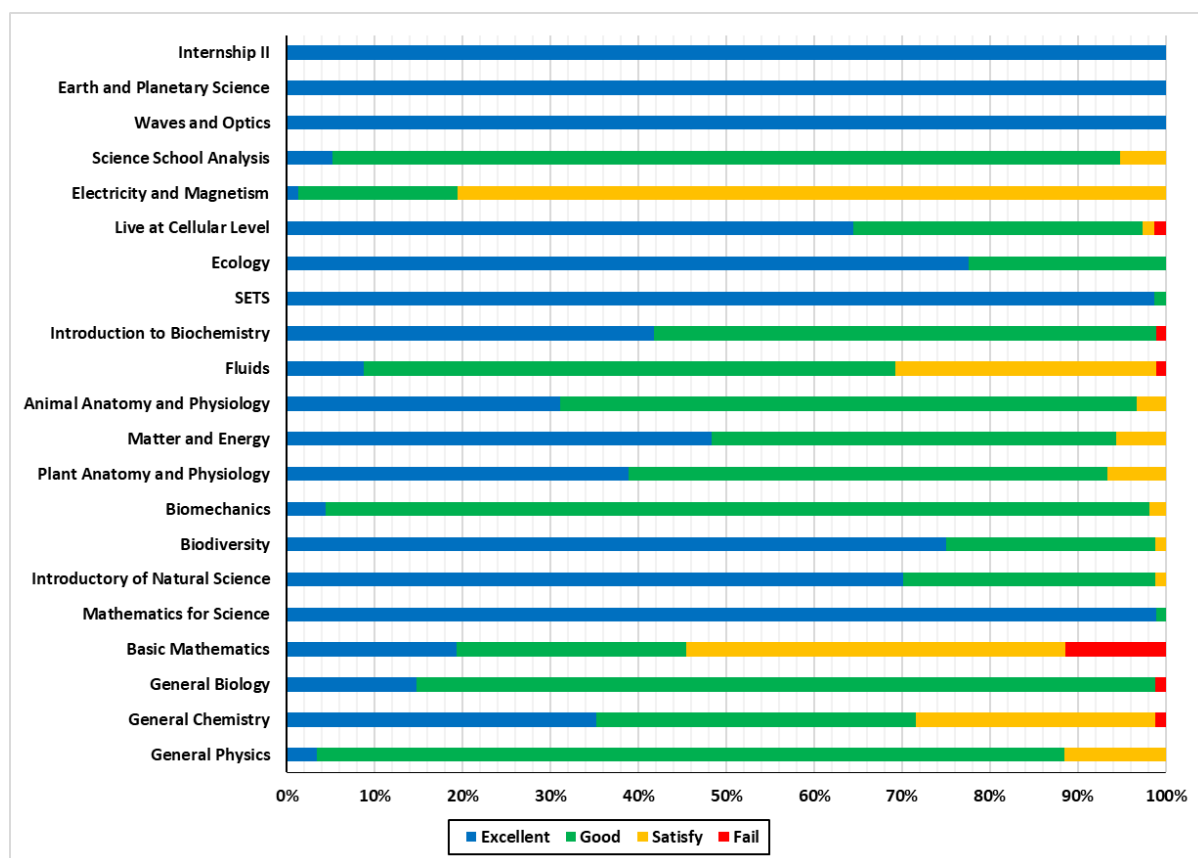


Figure 4 Achievement report of the PLO2

3. PLO3 Assessment Result

The result of the PLO3 Assessment Result from the sample of module attached to the PLO3 explained in Table 6, Figure 5, Table 7, and Figure 6.

Table 6 Descriptive Statistics of the PLO3

No.	Module	Type	Mean	Median	Mode	Maximum	Minimum	SD
1	Introductory of Education	Compulsory	83.34	84.10	85.00	88.90	16.00	7.36
2	Curriculum Review	Compulsory	82.28	81.88	80.75	88.38	78.50	2.41
3	Innovative Learning 2	Compulsory	83.16	83.27	80.81	88.50	77.35	2.60
4	Research Method	Compulsory	83.46	83.50	84.93	86.07	80.50	1.36
5	Learning Theory	Compulsory	81.47	81.80	84.60	86.90	41.10	4.93
6	Innovative Learning 1	Compulsory	85.84	86.38	86.65	88.38	78.46	2.28

No.	Module	Type	Mean	Median	Mode	Maximum	Minimum	SD
7	Learning Media	Compulsory	84.59	85.00	85.00	90.00	75.00	2.75
8	Assessment and Evaluation	Compulsory	81.72	81.35	80.00	88.10	75.30	3.08
9	Educational Psychology	Compulsory	80.35	80.63	76.63	88.50	68.75	4.37
10	Seminar	Compulsory	84.49	86.00	86.00	92.00	0.00	9.95
11	Thesis	Compulsory	69.40	86.15	0.00	100.00	0.00	34.85
PLO3			81.67	84.50	85.00	100.00	0.00	13.83

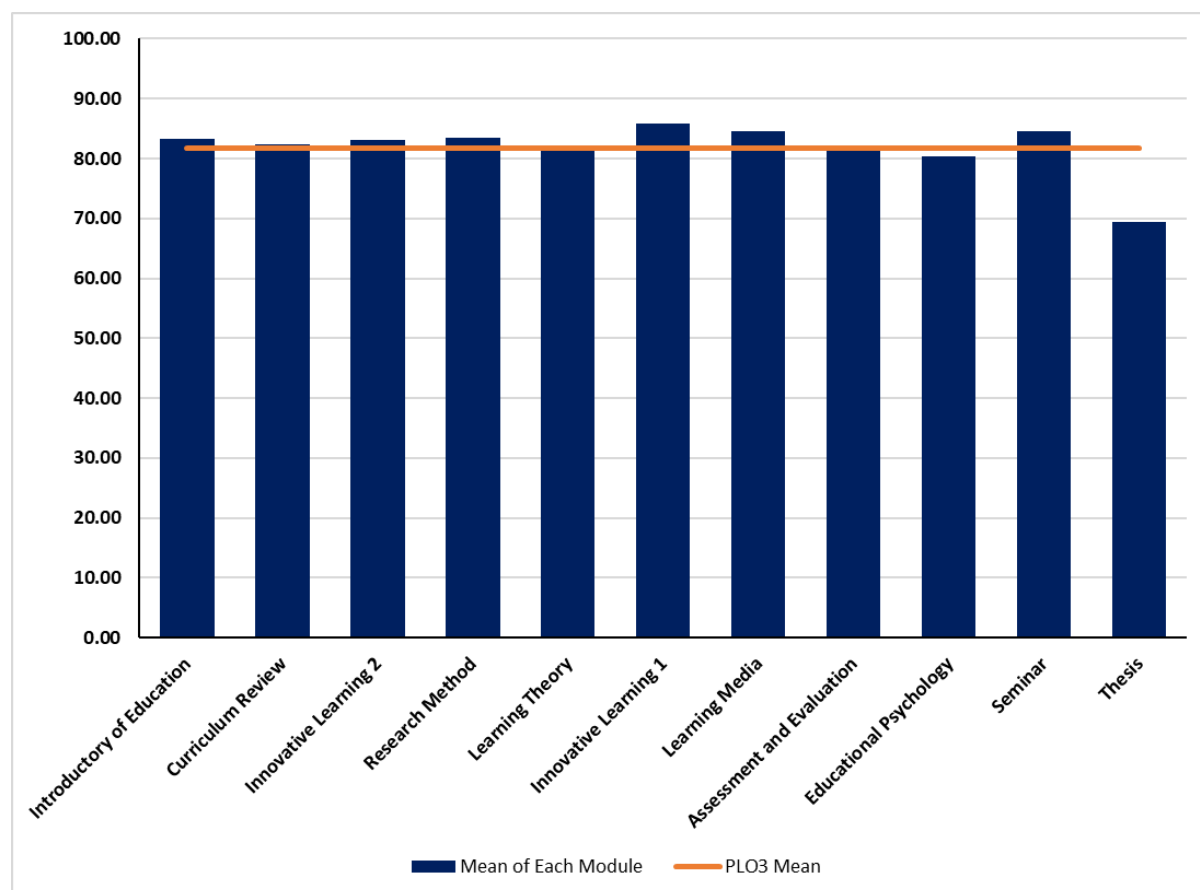


Figure 5 Mean score of the PLO3

The distribution of the interpretation of students' performance indicators on each course/module attached to the PLO3 reported in Table 7 and Figure 6.

