CHAPTER 5

RESULTS OF STUDENTS' SDL IMPROVEMENT FOR INTERNET USE

This chapter comprises two sections. It includes groups of the participating students, and testing of the short film production.

5.1 Groups of the participating students

The general breakdown of the participating students is presented in the following tables. They were separated by learning areas.

Mathematics

Table 5.1 The number of students in mathematics group

Grade / Gender	7	8	9	10	11	12	Total
Male	3	-	-	2	-	-	5
Female	-	-	1	1	2	-	4
Total	3	-	1	3	2	-	**9**

Science

Table 5.2 The number of students in science group

Grade / Gender	7	8	9	10	11	12	Total
Male	3	-	-	-	3	-	6
Female	-	-	-	4	3	-	7
Total	3	-	-	4	6	-	**13**

Thai language

Table 5.3 The number of students in Thai language group

Grade / Gender	7	8	9	10	11	12	Total
Male	-	-	-	-	-	3	3
Female	-	5	7	-	3	-	15
Total	-	5	7	-	3	3	**18**

Foreign languages

Table 5.4 The number of students in foreign language group

Grade / Gender	7	8	9	10	11	12	Total
Male	-	3	-	-	1	-	4
Female	-	-	-	-	1	1	2
Total	-	3	-	-	2	1	**6**

Art

Table 5.5 The number of students in art group

Grade / Gender	7	8	9	10	11	12	Total
Male	-	-	-	4	-	-	4
Female	-	-	-	-	2	-	2
Total	-	-	-	4	2	-	**6**

Occupations and Technology

Table 5.6 The number of students in occupations and technology group

Grade / Gender	7	8	9	10	11	12	Total
Male	-	-	7	-	-	1	8
Female	-	-	-	1	-	-	1
Total	-	-	7	1	-	1	**9**

Social Studies, Religion and Culture

Table 5.7 The number of students in social study, religion and culture group

Grade / Gender	7	8	9	10	11	12	Total
Male	-	1	3	-	-	-	4
Female	-	1	-	-	2	-	3
Total	-	2	3	-	2	-	**7**

Health and Physical Education

Table 5.8 The number of students in health and physical education group

Grade / Gender	7	8	9	10	11	12	Total
Male	-	3		2	-	-	5
Female	-	-	-	-	2	-	2
Total	-	3		2	2	-	**7**

5.2 Testing of the short film production

The short film production that operated in the first semester of academice year 2011 (May to September) aimed to make eight short films that related to eight learning areas. It was the activity for students' SDL improvement for Internet use in leisure time. To study the activity, pre-test, ongoing-test and post-test were conducted.

5.2.1 Pre-test

The questionaire about students' leisure time (Table 3.2) was made for measuring students before, on-going, and after joining the activity. This may present improvement of students' Internet use in leisure time.

Before performing the activity, all participating students were asked to fill out the questionaire about leisure time. This was conducted during the first week of June 2011. There were 75 students who took the pre-test about their leisure time. Figure 5.1 presents the results. The highest percentage was playing sports with 61.4 percent. This means most of the students like to play sports in their leisure time. The second highest percentage involves activities on the Internet (using social network sites) and watching television, VCD or VDO. For activities on the Internet, the percentage of learning on the Internet is higher than listening to music and/or watching movies on the Internet; playing online, computer, and video games; and communication on the Internet. The lowest percentage was "others" which included B-boy dancing and doing students' affairs.

