CHAPTER 4

RESEARCH RESULTS AND ANALYSIS

In this chapter, the effectiveness of the English for Social Science curriculum, students' paragraph writing ability, analytical thinking ability, and moral awareness are presented.

Part 4.1: The Effectiveness of the English for Social Science Curriculum

1) The effectiveness of lesson plans evaluated by three experts is presented as the followings:

Table 11 Means (μ) and standard deviation (σ) of learning objectives, content, process and evaluation of 9 lesson plans

Lesson plan No.	Learning objectives	Learning content	Learning Process				Learning evaluation	μ	σ	Level of effectiveness
			CE	RO	AC	AE				
1.	4.67	4.17	3.58	3.75	4.33	3.92	4.08	4.07	0.63	high
2.	4.75	4.75	4.58	4.42	4.42	4.58	4.25	4.54	0.19	highest
3.	4.67	4.75	4.67	4.75	4.58	4.92	4.42	4.54	0.16	highest
4.	4.42	4.33	4.42	4.25	4.42	3.25	3.92	4.14	0.43	high
5.	4.58	4.75	4.50	4.67	4.83	4.67	4.50	4.06	1.65	high
6.	4.83	4.33	4.25	4.75	4.75	4.92	4.25	4.58	0.29	highest
7.	4.42	4.33	4.67	4.50	4.75	4.33	4.17	4.45	0.24	high
8.	4.42	4.42	4.67	4.33	4.58	4.67	4.25	3.92	1.59	high
9.	4.58	4.67	4.08	4.67	4.25	4.83	4.33	3.93	1.61	high
Total	41.33	40.50	39.42	40.08	40.92	40.08	38.17	38.23	σ=	
(μ) Total	4.59	4.50	4.38	4.45	4.55	4.45	4.24	4.25	0.72	
Level	Highest	Highest	High	High	Highest	High	High	High		

From table 11, it shows that all the lesson plans are effective (μ = 4.25). Most of them are at the high level. The highest ones are learning objectives, learning content and process respectively. Lesson plan 6 is the most effective (μ = 4.58).

Based on the feedback from the advisor and the experts, the lesson plans were further refined and revised by the researchers before using them with the target group.

2) The effectiveness of the English for Social Sciences curriculum implementation evaluated by students

At the end of lesson plans implementing, students evaluated the teaching process by filling up the questionnaire. The results are as follows:

Table 12 The overall effectiveness of the English for Social Sciences curriculum implementation evaluated by students

Items of Evaluation	**Mean (μ)**	**Standard Deviation (σ)**	**Results**
1. Learning content	3.97	0.49	High
2. Learning process	4.58	0.66	Highest
3. Learning materials and resources	4.48	0.55	High
4. Learning assessment and evaluation	4.07	0.67	High
5. English for Social Sciences 1 curriculum and instruction	4.18	0.65	High
Total	4.25	0.60	High

From table 12, the students' opinion on the effectiveness of the English for Social Sciences curriculum implementation as a whole are at a high level (μ = 4.25), except the mean scores of item 2 that is at the highest level.

Part 4.2: The Results of the English for Social Sciences Curriculum Implementation

The results of the English for Social Sciences curriculum implementation are as follows:

2.1) Students' paragraph writing ability

In order to assess the effectiveness of the lesson plans, the researcher asked students to write paragraphs that included: a cause and effect paragraph, a problem-solution paragraph, a persuasive paragraph, and a conflict- resolution paragraph (See Appendix C) . The results are presented in the following table.

Table 13 Percentage scores of students' paragraph writing ability assessed from individual paragraph writings after each experiential learning unit (n=88)

Student No.	Cause-effect (20)	Problem-solution (20)	Persuasion (20)	Conflict-resolution (20)	Total (80)	%	Level of proficiency
1	13	16	16	16	61	76	Competent
2	11	10	12	14	47	59	Beginning
3	13	14	15	15	57	71	Competent
4	14	16	17	16	63	79	Competent
5	15	16	18	18	67	84	Accomplished
6	12	13	14	15	54	68	Developing
7	14	16	18	18	66	83	Accomplished
8	14	16	18	18	66	83	Accomplished
9	12	13	14	15	54	68	Developing
10	14	14	16	15	59	74	Competent
11	14	15	16	17	62	78	Competent
12	14	14	15	15	58	73	Competent
13	10	10	12	13	45	56	Beginning
14	14	14	14	15	57	71	Competent
15	11	14	15	16	56	70	Competent
16	15	16	18	18	67	84	Accomplished
17	11	14	15	16	56	70	Competent
18	10	12	12	14	48	60	Developing
19	14	15	14	15	58	73	Competent
20	12	12	12	16	52	65	Developing

Table 13 (Cont.)

Student No.	Cause-effect (20)	Problem-solution (20)	Persuasion (20)	Conflict-resolution (20)	Total (80)	%	Level of proficiency
21	14	16	16	16	62	78	Competent
22	13	16	16	16	61	76	Competent
23	14	15	17	17	63	79	Competent
24	11	10	12	15	48	60	Developing
25	14	16	17	16	63	79	Competent
26	14	16	18	18	66	83	Accomplished
27	11	15	14	15	55	69	Developing
28	12	15	15	15	57	71	Competent
29	14	15	16	15	60	75	Competent
30	12	16	17	15	60	75	Competent
31	12	15	15	18	60	75	Competent
32	14	16	17	16	63	79	Competent
33	10	14	12	14	50	63	Developing
34	12	10	12	14	48	60	Developing
35	13	16	18	18	65	81	Accomplished
36	12	13	15	16	56	70	Competent
37	13	13	16	16	58	73	Competent
38	12	12	15	16	55	69	Developing
39	12	16	15	16	59	74	Competent
40	11	10	12	12	45	56	Beginning
41	12	15	14	15	56	70	Competent
42	12	15	15	15	57	71	Competent
43	12	14	16	15	57	71	Competent
44	13	15	17	17	62	78	Competent
45	10	10	13	13	46	58	Beginning
46	13	16	17	18	64	80	Accomplished
47	10	10	13	15	48	60	Developing
48	12	15	15	15	57	71	Competent
49	13	15	16	16	60	75	Competent
50	10	10	12	12	44	55	Competent

Table 13 (Cont.)