Table 7 Students' performance indicators on each course attached to the PLO3

No.	Module	Excellent	Good	Satisfy	Fail
1	Introductory of Education	97.73	1.14	0.00	1.14
2	Curriculum Review	82.22	17.78	0.00	0.00
3	Innovative Learning 2	95.00	5.00	0.00	0.00
4	Research Method	100.00	0.00	0.00	0.00
5	Learning Theory	78.16	20.69	0.00	1.15

No.	Module	Excellent	Good	Satisfy	Fail
6	Innovative Learning 1	92.22	7.78	0.00	0.00
7	Learning Media	91.03	8.97	0.00	0.00
8	Assessment and Evaluation	75.56	24.44	0.00	0.00
9	Educational Psychology	55.17	43.68	1.15	0.00
10	Seminar	98.73	0.00	0.00	1.27
11	Thesis	77.78	2.22	0.00	20.00

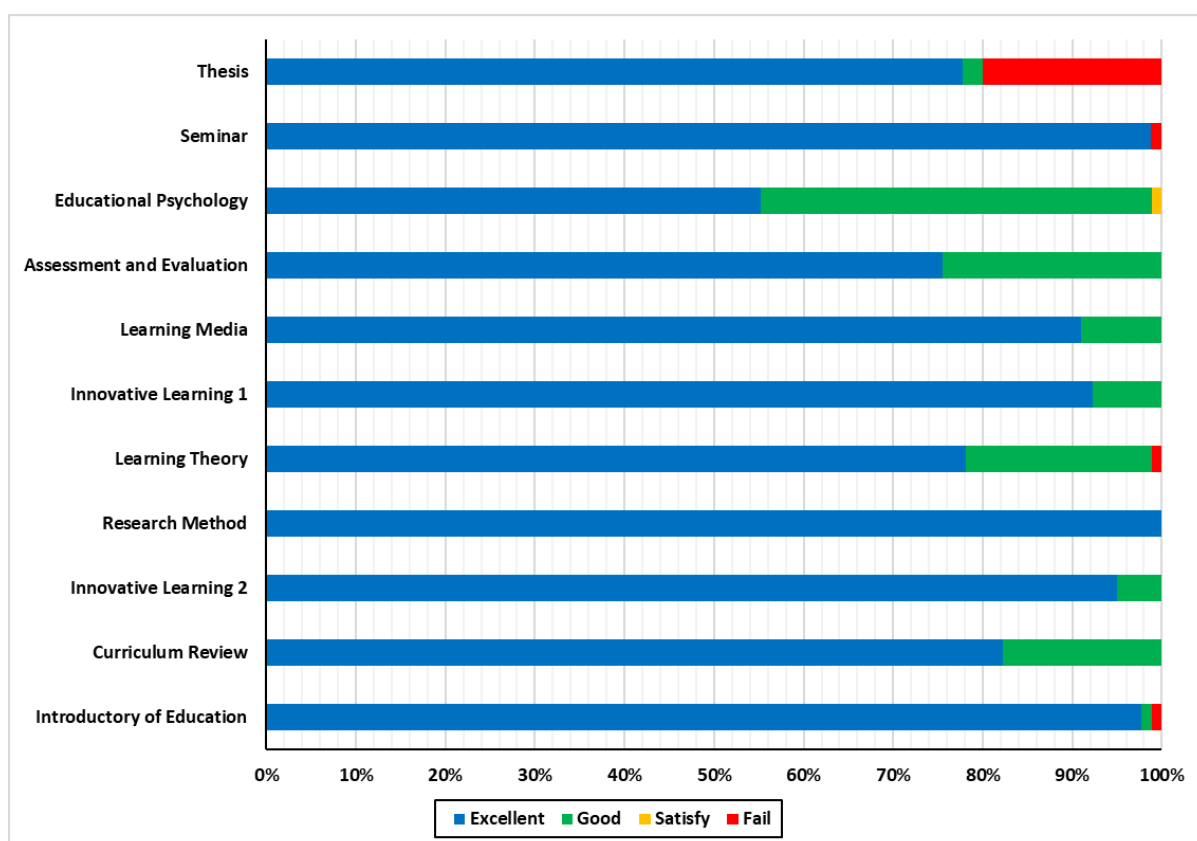


Figure 6 Achievement report of the PLO3

4. PLO4 Assessment Result

The result of the PLO4 Assessment Result from the modules attached to the PLO4 explained in Table 8, Figure 7, Table 9, and Figure 8.

Table 8 Descriptive Statistics of the PLO4

No.	Module	Type	Mean	Median	Mode	Maximum	Minimum	SD
1	History and Philosophy of Science Education	Compulsory	82.37	82.63	81.88	86.50	72.75	2.44
2	Basic Computer	Compulsory	85.17	85.50	86.80	88.60	70.10	2.55
3	Internship I	Compulsory	86.52	87.00	87.00	90.90	80.80	1.83

No.	Module	Type	Mean	Median	Mode	Maximum	Minimum	SD
4	Internship II	Compulsory	88.02	87.30	87.20	93.40	84.20	2.31
PLO4			85.40	85.60	85.00	93.40	70.10	3.09

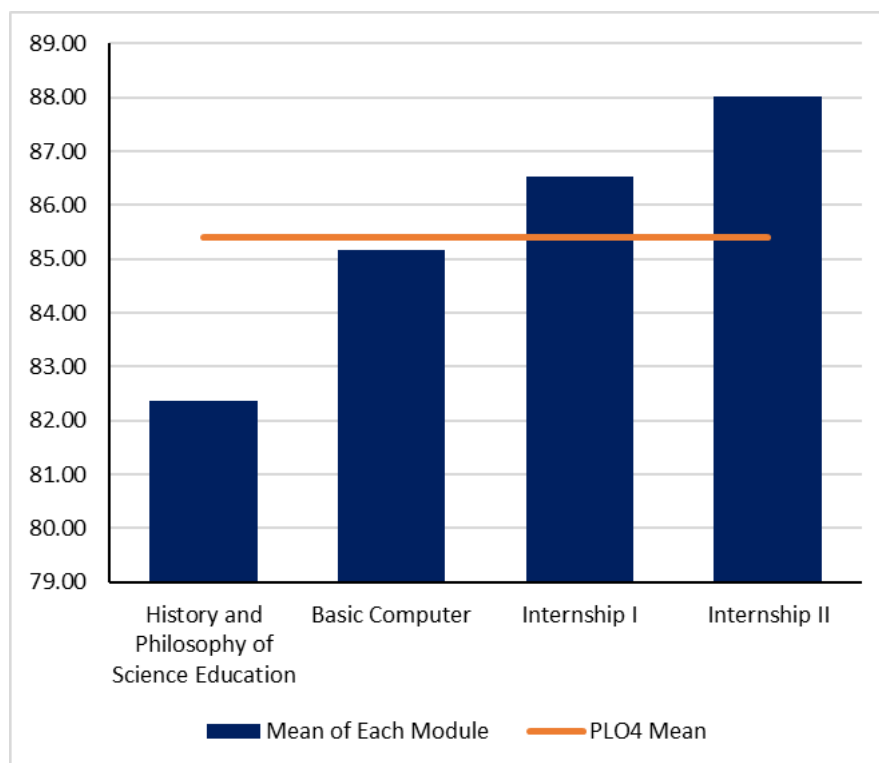


Figure 7 Mean score of the PLO4

The distribution of the interpretation of students' performance indicators on each course/module attached to the PLO4 reported in Table 9 and Figure 8.