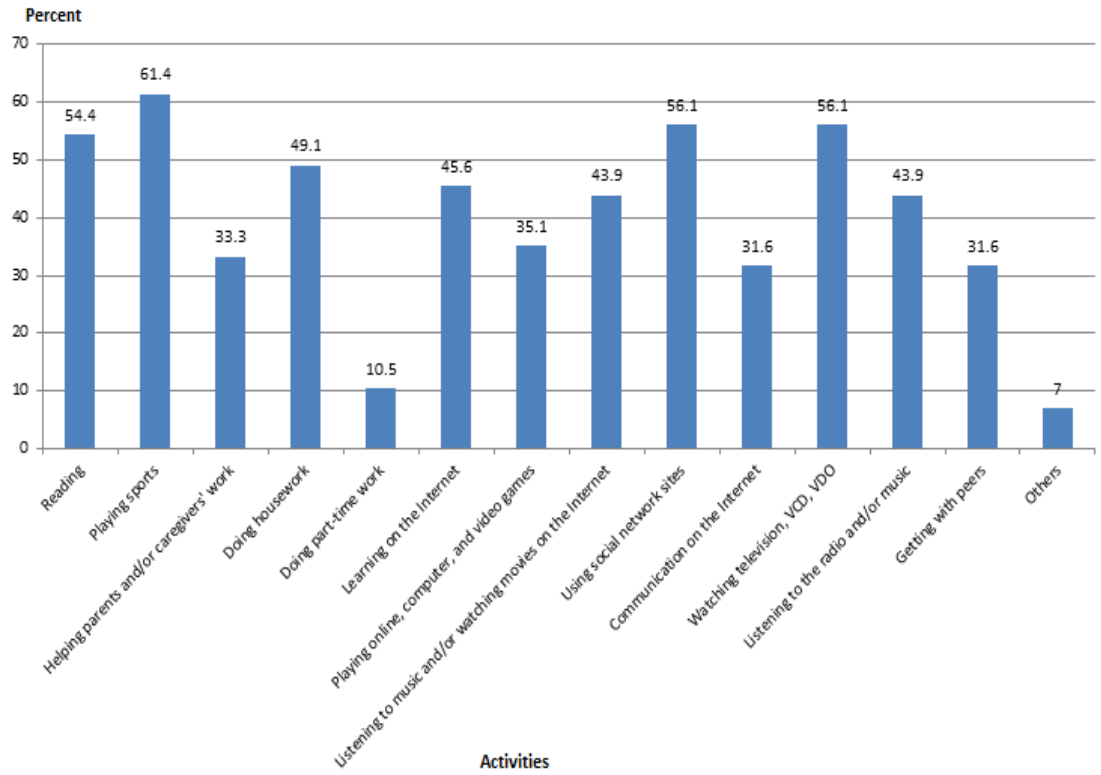

Figure 5.1 The percentage of pre-test of students' leisure time

Moreover, 75 students were assessed about the degree of self-direction (Table 3.4) as a pre-test by the teachers. The results showed as Figure 5.2. Self-directed students had the lowest percentage, whereas interested students had the highest percentage. This showed that most of students were not self-directed. The students need SDL improvement, especially dependent students who don't have skills to learn and need discipline and direction by teachers to improve their learning skills and have an experience to learn by themselves.

Figure 5.2 The percentage of pre-test of students' degree of self-direction

5.2.2 Ongoing-test

To improve students' SDL for Internet use, the short film production began with students interacting with the teacher of each group. The results are included in Table 5.9. The teachers guided the students to identify ideas and themes of a story that related to a learning area. They suggested knowledge sources for their students. This involved a learner-instruction interaction because the teachers gave an issue of a subject matter and the students responsed to the teachers by writing a story board. Moreover, there was goal-setting and task analysis. The teachers and the students wanted to make a short film that related to a learning area. Then, they identified and allocated tasks like a film directing, recording, film editing and special effects, coordinators, and actors. Furthermore, they planned their time frame.

During the production of the short film, the students interacted with other people. They worked as a team. They mainly interacted face to face in their leisure time like lunch break, after school and on weekends. They used the Internet to contact members of their group for making an appoinment. In many cases, they asked students in the others about sources of information for making a short film via online. Moreover, each group found actors, selected locations, performed a film, recorded a film, edited a film, and added effects by interaction with the group. Then, each group presented their progression to

their teachers and then it received comments from the teachers. The students interacted with other teachers in school ,who did not participate with this project, and experts from CAMT. They presented their work and they received responses from the teachers and the experts. Most of the interaction occurred face to face. They used online interaction to make an appointment for meeting in their groups.

For non-human interactions, the students used the Internet to learn how to make a short film because they did not have a book to learn about it. They learned the process to make a film by using a computer program and using a search engine. They read the content and then practiced according to the content. As well, they saw samples from Youtube. Additionally, they found special effects such as sound and animation by searching on the Internet. They interacted with their community to make the short film. They communicated to elders, monks, and people in their community. They learned their cultural and contextual community that related to a learning area. These involved the implementaion of the plan. They also managed their time following the established time frame.

Table 5.9 The learner-human interactions and learner-non-human interactions in the short film production

Interactions	**Short film production**	**Action**
Learner-teacher	Teachers as facilitators	- Students presented their progresssion and responded to the teachers.
Learner-learner	Group activities	- It included planning and implementation, communication, and cooperation of a team. - Students use online communication to make an appoinment.

Table 5.9 The learner-human interactions and learner-non-human interactions in the short film production (Continued)

Interactions	**Short film production**	**Action**
Learner-other	Other teachers Experts from CAMT	- Students asked questions to other teachers who did not participate in this project. - Students presented their work to the experts and received suggestions.
Learner-content	Online content in the Internet	- Students read about processes for making a short film and editing a computer program for editing on the Internet. - Students found special effects on the Internet. - Students watched samples from Youtube.
Learner-interface	Means of interaction with content, learners, and teachers	- Students used search engine to find sources of knowledge and samples.
Learner-environment	Location as content	- Learners interacted with their community to find content of their short films and link to a learning area.

For learner-self interactions, the students set a goal to make a short film that related to a learning area in a defined time frame. They could conduct their self-evaluation by receiving help from their teachers. They created a short film by themselves that other students can use to learn. Their final product was shown to the teachers, their peers, and the experts. They could see how they spent their time and compare that with a defined time frame.