Student No.	Cause-effect (20)	Problem-solution (20)	Persuasion (20)	Conflict-resolution (20)	Total (80)	%	Level of proficiency
51	12	14	15	15	56	70	Beginning
52	10	10	10	12	42	53	Beginning
53	10	10	11	12	43	54	Beginning
54	13	13	14	15	55	69	Developing
55	13	13	15	15	56	70	Competent
56	10	14	14	16	54	68	Developing
57	14	15	15	17	61	76	Competent
58	12	13	15	15	55	69	Developing
59	11	16	16	17	60	75	Competent
60	11	14	14	16	55	69	Developing
61	14	14	16	16	60	75	Competent
62	10	13	13	16	52	65	Developing
63	12	15	13	16	56	70	Competent
64	12	17	15	17	61	76	Competent
65	13	15	14	15	57	71	Competent
66	11	13	14	15	53	66	Developing
67	12	17	16	16	61	76	Competent
68	10	12	12	12	46	58	Beginning
69	13	12	13	14	52	65	Developing
70	11	14	12	13	50	63	Developing
71	13	17	18	18	66	83	Accomplished
72	12	10	12	13	47	59	Beginning
73	12	12	14	14	52	65	Developing
74	13	14	16	16	59	74	Competent
75	11	12	13	14	50	63	Developing
76	11	15	15	15	56	70	Competent
77	13	15	15	15	58	73	Competent
78	14	17	17	17	65	81	Accomplished
79	13	12	15	16	56	70	Competent
80	11	15	15	17	58	73	Competent

Table 13 (Cont.)

Student No.	Cause-effect (20)	Problem-solution (20)	Persuasion (20)	Conflict-resolution (20)	Total (80)	%	Level of proficiency
81	13	16	15	16	60	75	Competent
82	11	10	12	11	44	55	Beginning
83	11	14	16	15	56	70	Competent
84	15	17	17	18	67	84	Accomplished
85	11	16	15	16	58	73	Competent
86	13	15	15	16	59	74	Competent
87	11	12	15	14	52	65	Developing
88	13	15	16	16	60	75	Competent
(μ)	12.3	14.0	14.8	15.4	56	71	Competent
%	(61.5%)	(70%)	(74%)	(77%)			

Note: 90-100 = Proficient, 80-89= Accomplished, 70-79 = Competent, 60-69 = Developing, 50-59 = Beginning

From table 13, the mean score of a cause and effect paragraph is 12.3 (61.5%). The mean score of a problem-solution paragraph is 14.0 (70%). The mean score of a persuasive paragraph is 14.8 (74%). The mean score of a conflict-resolution paragraph is 15.4 (77%). The average of students' paragraph writing ability assessed from paragraph writings as a whole is at competent level (71%). 11.36 percent of students demonstrate their paragraph writing ability at accomplished level. 53.4 percent of students demonstrate their paragraph writing ability at competent level. Less than half of students (21.59%, 11.36%) at developing and beginning levels respectively. Most students received the highest score in a conflict – resolution paragraph writing.

2.2) Students' analytical thinking ability

The analytical thinking ability is assessed from three essay writings and three group project assignments.

2.2.1) The data of students' analytical thinking ability assessed from students' essay writings after each experiential learning unit. Students are asked to individually write an essay related to the content of each unit as follows:

Unit 1- students are assigned to write a problem-solution essay. They are asked to choose one problem that needs to be solved to make their community a better place to live and conduct a research about the cause and effects of social problems that each student has selected. Then write a problem-solution essay to propose what they think the government should do about the problem they have identified.

Unit 2 – students are assigned to write a persuasive essay stating their opinion on the topic "Animal in captivity". They are asked to state and clarify their position, and give their reasons for taking the position as well as taking into account opposing points of view before summarizing their position.

Unit 3 – students are assigned to write a conflict-resolution essay. They are asked to write a conflict – resolution paragraph to discuss the best way to resolve this dispute between China and Japan over five uninhabited islands in the East China Sea .

The results of students' analytical thinking ability assessed from individual essay writings are presented in the following table.

Table 14 Percentage and mean scores of students' analytical thinking ability assessed through individual essay writings after each experiential learning unit (n=88)

Student No.	Problem-solution essay (30)	Persuasive essay (30)	Conflict-resolution essay (30)	Total Scores (90)	(%)	μ	σ	Level of proficiency
1	18	21	25	64	71	21.22	3.34	Competent
2	13	16	19	48	53	15.89	3.01	Beginning
3	16	19	22	57	63	19.00	3.01	Developing
4	19	21	23	64	71	21.21	2.00	Competent
5	21	23	25	64	77	23.11	2.17	Competent
6	16	19	21	56	62	18.66	2.53	Developing
7	21	23	26	70	78	23.44	2.70	Competent
8	21	23	26	70	78	23.44	2.17	Competent
9	16	19	20	55	61	18.44	2.22	Developing
10	16	19	21	56	62	18.66	2.52	Developing

Table 14 (Cont.)