Table 9 Students' performance indicators on each course attached to the PLO4

No.	Module	Excellent	Good	Satisfy	Fail
1	History and Philosophy of Science Education	91.11	8.89	0.00	0.00
2	Basic Computer	97.70	2.30	0.00	0.00
3	Internship I	100.00	0.00	0.00	0.00
4	Internship II	100.00	0.00	0.00	0.00

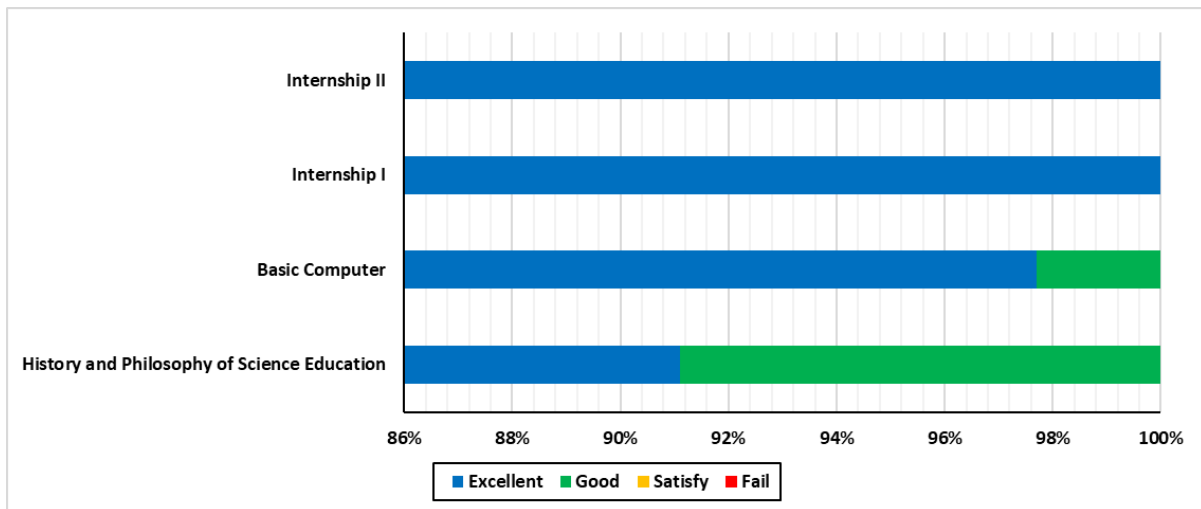


Figure 8 Achievement report of the PLO4

5. PLO5 Assessment Result

The result of the PLO5 Assessment Result from the modules attached to the PLO5 explained in Table 10, Figure 9, Table 11, and Figure 10.

Table 10 Descriptive Statistics of the PLO5

No.	Module	Type	Mean	Median	Mode	Maximum	Minimum	SD
1	Digital Literacy	Compulsory	80.48	80.00	80.00	88.00	69.00	4.40
2	Innovative Learning I	Compulsory	85.90	86.56	86.61	88.56	78.89	2.22
3	Learning Media	Compulsory	84.59	85.00	85.00	90.00	75.00	2.75
4	Assessment and Evaluation	Compulsory	81.72	81.35	80.00	88.10	75.30	3.08
5	Internship I	Compulsory	86.52	87.00	87.00	90.90	80.80	1.83
6	Innovative Learning II	Compulsory	84.05	84.17	82.39	87.94	78.50	2.04
7	Research Method	Compulsory	83.57	83.67	85.33	86.44	80.11	1.62
8	Seminar	Compulsory	84.49	86.00	86.00	92.00	0.00	9.95
9	Internship II	Compulsory	88.02	87.30	87.20	93.40	84.20	2.31
10	Thesis	Compulsory	69.40	86.15	0.00	100.00	0.00	0.00
PLO5			82.71	85.10	85.00	100.00	0.00	13.12

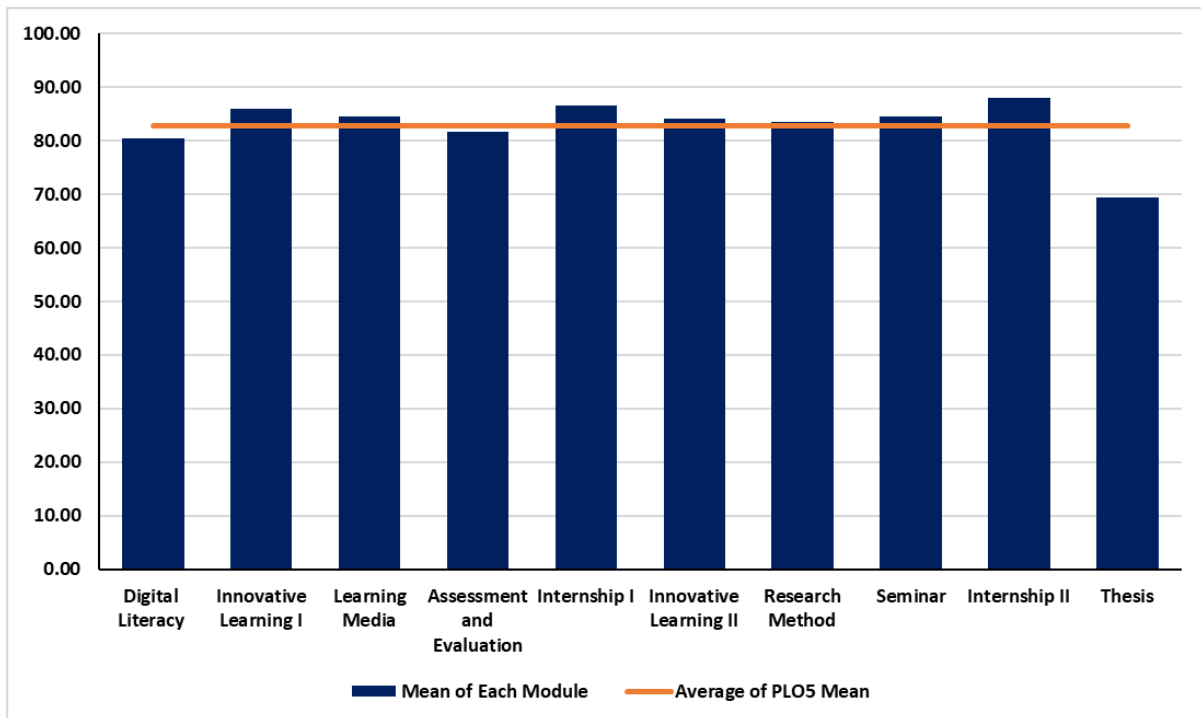


Figure 9 Mean score of the PLO5

The distribution of the interpretation of students' performance indicators on each course/module attached to the PLO5 reported in Table 11 and Figure 10.

Table 11 Students' performance indicators on each course attached to the PLO5

No.	Module	Excellent	Good	Satisfy	Fail
1	Digital Literacy	57.47	41.38	1.15	0.00
2	Innovative Learning I	92.22	7.78	0.00	0.00
3	Learning Media	91.03	8.97	0.00	0.00
4	Assessment and Evaluation	75.56	24.44	0.00	0.00
5	Internship I	100.00	0.00	0.00	0.00
6	Innovative Learning II	95.00	5.00	0.00	0.00
7	Research Method	100.00	0.00	0.00	0.00
8	Seminar	98.73	0.00	0.00	1.27
9	Internship II	100.00	0.00	0.00	0.00
10	Thesis	77.78	2.22	0.00	20.00