Student No.	Problem-solution essay (30)	Persuasive essay (30)	Conflict-resolution essay (30)	Total Scores (90)	(%)	μ	σ	Level of proficiency
11	19	21	24	64	71	21.22	2.35	Competent
12	16	19	21	56	62	18.56	2.70	Developing
13	12	16	18	46	51	15.33	3.18	Beginning
14	16	19	21	56	62	18.66	2.52	Developing
15	17	21	22	60	66	19.89	2.27	Developing
16	21	24	26	71	79	23.55	2.17	Competent
17	16	19	22	57	63	18.88	2.84	Developing
18	13	16	20	49	54	16.21	3.53	Beginning
19	16	19	22	57	63	18.88	2.84	Developing
20	13	16	18	47	52	15.66	2.67	Beginning
21	16	21	23	60	67	20.00	3.61	Developing
22	13	16	21	49	55	16.44	3.89	Beginning
23	19	22	26	67	74	22.22	3.34	Competent
24	16	19	20	55	61	18.44	2.22	Developing
25	19	21	22	62	69	20.66	1.53	Developing
26	21	23	26	70	78	23.33	2.18	Competent
27	16	19	21	56	62	18.66	2.52	Developing
28	16	19	22	57	63	18.99	3.01	Developing
29	13	16	20	49	54	16.21	3.53	Beginning
30	17	20	22	59	65	19.45	2.54	Developing
31	6	19	22	57	63	18.99	3.01	Developing
32	19	21	23	63	70	21.00	2.01	Competent
33	13	16	18	47	52	15.66	2.67	Beginning
34	13	16	18	47	52	15.66	2.67	Beginning
35	21	23	26	70	78	23.44	2.17	Competent
36	16	21	25	62	68	20.55	4.35	Developing
37	19	21	23	63	70	21.00	2.01	Competent
38	16	19	21	56	62	18.66	2.52	Developing
39	13	16	20	49	54	16.22	3.54	Beginning
40	13	16	18	47	52	15.66	2.67	Beginning

Table 14 (Cont.)

Student No.	Problem-solution essay (30)	Persuasive essay (30)	Conflict-resolution essay (30)	Total Scores (90)	(%)	μ	σ	Level of proficiency
41	16	19	20	55	61	18.32	2.08	Developing
42	17	21	23	61	67	20.22	3.24	Developing
43	16	19	21	56	62	18.66	2.53	Developing
44	19	21	26	66	73	21.88	3.42	Competent
45	13	16	18	47	52	15.66	2.67	Beginning
46	19	21	25	65	72	21.55	2.88	Competent
47	16	19	20	55	61	18.32	2.08	Developing
48	17	21	22	60	66	19.89	2.91	Developing
49	16	20	24	61	67	20.00	4.17	Developing
50	13	15	18	47	52	15.55	2.68	Beginning
51	13	16	20	49	54	16.22	3.54	Beginning
52	13	14	15	42	46	13.87	0.84	Fail
53	12	15	17	43	48	14.43	2.34	Fail
54	13	21	24	58	65	19.44	5.83	Developing
55	13	21	24	58	64	19.33	5.79	Developing
56	12	16	20	47	53	15.77	3.84	Beginning
57	17	19	21	57	63	19.00	2.00	Developing
58	19	21	23	62	69	20.78	1.84	Developing
59	18	21	23	62	69	20.55	2.37	Developing
60	16	19	21	56	63	18.77	2.68	Developing
61	18	21	23	62	69	20.55	2.37	Developing
62	18	21	22	61	67	20.22	1.95	Developing
63	17	19	21	57	63	19.00	2.33	Developing
64	16	19	22	57	63	18.99	3.01	Developing
65	18	21	23	62	69	20.67	2.52	Developing
66	16	19	21	56	62	18.66	2.52	Developing
67	18	21	23	61	68	20.34	2.52	Developing
68	13	26	18	47	52	15.66	2.67	Beginning
69	13	16	22	52	57	17.22	4.73	Beginning
70	12	16	20	48	53	15.88	4.00	Beginning

Table 14 (Cont.)

Student No.	Problem-solution essay (30)	Persuasive essay (30)	Conflict-resolution essay (30)	Total Scores (90)	(%)	μ	σ	Level of proficiency
71	21	24	26	71	79	23.67	2.34	Competent
72	13	17	18	48	53	15.99	2.73	Beginning
73	13	17	20	50	55	16.55	3.50	Beginning
74	17	21	23	61	68	20.44	2.88	Developing
75	16	19	21	56	62	18.55	2.37	Developing
76	19	22	23	64	71	21.33	2.19	Competent
77	17	19	22	58	64	19.34	2.84	Developing
78	19	21	23	63	70	20.89	2.02	Competent
79	13	17	20	50	55	16.55	3.51	Beginning
80	17	21	22	60	66	19.89	2.91	Developing
81	17	21	23	61	68	20.34	2.85	Developing
82	12	16	18	46	51	15.33	3.18	Beginning
83	16	19	21	56	62	18.66	2.52	Developing
84	21	24	26	71	79	23.55	2.17	Competent
85	19	22	25	65	73	21.77	2.84	Competent
86	16	19	21	56	62	18.66	2.52	Developing
87	13	17	20	50	56	16.66	3.67	Beginning
88	17	21	22	60	67	20.11	2.46	Developing
Average	16.19 (53.95%)	19.18 (63.93%)	21.74 (72.46%)	57.14	63.45	19.03	2.80	Developing

Note: 90-100 = Proficient, 80-89= Accomplished, 70-79 = Competent, 60-69 = Developing,50-59 = Beginning

From table 14, the average of students' analytical thinking ability assessed from essay writings as a whole is at developing level (63.45%). The mean score of the first essay writing- a problem solution essay is 16.19 (53.95%). The mean score of the second writing – a persuasive essay is 19.18 (63.93%). The mean score of the third essay writing- a conflict-resolution essay is 21.74 (72.46%). Comparing results of these three essay writings indicate that students' analytical thinking ability has improved. 52.57 percent of students demonstrate that their analytical thinking ability is at developing

level. Less than half of students' (25 % and 20.46%) are at beginning and competent levels respectively.

2.2.2 The data of students' analytical thinking ability assessed from group project reports after completing each group project assignment. There are three projects that each group of students has completed in each experiential learning unit as follows:

Unit 1- the simulated public hearing project. In the simulated public hearing project, students were assigned to work in groups of 5-6, and collect information about the social problem that each group was interested in studying. There are 12 social problems in Rong Kwang community each group selected that include: solid waste management, bullying in Maejo University, drug abuse, gambling, deforestation, alcoholism, drunk driving, traffic law violation, school violence, teen smoking, teenage love, and rising cost of living in Rong Kwang community. At the reflective observation phase, students were encouraged to collect and organized information about their selected social problems from various sources. The researcher found that every group conducted community investigation to observe the problems and interviewed people involved to gather information needed. Students investigated the problem in the real place, and interviewed the officials in charged with the problems to get useful and reliable information. After that, students created a poster presentation to share the social problems to the class and other people. From the observation, the researcher found that students were enthusiastic to do this activity. The poster presenters were willingly to share their collected data to their classmates. The audiences paid attention to the poster presentation. They discussed and exchanged opinions about the social problems interestingly. The researcher and observers also got new knowledge from student poster presentation such as the problem of slot machine gambling in Rong Kwang community. Then, each group was assigned to study a current public policy that dealt with the selected social problem, evaluate the selected public policy, and propose three alternatives to improve the policy. As a group assignment, students developed a solution for their selected public policy problem and propose a solution for their selected public policy problem in a form of simulated public hearing.

During learning through experiential learning unit 1, students engaged in various activities both in classroom, out of the classroom, and in an online environment as shown in the following pictures.

Figure 3 Students investigated social problem in Rong Kwang Community

Figure 4 Students participated in a poster presentation on social problem in the community

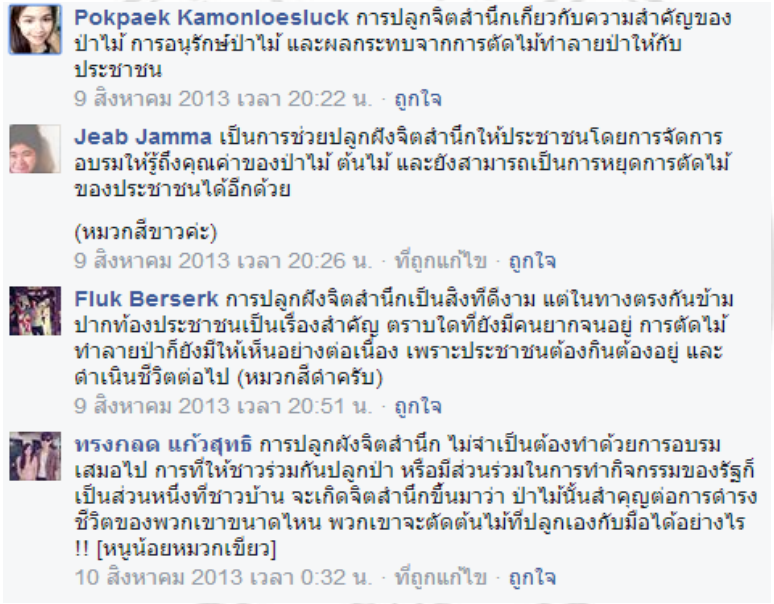

Figure 5 Students actively participated in group discussion

Figure 6 Students proposed a solution in a form of simulated public hearing.

Students' project report after they completed the Simulated Public Hearing Project showed that while learning through experiential learning unit 1, students had developed five abilities that associated in analytical thinking that included 1) ability to define social problem, 2) ability to choose relevant information concerning the selected social problems,3) ability to formulate hypothesis on root cause and effects of social problems 4) ability to conducting the analysis of proposed alternatives, and 5) ability to develop the viable solution for public policy problem.

Unit 2 – the Service Learning for Social Justice Project. In this group project, students were assigned to investigate social injustice issues in Rong Kwang community, identify its impact on individuals and community, plan and carry out a course of action to address the issue. From the observation, the researcher found that students actively participated in service learning project. Some groups created their projects based on the social problems that they had studied from the first experiential learning unit. They considered that they should do something to eliminate those social problems and bring back social justice to people in their community.

During learning through experiential learning unit 2, students engaged in various activities both in classroom, out of the classroom, and in an online environment as shown in the following pictures.

Figure 7 Students investigated social injustice issues in Rong Kwang community

Figure 8 Students discussed the information obtained from social injustice investigation

Figure 9 Students planned their service learning for social justice projects

Figure 10 Students carried out a course of action to address the social injustice issue

Students' project report after they completed the Service Learning for Social Justice Project showed that while learning through experiential learning unit 2, students had developed five abilities that associated in analytical thinking that included 1) ability to define social injustice in the community, 2) ability to choose relevant information concerning the selected social injustice or human rights violation, 3) ability to formulate hypothesis on root cause and effects of social injustice or human rights violation ,4) ability to conducting the analysis of forms of acts of justice, and 5) ability to develop the service learning project to promote social justice.

Unit 3 – the Conflict Mediation Role Play Project. Each group of students was assigned to analyze the conflict situation provided and brainstorm possible solutions for the conflict. Students considered each alternative solution proposed and selected the best one. They decided how to act out the conflict scenario and developed a script that demonstrates the conflict resolution, then act it out.

Figure 11 Students' Conflict Mediation Role Play

Students' project report after they completed the Conflict Mediation Role Play Project showed that while learning through experiential learning unit 3, students had developed five abilities that associated in analytical thinking that included 1) ability to define conflict in the society, 2) ability to choose relevant information concerning the conflict, 3) ability to analyze the conflict ,4) ability to propose positive resolution to the conflict and 5) ability to develop the conflict mediation role play to promote effective and positive conflict resolution.

The results of students' analytical thinking ability assessed from group project reports are presented in the following table.

Table 15 Results of students' analytical thinking ability assessed from group project reports (n=12 student groups)

Groups	Project 1- Simulated Public Hearing (30)	Project 2- Service Learning for Social Justice (30)	Project 3- Conflict Mediation Role Play (30)	Total Scores (90)	(%)	μ	σ	Level of proficiency
1	21.66	24.66	26.34	72.66	80.74	24.22	2.37	Accomplished
2	22.34	24.67	26.68	73.69	81.87	24.56	2.17	Accomplished
3	21.66	23.61	26.32	71.59	79.54	23.86	2.34	Accomplished
4	22.32	25.00	26.68	74.00	82.22	24.67	2.20	Accomplished
5	21.00	20.99	24.33	66.32	73.69	22.11	1.93	Competent
6	23.67	26.34	24.33	74.34	82.60	24.78	1.39	Accomplished
7	20.18	23.01	25.32	68.51	76.12	22.84	2.58	Competent
8	20.99	22.67	23.99	67.65	75.17	22.55	1.50	Competent
9	22.33	25.67	26.01	74.01	82.23	24.67	2.03	Accomplished
10	16.34	19.00	22.00	57.34	63.71	19.11	2.83	Developing
11	19.97	22.33	24.66	66.96	74.40	22.32	2.35	Competent
12	18.67	22.00	23.00	63.67	70.74	21.22	2.27	Competent
13	20.00	23.01	24.65	67.66	75.18	22.55	2.36	Competent
Average	20.79 (69.30%)	23.22 (77.73%)	24.79 (82.67%)	68.80	76.45	22.93	1.95	Competent