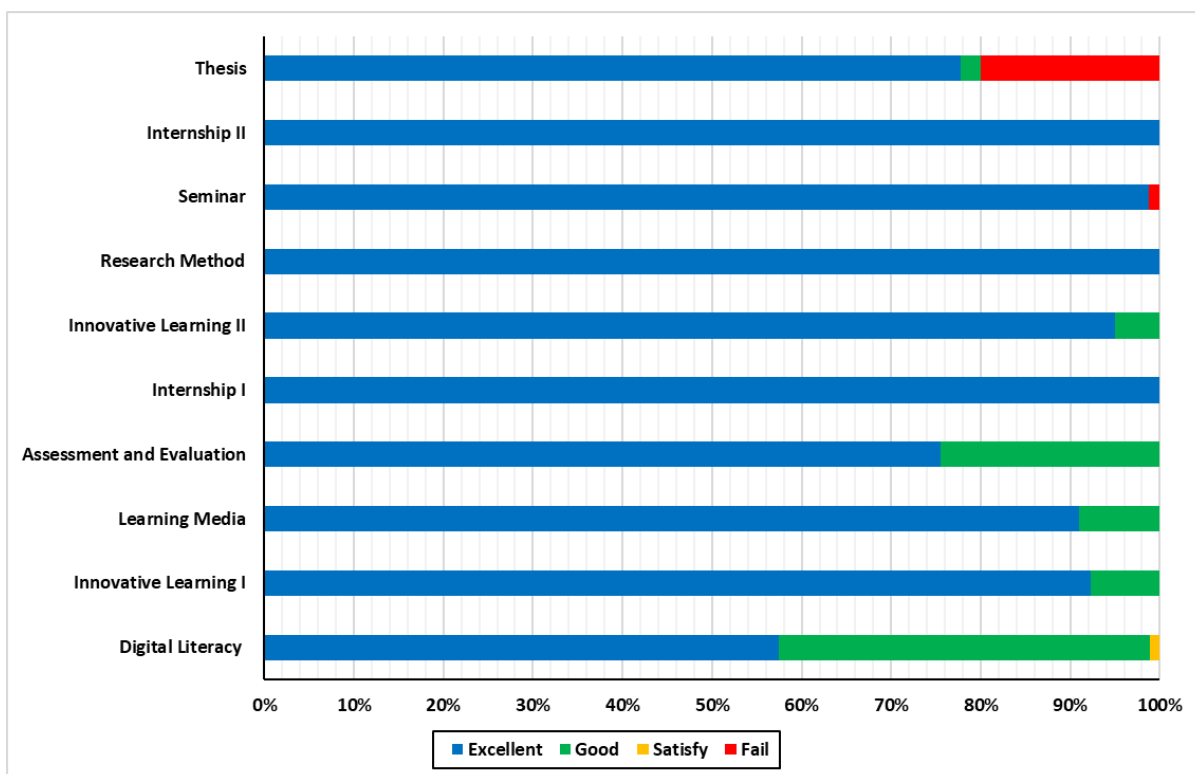


Figure 10 Achievement report of the PLO5

6. PLO6 Assessment Result

The result of the PLO6 Assessment Result from the modules attached to the PLO6 explained in Table 12, Figure 11, Table 13, and Figure 12.

Table 12 Descriptive Statistics of the PLO6

No.	Module	Type	Mean	Median	Mode	Maximum	Minimum	SD
1	Research Method	Compulsory	83.61	83.96	85.52	87.04	79.72	2.04
2	Statistics of Education	Compulsory	76.75	75.88	75.88	90.13	70.75	3.89
3	Seminar	Compulsory	84.49	86.00	86.00	92.00	0.00	9.95
4	Thesis	Compulsory	69.40	86.15	0.00	100.00	0.00	34.85
PLO6			78.23	84.00	0.00	100.00	0.00	20.12

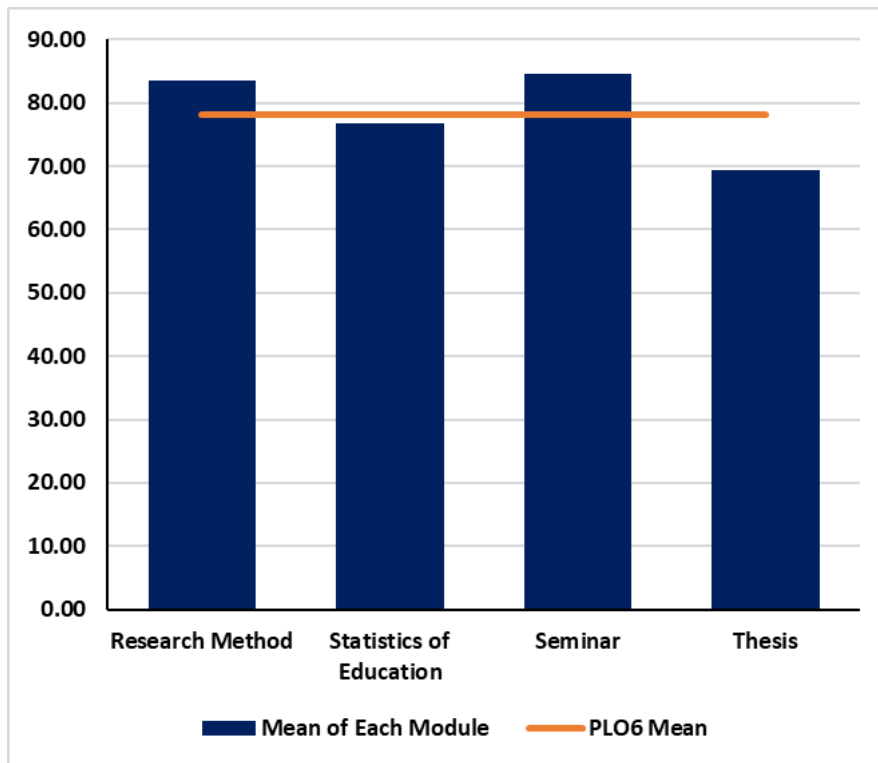


Figure 11 Mean score of the PLO6

The distribution of the interpretation of students' performance indicators on each course/module attached to the PLO6 reported in Table 13 and Figure 12.

Table 13 Students' performance indicators on each course attached to the PLO6

No.	Module	Excellent	Good	Satisfy	Fail
1	Research Method	97.40	2.60	0.00	0.00
2	Statistics of Education	16.67	83.33	0.00	0.00
3	Seminar	98.73	0.00	0.00	1.27
4	Thesis	77.78	2.22	0.00	20.00

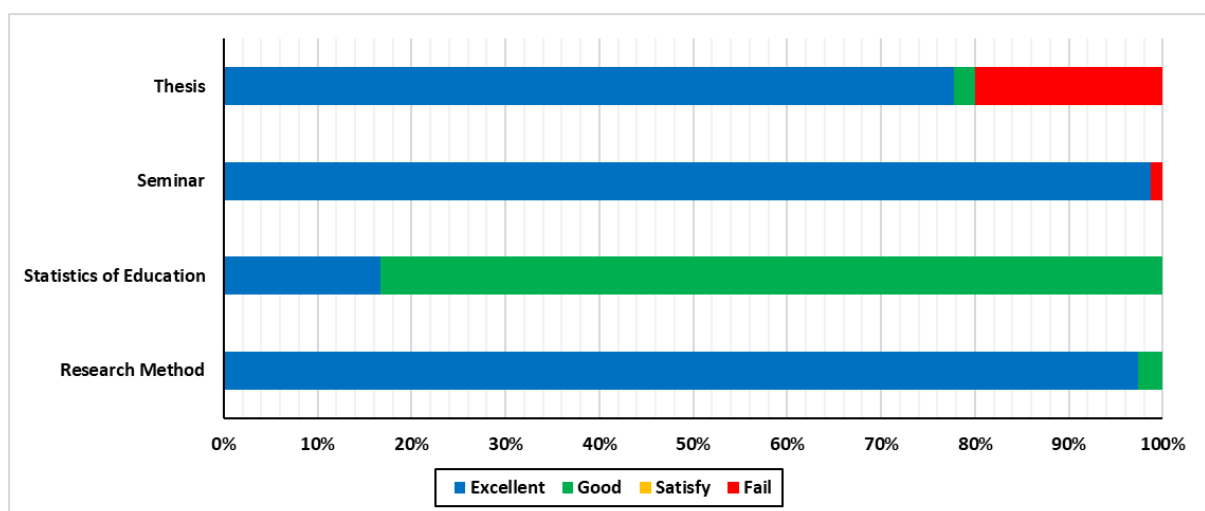


Figure 12 Achievement report of the PLO6

7. PLO7 Assessment Result

The result of the PLO7 Assessment Result from the modules attached to the PLO7 explained in Table 14, Figure 13, Table 15, and Figure 14.

Table 14 Descriptive Statistics of the PLO7

No.	Module	Type	Mean	Median	Mode	Maximum	Minimum	SD
1	English	Compulsory	67.68	67.25	58.13	83.00	51.88	7.79
2	Indonesian Language	Compulsory	79.23	79.88	76.88	85.63	72.25	3.05
3	Social and Culture Study	Compulsory	79.85	80.00	80.00	85.00	75.56	2.36
4	Community Service	Compulsory	84.60	87.50	85.00	97.50	0.00	16.18
PLO7			77.79	80.00	80.00	97.50	0.00	11.09

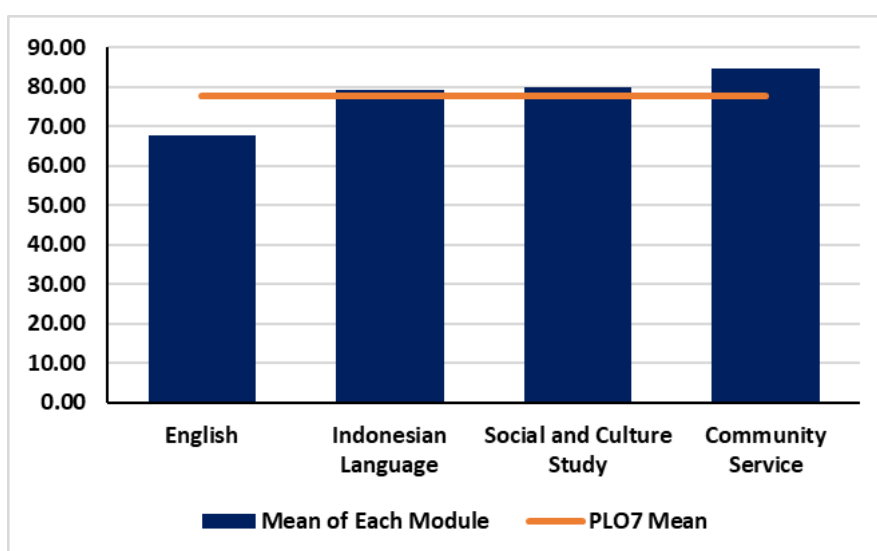


Figure 13 Mean score of the PLO7

The distribution of the interpretation of students' performance indicators on each course/module attached to the PLO7 reported in Table 15 and Figure 14.