From table 15, the mean and percentage scores of students' analytical thinking ability obtained from group project report in each experiential learning unit are 20.79 (69.30%), 23.22 (77.73%), and 24.79 (82.67%) respectively. Students' analytical thinking ability assessed from group project reports as a whole is at competent level (76.45%). 45.45% of students demonstrate that their analytical thinking skill is at accomplished level. 44.32 % of them show that their analytical thinking ability is at competent level. 9.09% and 1.14 % of students are at developing and beginning levels respectively. The percentage and mean scores on group project reports are increased from the first experiential learning unit to the third. Comparing results of these three group project reports indicate that students' analytical thinking ability has improved.

2.3) Students' moral awareness

Students' moral awareness is assessed from students' reflective writings on moral issue and students' moral behaviors observation form.

2.3.1) The data of students' moral awareness assessed from students' reflective writings on moral issue after each experiential learning unit. There are three reflective writing assignments that each student has written as follows:

Unit1 - students are assigned to write a reflective writing about effects of human activities on the condition of the earth and identify who would be most affected by human activities. Then students are asked to explain what they would do to save the world if they were given the opportunity and the power. The following is a reflective writing of a student written on Google Docs.

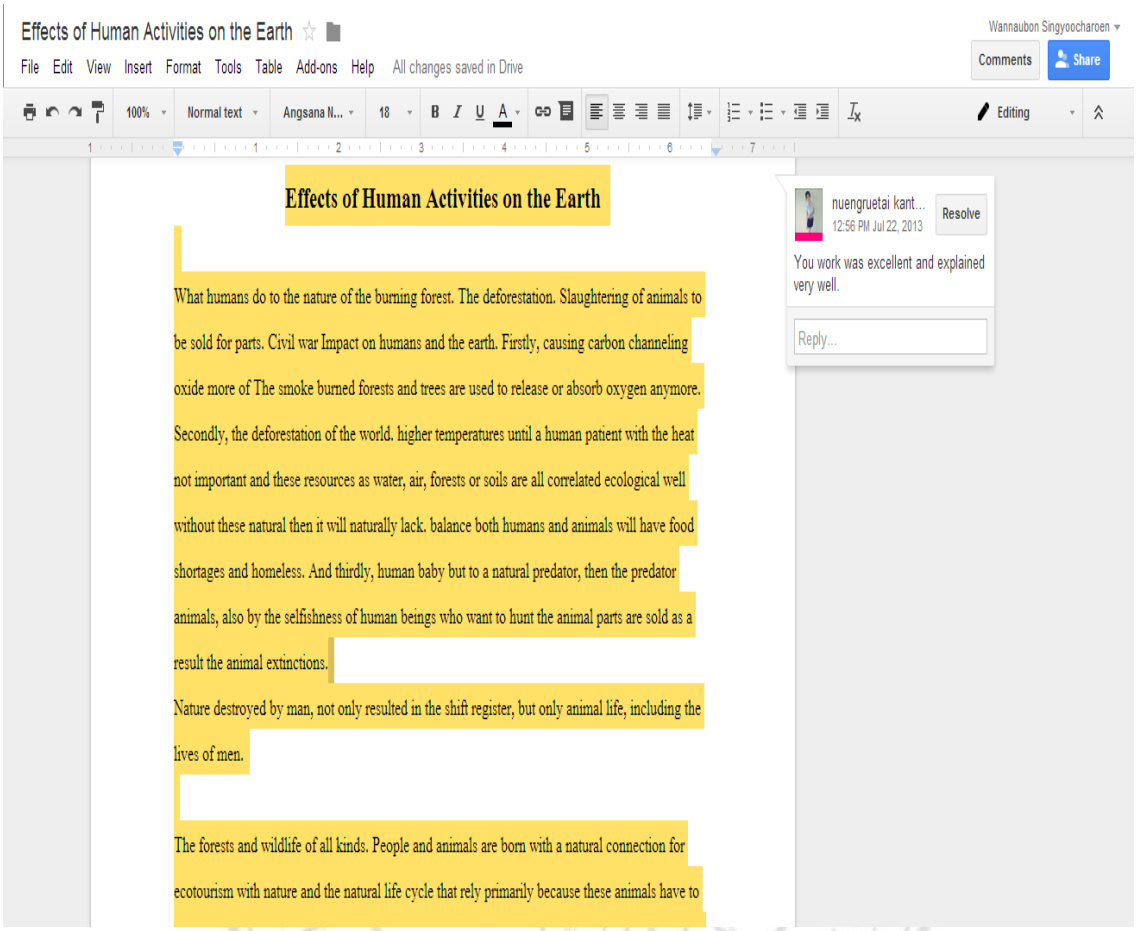

Figure 12 A reflective writing of a student written on social issues.

Analyzed from students' reflective writing 1, the researcher found that most students expressed some awareness regarding moral issue. They could identify the stakeholders and their interests. However, students inconsistently demonstrated sensitivity to alternative moral point of view and they demonstrated limited responsibility for community.

Unit2 – students are assigned to write a reflective writing about university tradition of rub-nong ("welcoming the newcomer"). Students are asked to state if they agree that university tradition of rub-nong could be described as ritualised abuse, and violations of human rights? and Why? The following is a reflective writing of a student written on Google Docs.

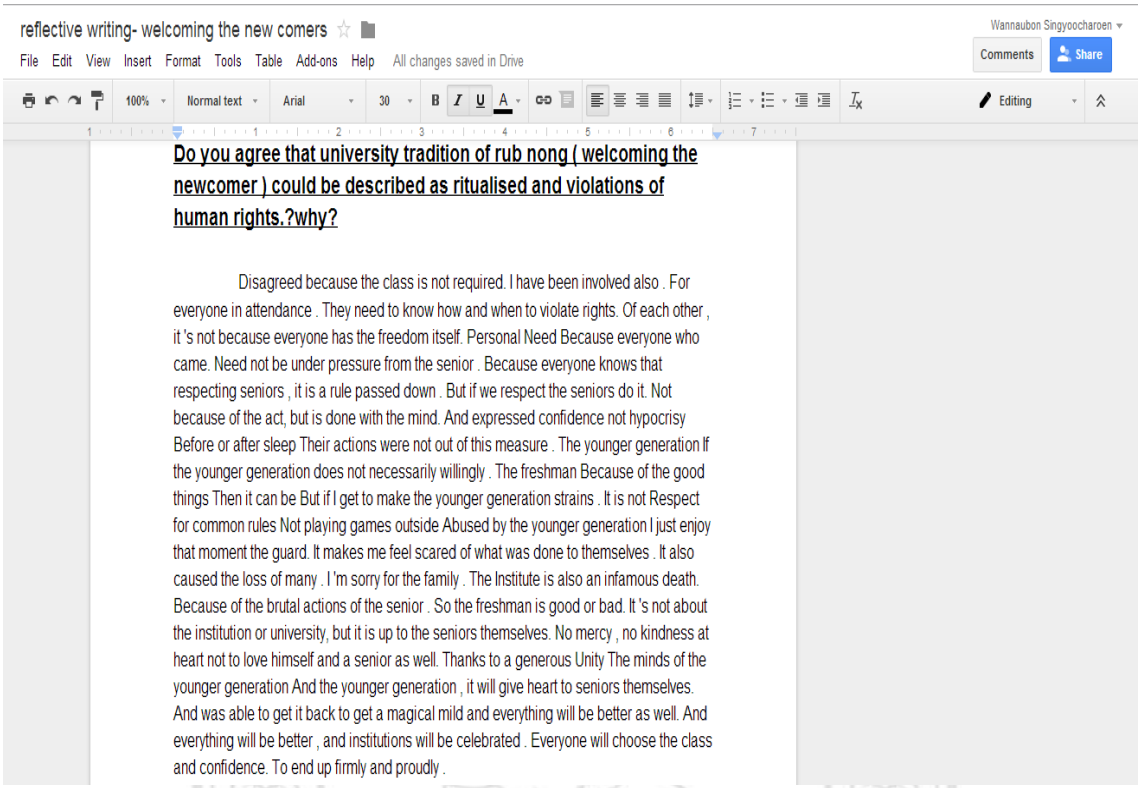

Figure 13 A reflective writing of a student written on social injustice issue

Analyzed from students' reflective writing 2, the researcher found that most students expressed some awareness regarding moral issue. They could identify the stakeholders and their interests. Students demonstrated sensitivity to alternative moral point of view and they accepted responsibility for personal actions.

Unit 3- students are assigned to write a reflective writing about a situation in their life in which their behaviors, values, perceptions, assumptions, or stereotypes created a conflict for them. What lesson they learn in that situation, and what necessary would be to accomplish the win-win solutions.

Analyzed from students' reflective writing 3, the researcher found that most students recognized the moral issue and were aware of personal role in solutions. They clearly identified the stakeholders and their interests. Students demonstrated sensitivity to alternative moral point of view. Most of them accepted responsibility for personal actions and could tell its impact on self and community. Students recognized that alternative moral perspectives result in differing outcomes.

Table 16 Percentage, mean and standard deviation of students' moral awareness assessed from students' reflective writing assignments after each experiential learning unit (n= 88)

Student No.	Unit 1 (20)	Unit 2 (20)	Unit 3 (20)	Total scores (60)	(%)	μ	σ	Level of Moral awareness
1	13	17	18	48	80	16.00	2.65	Very high
2	10	12	14	36	60	12.00	2.00	Basic
3	12	14	16	42	70	14.00	2.00	High
4	13	16	18	47	78	15.67	2.52	High
5	14	17	19	50	83	16.67	2.52	Very high
6	11	14	17	42	70	14.00	3.00	High
7	14	17	19	50	83	16.67	2.52	Very high
8	14	16	19	49	82	16.33	2.52	Very high
9	10	13	15	38	63	12.67	2.52	Basic
10	11	14	17	42	70	14.00	3.00	High
11	12	15	17	44	73	14.67	2.52	High
12	12	14	16	42	70	14.00	2.00	High
13	10	12	14	36	60	12.00	2.00	Basic
14	12	14	17	43	72	14.33	2.52	High
15	12	14	16	42	70	14.00	2.00	High
16	14	17	19	50	83	16.67	2.52	Very high
17	12	14	16	42	70	14.00	2.00	High
18	10	13	15	38	63	12.67	2.52	Basic
19	11	14	16	41	68	13.67	2.52	Basic
20	10	12	15	37	62	12.33	2.52	Basic
21	14	17	19	50	83	16.67	2.52	Very high
22	12	14	18	44	73	14.67	3.06	High
23	14	15	17	46	77	15.33	1.53	High
24	10	13	15	38	63	12.67	2.52	Basic
25	14	17	19	50	83	16.67	2.52	Very high
26	14	16	19	49	82	16.33	2.52	Very high
27	10	12	15	37	62	12.33	2.52	Basic
28	12	14	16	42	70	14.00	2.00	High

Table 16 (Cont.)