Table 15 Students' performance indicators on each course attached to the PLO7

No.	Module	Excellent	Good	Satisfy	Fail
1	English	6.67	33.33	56.67	3.33
2	Indonesian Language	49.43	50.57	0.00	0.00
3	Social and Culture Study	53.33	46.67	0.00	0.00
4	Community Service	96.59	0.00	0.00	3.41

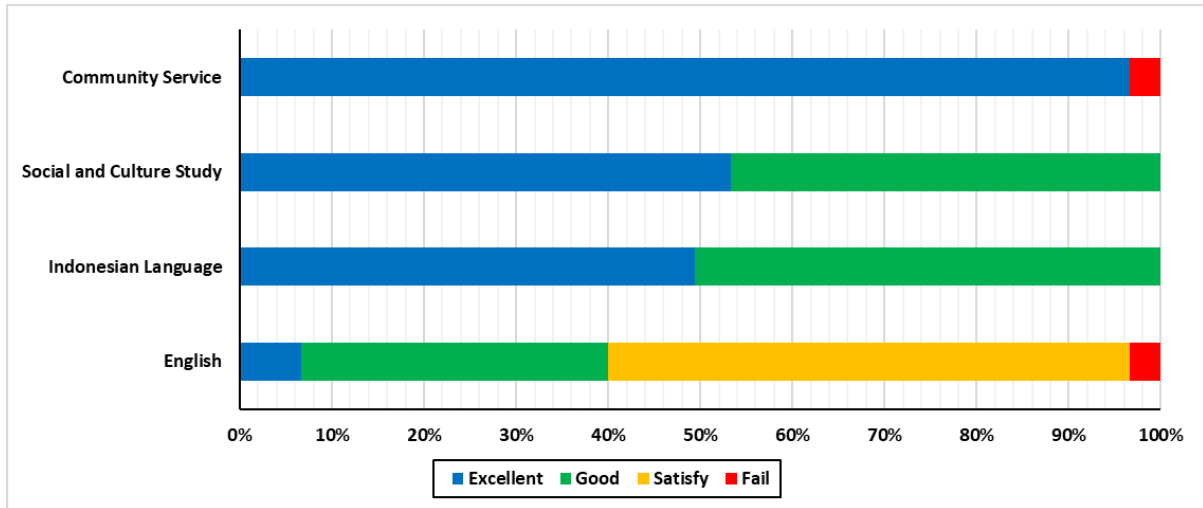


Figure 14 Achievement report of the PLO7

8. PLO8 Assessment Result

The result of the PLO8 Assessment Result from the modules attached to the PLO8 explained in Table 16, Figure 15, Table 17, and Figure 16.

Table 16 Descriptive Statistics of the PLO8

No.	Module	Type	Mean	Median	Mode	Maximum	Minimum	SD
1	Social and Culture Study	Compulsory	80.10	80.00	80.00	85.00	76.67	2.20
2	Management and Safety work in Laboratory	Compulsory	85.21	84.88	81.88	90.63	78.88	2.61
3	Conservation of Natural Resources and Environment	Compulsory	82.22	82.30	80.20	86.90	57.40	3.37
4	Internship I	Compulsory	86.52	87.00	87.00	90.90	80.80	1.83
5	Internship II	Compulsory	88.02	87.30	87.20	93.40	84.20	2.31
PLO8			84.27	85.00	80.00	93.40	57.40	3.81

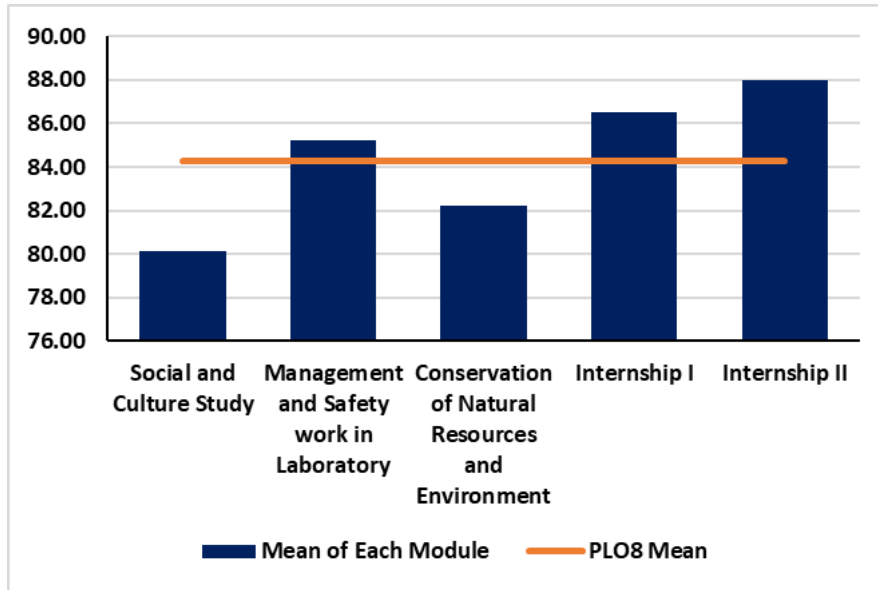


Figure 15 Mean score of the PLO8

The distribution of the interpretation of students' performance indicators on each course/module attached to the PLO8 reported in Table 17 and Figure 16.

Table 17 Students' performance indicators on each course attached to the PLO8

No.	Module	Excellent	Good	Satisfy	Fail
1	Social and Culture Study	53.33	46.67	0.00	0.00
2	Management and Safety work in Laboratory	98.89	1.11	0.00	0.00
3	Conservation of Natural Resources and Environment	90.11	8.79	1.10	0.00
4	Internship I	100.00	0.00	0.00	0.00
5	Internship II	100.00	0.00	0.00	0.00

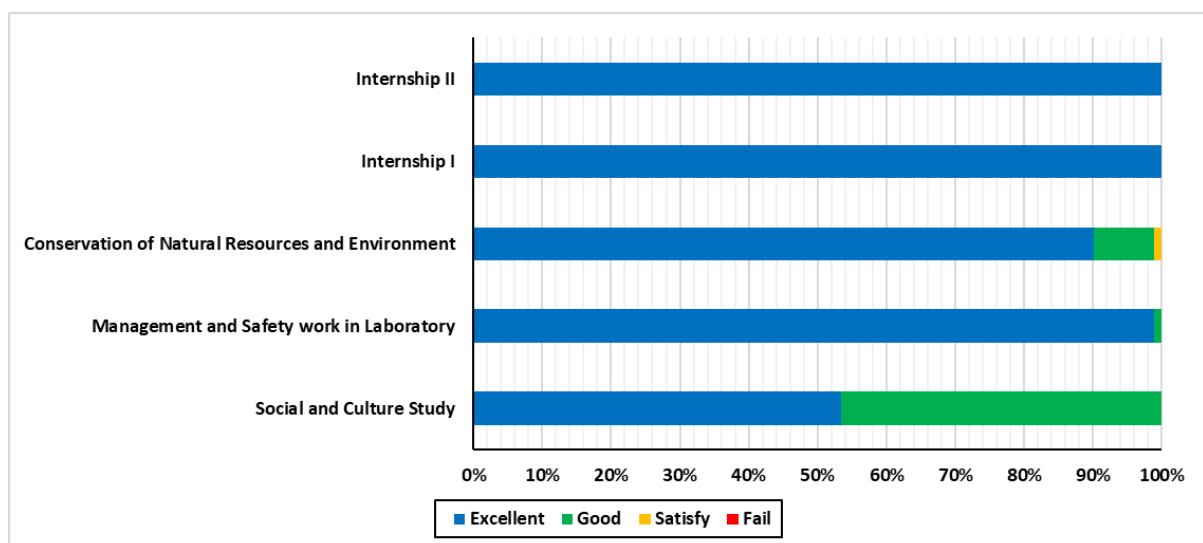


Figure 16 Achievement report of the PLO8

9. PLO9 Assessment Result

The result of the PLO9 Assessment Result from the modules attached to the PLO9 explained in Table 18, Figure 17, Table 19, and Figure 18.