Student No.	Unit 1 (20)	Unit 2 (20)	Unit 3 (20)	Total scores (60)	(%)	μ	σ	Level of Moral awareness
29	11	13	16	40	67	13.33	2.52	Basic
30	12	14	17	43	72	14.33	2.52	High
31	14	17	19	50	83	16.67	2.52	Very high
32	14	16	17	47	78	15.67	1.53	High
33	10	12	15	37	62	12.33	2.52	Basic
34	10	12	15	37	62	12.33	2.52	Basic
35	14	16	19	49	82	16.33	2.52	Very high
36	10	13	16	39	65	13.00	3.00	Basic
37	14	16	17	47	78	15.67	1.53	High
38	11	12	15	38	63	12.67	2.08	Basic
39	11	13	16	40	67	13.33	2.52	Basic
40	10	12	14	36	60	12.00	2.00	Basic
41	12	14	16	42	70	14.00	2.00	High
42	14	16	17	47	78	15.67	1.53	High
43	12	16	18	46	77	15.33	3.06	High
44	14	16	19	49	82	16.33	2.52	Very high
45	10	12	14	36	60	12.00	2.00	Basic
46	14	15	16	45	75	15.00	1.00	High
47	10	13	16	39	65	13.00	3.00	Basic
48	12	14	16	42	70	14.00	2.00	High
49	13	15	17	45	75	15.00	2.00	High
50	10	11	14	36	60	12.00	2.00	Basic
51	13	15	18	46	77	15.33	2.52	High
52	10	11	14	36	60	12.00	2.00	Basic
53	10	13	15	38	63	12.67	2.52	Basic
54	11	16	17	44	73	14.67	3.21	High
55	11	16	17	44	73	14.67	3.21	High
56	11	13	15	39	65	13.00	2.00	Basic
57	12	14	18	44	73	14.67	3.06	High
58	13	16	17	46	77	15.33	2.08	High

Table 16 (Cont.)

Student No.	Unit 1 (20)	Unit 2 (20)	Unit 3 (20)	Total scores (60)	(%)	μ	σ	Level of Moral awareness
59	12	14	18	44	73	14.67	3.06	High
60	11	13	15	39	65	13.00	2.00	Basic
61	12	16	17	45	75	15.00	2.65	High
62	13	15	17	45	75	15.00	2.00	High
63	11	13	15	39	65	13.00	2.00	Basic
64	13	15	17	45	75	15.00	2.00	High
65	12	15	17	44	73	14.67	2.52	High
66	12	14	17	43	72	14.33	2.52	High
67	14	16	18	48	80	16.00	2.00	Very high
68	10	12	14	36	60	12.00	2.00	Basic
69	10	13	17	40	67	13.33	3.51	Basic
70	11	13	15	39	65	13.00	2.00	Basic
71	14	16	19	49	82	16.33	2.52	Very high
72	10	12	14	36	60	12.00	2.00	Basic
73	11	13	15	39	65	13.00	2.00	Basic
74	14	16	19	49	82	16.33	2.52	Very high
75	10	13	15	38	63	12.67	2.52	Basic
76	12	14	17	43	72	14.33	2.52	High
77	11	13	15	39	65	13.00	2.00	Basic
78	12	14	15	41	68	13.67	1.53	Basic
79	10	13	16	39	65	13.00	3.00	Basic
80	13	15	17	45	75	15.00	2.00	High
81	11	14	17	42	70	14.00	3.00	High
82	10	11	14	36	60	12.00	2.00	Basic
83	12	14	17	43	72	14.33	2.52	High
84	14	17	19	50	83	16.67	2.52	Very high
85	12	14	17	43	72	14.33	2.52	High
86	12	14	18	44	73	14.67	3.06	High
87	10	15	17	42	70	14.00	3.61	High
88	12	14	17	43	72	14.33	2.52	High
Average	11.83 (59.15%)	14.24 (71.20%)	16.55 (82.75%)	42.61	71.02	14.20	2.38	High

** Note 90-100 = Genuine, 80-89 = Very high, 70-79 = High, 60-69 = Basic, 50-59 = Limited

From table 16, the mean score of students' reflective writing on moral issues in unit 1 is 11.83 (59.15%). The mean score of students' reflective writing on moral issues in unit 2 is 14.24 (71.24%). The mean score of students' reflective writing on moral issues in unit 3 is 16.55 (82.75%). The average of students' moral awareness assessed from reflective writing assignments as a whole is at the high level (71.02%). The mean scores of students' moral awareness are increased from the first experiential learning unit to the third.

2.3.2) Students' moral behaviors are observed during they engage in classroom learning activities, individual work, group work, and e-learning activities. The researcher and two observers made a description of students' behaviors to be observed in 4 morals that included honesty, public mind, discipline and responsibility. Frequency of each moral behavior of each student is monitored and rated by the researcher and the two observers using the rubric for observing students' moral behaviors.

The results of students' moral behaviors focusing on honesty, public mind, discipline and responsibility are presented in the following tables.

Table 17 Means (μ) and standard deviations of the students' moral behaviors focusing on **honesty** monitored during students engaged in classroom learning activities, students' work, group work, and e-learning activities. (n= 88)

Behaviors monitored	**Unit 1**		**Unit 2**		**Unit 3**		**Total**		**Level of satisfaction**
	μ	σ	μ	σ	μ	σ	μ	σ	
1. Student does not copy all or part of an assignment from another person or resource and presents it as his/her own work.	2.38	0.70	3.07	0.97	2.95	0.68	2.99	0.53	Satisfactory
2. Student does not allow another student to copy one's assignment.	2.13	0.32	2.87	0.31	2.85	0.38	2.62	0.59	Satisfactory

Table 17 (Cont.)

Behaviors monitored	Unit 1		Unit 2		Unit 3		Total		Level of satisfaction
	μ	σ	μ	σ	μ	σ	μ	σ	
3. Student does not provide help on an examination or look at another student's exam during a test	3.36	0.67	2.85	0.45	2.86	0.37	3.02	0.50	Satisfactory
4. Student gives credit acknowledges or for any sources of information.	2.95	0.51	2.96	0.48	3.66	0.37	2.92	0.69	Satisfactory
5. Student does a full share of the group work assignments.	3.28	0.78	3.36	0.82	3.46	0.71	3.37	0.73	Satisfactory

Note: 3.50-4.00 = Very satisfactory, 2.50-3.49 = Satisfactory,
1.50-2.49 = Somewhat satisfactory 1.00-1.49 = Somewhat unsatisfactory

From table 17, the students' moral behavior focusing on honesty as a whole is at the satisfactory level.The students' honest behaviors had improved from the first experiential unit to the third unit.