Table 18 Descriptive Statistics of the PLO9

No.	Module	Type	Mean	Median	Mode	Maximum	Minimum	SD
1	Pancasila Education	Compulsory	84.04	85.31	88.27	90.35	71.81	3.99
2	History and Philosophy of science Education	Compulsory	85.40	85.00	85.00	90.00	85.00	1.30
3	Citizenship Education	Compulsory	80.00	80.00	80.00	80.00	80.00	0.00
4	Entrepreneurship	Compulsory	82.56	81.88	80.00	89.25	75.00	3.93
5	Community Service	Compulsory	84.60	87.50	85.00	97.50	0.00	16.18
PLO9			83.32	85.00	80.00	97.50	0.00	7.89

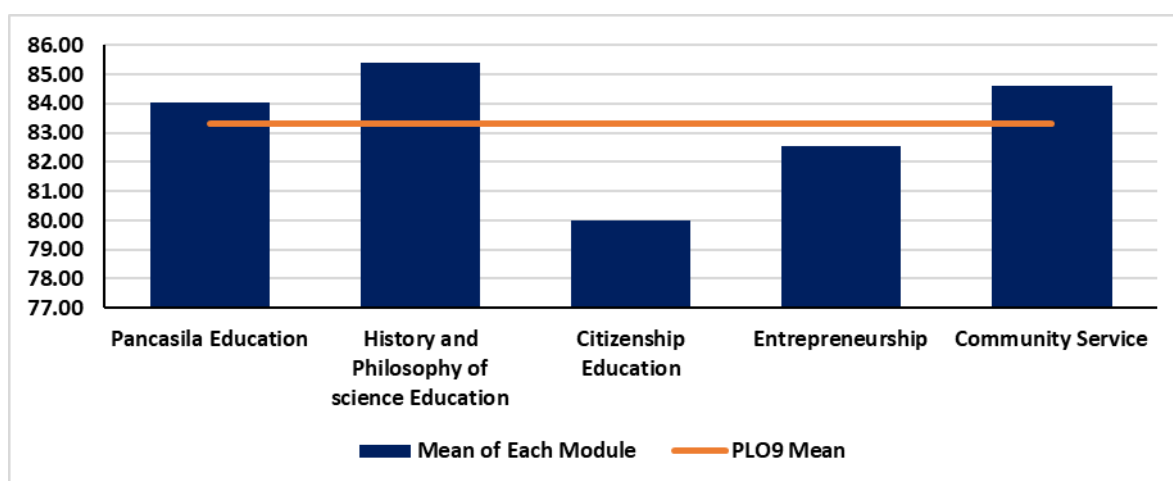


Figure 17 Mean score of the PLO9

The distribution of the interpretation of students' performance indicators on each course/module attached to the PLO9 reported in Table 19 and Figure 18.

Table 19 Students' performance indicators on each course attached to the PLO9

No.	Module	Excellent	Good	Satisfy	Fail
1	Pancasila Education	83.91	16.09	0.00	0.00
2	History and Philosophy of science Education	100.00	0.00	0.00	0.00
3	Citizenship Education	100.00	0.00	0.00	0.00
4	Entrepreneurship	73.33	26.67	0.00	0.00
5	Community Service	96.59	0.00	0.00	3.41

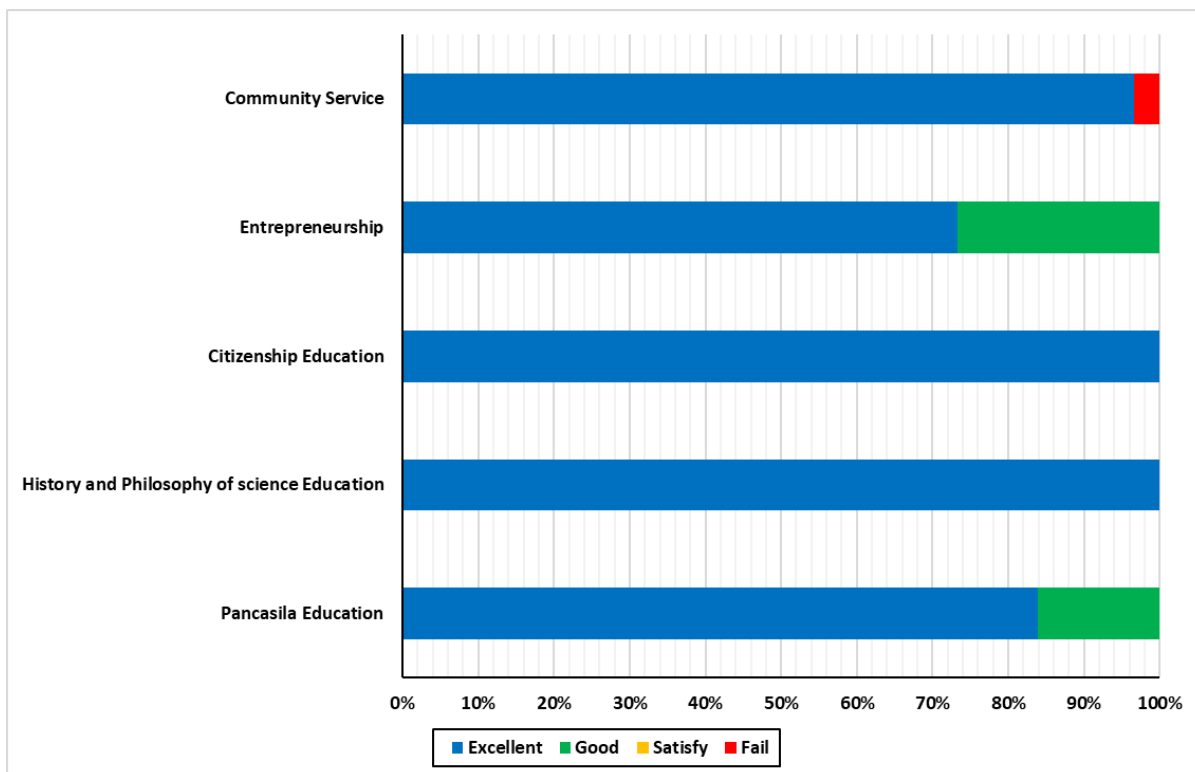


Figure 18 Achievement report of the PLO9

10. PLO10 Assessment Result

The result of the PLO10 Assessment Result from the modules attached to the PLO10 explained in Table 20, Figure 19, Table 21, and Figure 20.

Table 20 Descriptive Statistics of the PLO10

No.	Module	Type	Mean	Median	Mode	Maximum	Minimum	SD
1	Seminar	Compulsory	84.49	86.00	86.00	92.00	0.00	9.95
2	Management and Safety work in Laboratory	Compulsory	85.21	84.88	81.88	90.63	78.88	2.61
3	Thesis	Compulsory	69.40	86.15	0.00	100.00	0.00	34.85
4	Internship I	Compulsory	86.52	87.00	87.00	90.90	80.80	1.83
5	Internship II	Compulsory	88.02	87.30	87.20	93.40	84.20	2.31
PLO10			82.47	86.13	85.00	100.00	0.00	18.12

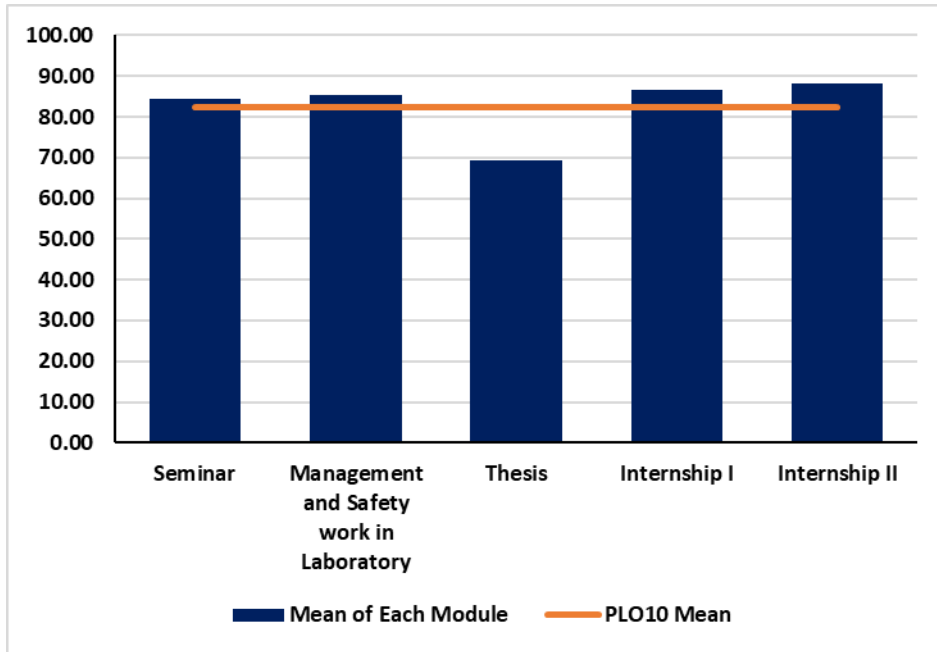


Figure 19 Mean score of the PLO10

The distribution of the interpretation of students' performance indicators on each course/module attached to the PLO10 reported in Table 21 and Figure 20.

Table 21 Students' performance indicators on each course attached to the PLO10

No.	Module	Excellent	Good	Satisfy	Fail
1	Seminar	98.73	0.00	0.00	1.27
2	Management and Safety work in Laboratory	98.89	1.11	0.00	0.00
3	Thesis	77.78	2.22	0.00	20.00
4	Internship I	100.00	0.00	0.00	0.00
5	Internship II	100.00	0.00	0.00	0.00

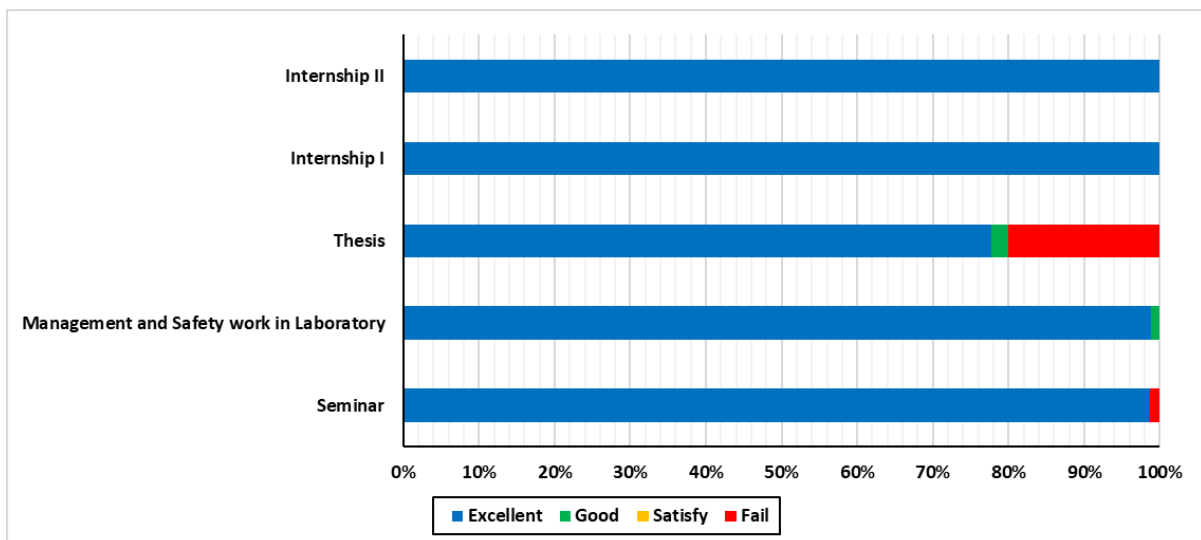


Figure 20 Achievement report of the PLO10

11. PLO11 Assessment Result

The result of the PLO11 Assessment Result from the modules attached to the PLO11 explained in Table 22, Figure 21, Table 23, and Figure 22.

Table 22 Descriptive Statistics of the PLO11

No.	Module	Type	Mean	Median	Mode	Maximum	Minimum	SD
1	Pancasila Education	Compulsory	83.96	85.69	86.56	90.39	69.78	4.26
2	Religion Education	Compulsory	89.81	90.63	85.38	97.50	85.00	3.99
3	Citizenship Education	Compulsory	75.86	77.00	77.00	83.00	0.00	11.58
4	Social and Culture Study	Compulsory	89.81	90.63	85.38	97.50	85.00	3.99
5	Seminar	Compulsory	84.49	86.00	86.00	92.00	0.00	9.95
6	Thesis	Compulsory	69.40	86.15	0.00	100.00	0.00	0.00
PLO11			81.94	85.72	80.00	100.00	0.00	17.78

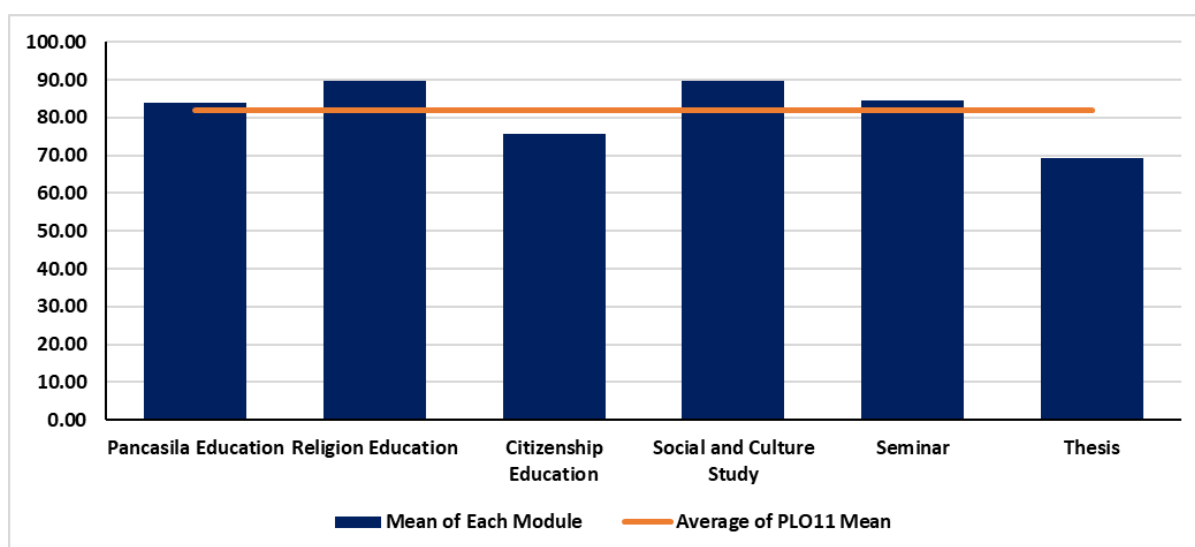


Figure 21 Mean score of the PLO11

The distribution of the interpretation of students' performance indicators on each course/module attached to the PLO11 reported in Table 23 and Figure 22.

Table 23 Students' performance indicators on each course attached to the PLO11

No.	Module	Excellent	Good	Satisfy	Fail
1	Pancasila Education	83.91	14.94	1.15	0.00
2	Religion Education	100.00	0.00	0.00	0.00
3	Citizenship Education	29.67	68.13	0.00	2.20
4	Social and Culture Study	100.00	0.00	0.00	0.00
5	Seminar	98.73	0.00	0.00	1.27
6	Thesis	77.78	2.22	0.00	20.00