Table 18 Means (μ) and standard deviations of the students' moral behaviors focusing on **public mind** monitored during students engaged in classroom learning activities, students' work, group work, and e-learning activities. (n= 88)

Behaviors monitored	Unit 1		Unit 2		Unit 3		Total		Level of satisfaction
	μ	σ	μ	σ	μ	σ	μ	σ	
1. Student engages in community activities with sustained values.	2.96	0.54	3.03	0.57	3.24	0.64	3.08	0.44	Satisfactory
2. Student helps peers to resolve community problems peacefully.	2.97	0.81	2.94	0.23	3.05	0.37	2.99	0.26	Satisfactory
3. Student acknowledges a responsibility to community.	2.82	0.39	3.73	0.59	3.79	0.49	3.45	0.49	Satisfactory
4. Student concerns about the feelings, or actions of others.	3.26	0.30	3.29	0.19	3.35	0.49	3.30	0.18	Satisfactory
5. Student lends his/her voices and talents to eliminate the causes of a specific problem, and suggests feasible solutions.	3.05	0.53	3.09	0.46	3.48	0.55	3.21	0.51	Satisfactory

Note: 3.50-4.00 = Very satisfactory, 2.50-3.49 = Satisfactory,
1.50-2.49 = Somewhat satisfactory 1.00-1.49 = Somewhat unsatisfactory

From table 18, the students' moral behavior focusing on public mind is at satisfactory level. The students' public mind had improved from the first experiential unit to the third unit.

Table 19 Means (μ) and standard deviations of the students' moral behaviors focusing on **discipline** monitored during students engaged in classroom learning activities, students' work, group work, and e-learning activities. (n= 88)

Behaviors monitored	Unit 1		Unit 2		Unit 3		Total		Level of satisfaction
	μ	σ	μ	σ	μ	σ	μ	σ	
1. Student pays attention to teacher instructions and participates actively in learning activities.	3.29	0.71	3.39	0.61	3.40	0.62	3.36	0.64	Satisfactory
2. Student is self-directed, consistently focuses on the task and shows best effort.	2.74	0.55	2.85	0.50	2.88	0.52	2.82	0.56	Satisfactory
3. Student completes and turns in homework or assignments on time.	3.08	0.75	3.32	0.59	3.36	0.57	3.25	0.64	Satisfactory
4. Student contributes to team and performs assigned role within the group.	2.89	0.67	2.96	0.67	2.99	0.62	2.95	0.65	Satisfactory
5. Student contributes valuable information, share ideas, and experiences with the group through asynchronous discussion.	2.75	0.45	2.97	0.55	3.06	0.59	2.93	0.53	Satisfactory

Note: 3.50-4.00 = Very satisfactory, 2.50-3.49 = Satisfactory,
1.50-2.49 = Somewhat satisfactory, 1.00-1.49 = Somewhat unsatisfactory

From table 19, the students' moral behavior focusing on public mind as a whole is at the satisfactory level. The students' discipline had improved from the first experiential unit to the third unit.

Table 20 Means (μ) and standard deviations of the students' moral behaviors focusing on **responsibility** monitored during students engaged in classroom learning activities, students' work, group work, and e-learning activities. (n= 88)

Behaviors monitored	Unit 1		Unit 2		Unit 3		Total		Level of satisfaction
	μ	σ	μ	σ	μ	σ	μ	σ	
1. Student cooperates, interacts responsibly with others, and demonstrates respect for others.	2.75	0.68	2.79	0.65	2.86	0.60	2.80	0.64	Satisfactory
2. Student assumes leadership role and gets others involved in civic action.	2.63	0.54	2.67	0.54	2.69	0.52	2.66	0.53	Satisfactory
3. Student gets along well with others in group work, responds appropriately to peers.	3.27	0.40	3.61	0.18	3.62	0.17	3.50	0.25	Satisfactory
4. Student focuses on task and can be counted on to complete the assigned work within the group.	2.48	0.52	2.55	0.50	2.60	0.52	2.54	0.50	Satisfactory
5.Student works independently with minimum teacher support.	2.22	0.44	2.32	0.49	2.56	0.45	2.37	0.46	Moderate

Note: 3.50-4.00 = Very satisfactory, 2.50-3.49 = Satisfactory,
1.50-2.49 = Somewhat satisfactory, 1.00-1.49 = Somewhat unsatisfactory

From table 20, the students' moral behavior focusing on responsibility as a whole is at satisfactory level, except the item 5 that is at a moderate level. The students' responsibility is developed from the first experiential learning unit to the third.

Table 21 Means (μ) and standard deviations (σ) of the students' moral behavior (n=88)

Morals	Unit 1		Unit 2		Unit 3		Total		Level of satisfaction
	μ	σ	μ	σ	μ	σ	μ	σ	
Honesty	2.83	0.47	3.0	0.47	3.17	0.49	3.01	0.47	Satisfactory
Public Mind	3.02	0.33	3.23	0.34	3.39	0.33	3.21	0.33	Satisfactory
Discipline	2.96	0.60	3.11	0.56	3.15	0.56	3.07	0.57	Satisfactory
Responsibility	2.69	0.47	2.80	0.43	2.88	0.42	2.79	0.44	Satisfactory
Total	μ = 3.02 σ= 0.18								Satisfactory

Note : 3.50-4.00 = Very satisfactory, 2.50-3.49 = Satisfactory,
1.50-2.49 = Somewhat satisfactory 1.00-1.49 = Somewhat unsatisfactory

From table 21, it can be seen that behaviors indicating morality and ethics after the program is overall at satisfactory level (μ=3.02). In addition, the moral behavior concerning honesty, public mind, and discipline are higher than the moral behavior concerning responsibility. The mean of students' moral behavior as a whole is at satisfactory level. However, the table shows that students' moral behavior focusing on responsibility obtains the lowest score.