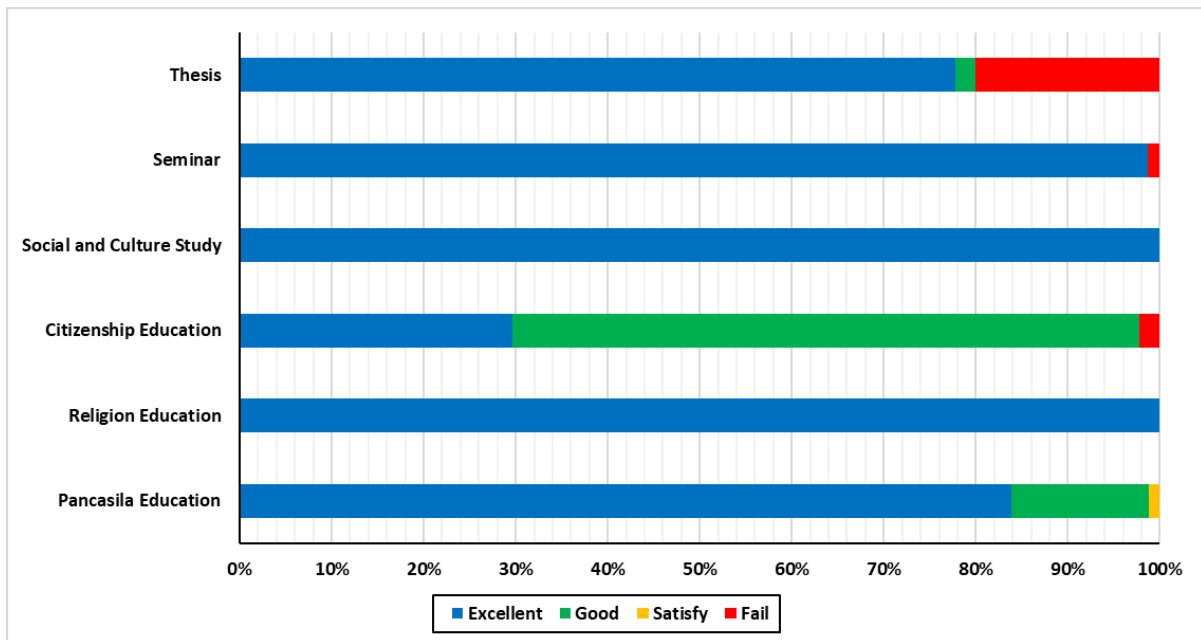


Figure 22 Achievement report of the PLO11

D. Summary of the UPSE PLOs Assessment

1. Average of Mean

The measurement of each PLO can be obtained from the mean value obtained based on the student learning outcomes. The mean score for all PLOs in the 2019/2020 Academic Year is 78.23. The comparison of the mean performance of each PLO with the overall mean is presented in Figure 23.

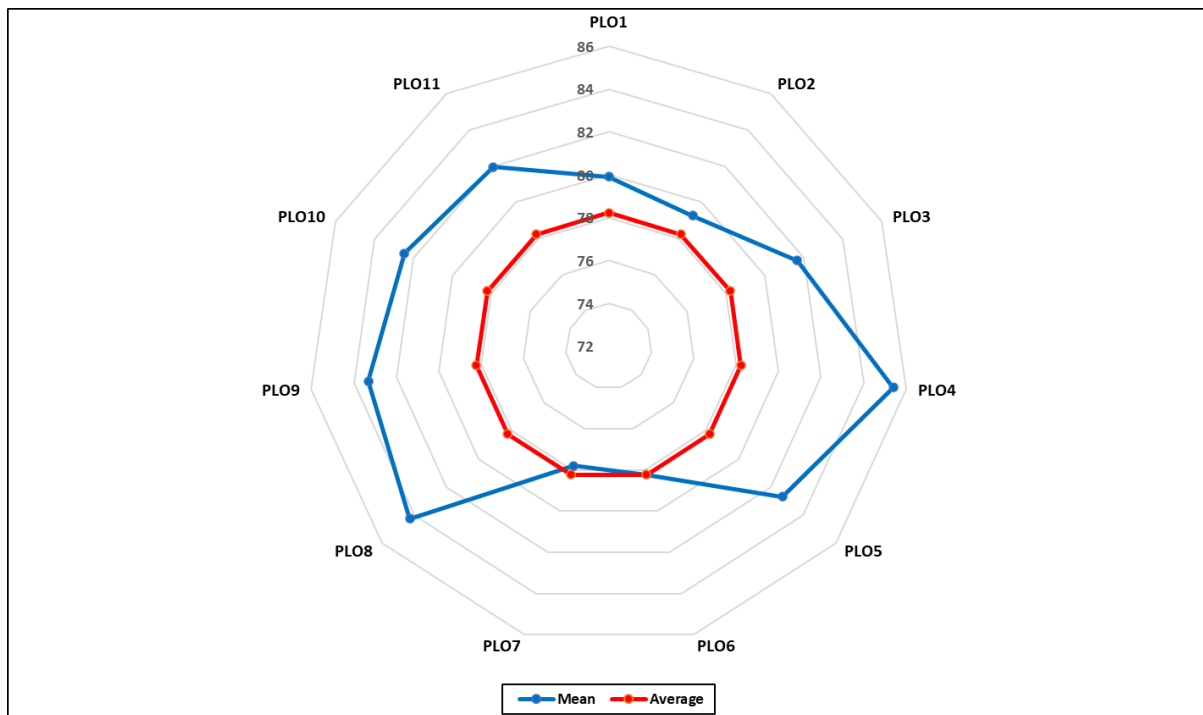


Figure 23 Comparison among Average of Mean and Mean of each PLO

Based on Figure 23, PLO6 and PLO7 are still below the average of mean. This shows that all modules assigned to PLO6 and PLO7 must be evaluated and the learning process improved in the coming Academic Year.

2. PLO Assessment based on Students' Performance

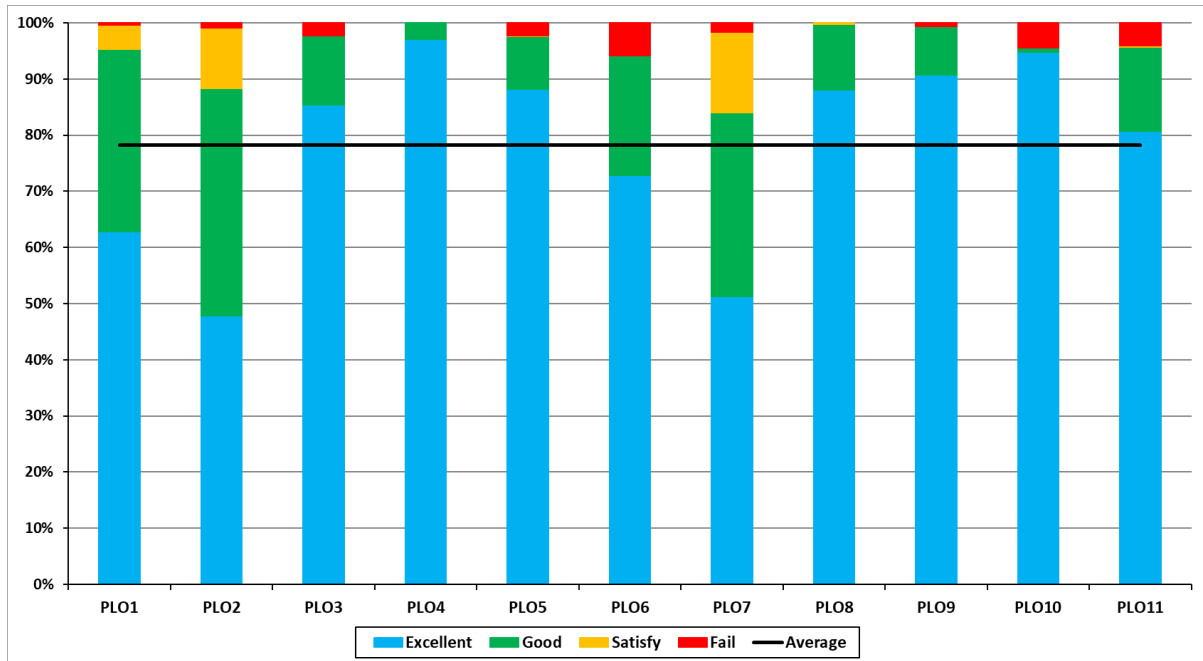


Figure 24 PLOs Assessment of the UPSE (2019/2020 Academic Year)

The results of the PLO Assessment show that the performance of students who reach the Excellent category (above the average line) i.e., PLO3, PLO4, PLO5, PLO8, PLO9, PLO10, and PLO11. The performance of students who achieved the Excellent category in PLO1, PLO2, PLO6, and PLO7 still below the average. This indicates that there is a need for evaluation on all modules/courses related to the PLO1, PLO2, PLO6, and PLO7. However, the learning process in the 2019/2020 Academic Year has been quite successful, this is indicated by the small percentage of students whose performance is in the Fail category. In addition, the Fail category in the Thesis module does not mean failure, but students who program the Thesis have not been able to complete the research and writing process during the 2019/2020 Academic Year and will continue in the next Academic Year.