The ongoing test about students' leisure time was completed when students had performed the activity for 66 days. This was conducted during the first week of August, 2011. There were 65 students who answered the questionaire. Figure 5.3 presents the results. The highest percentage of students' activities was using social network sites. Students did not reduce playing sports which showed the second highest rate of the ongoing-test.

Activities of students' leisure time that were increasing included helping parents and/or caregivers' work; learning on the Internet; listening to music and/or watching movies on the Internet; using social network sites; communication on the Internet; watching television, VCD, VDO; and getting on with peers. The number of students using social network sites increased from 56.1 to 77.2, which was the highest increase. The number of students who reported helping parents and/or caregivers' work increased from 33.3 to 50.9 percent. This was the second highest increse. Getting with peers was increasing for 10.5 percent. Moreover, learning on the Internet, listening to music and/or watching movies on the Internet, and communication on the Internet increased seven percent.

However, activities that decreased included reading, doing housework, and listening to the radio and music. A number of students who reported reading decrease from 54.5 to 45.6 percent. Doing housework decresed from 49.1 to 45.6 percent. Listening to the radio and musice decreased from 43.9 to 40.4 percent.

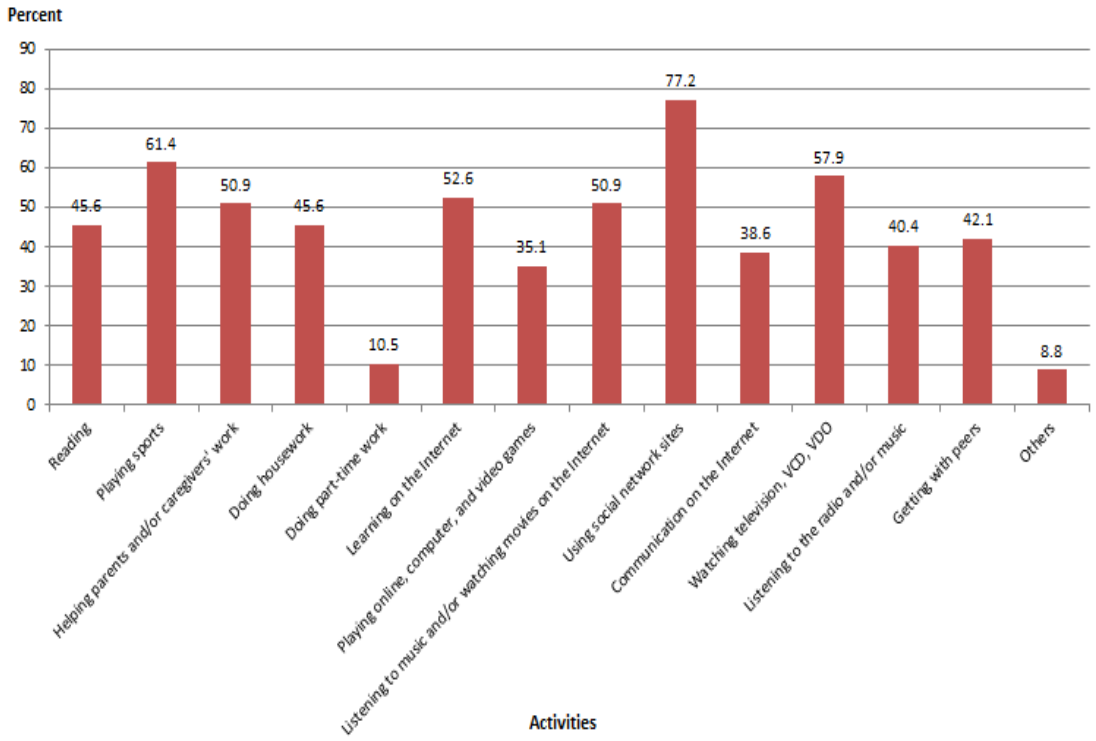

Figure 5.3 The percentage of ongoing-test of students' leisure time

5.2.3 Post-test

After the short film production finished for three weeks, the students were asked to complete a questionaire of leisure time. This was during the last week of September. There were 68 who students answered it. Figure 5.4 shows the results. The highest percentage of activities was using social network sites and watching the television, VCD, VDO with 70.2 percents. However, using social network sites decreased for seven percent. The second highest was learning on the Internet with 68.2 percent.

Activities that increased between ongoing-test and post-test comprised of reading; helping parents; doing housework; doing part-time work; learning on the Internet; listening to music and/or watching movies on the Internet; communication on the Internet; and watching television, VCD, VDO. The activities with the highest increase were reading and doing housework with 17.6 percent. The second highest increase was learning on the Internet at 15.8 percent.

Activities that were decreased included playing sports; playing online, computer, and video games; using social networking sites; and getting with peers. The highest decreased activities was getting on with peers with 14.0 percent. The second highest decreased activities were playing online, computer, and video games and playing sports with 8.8 percent. Using social networking sites decreased seven percent.

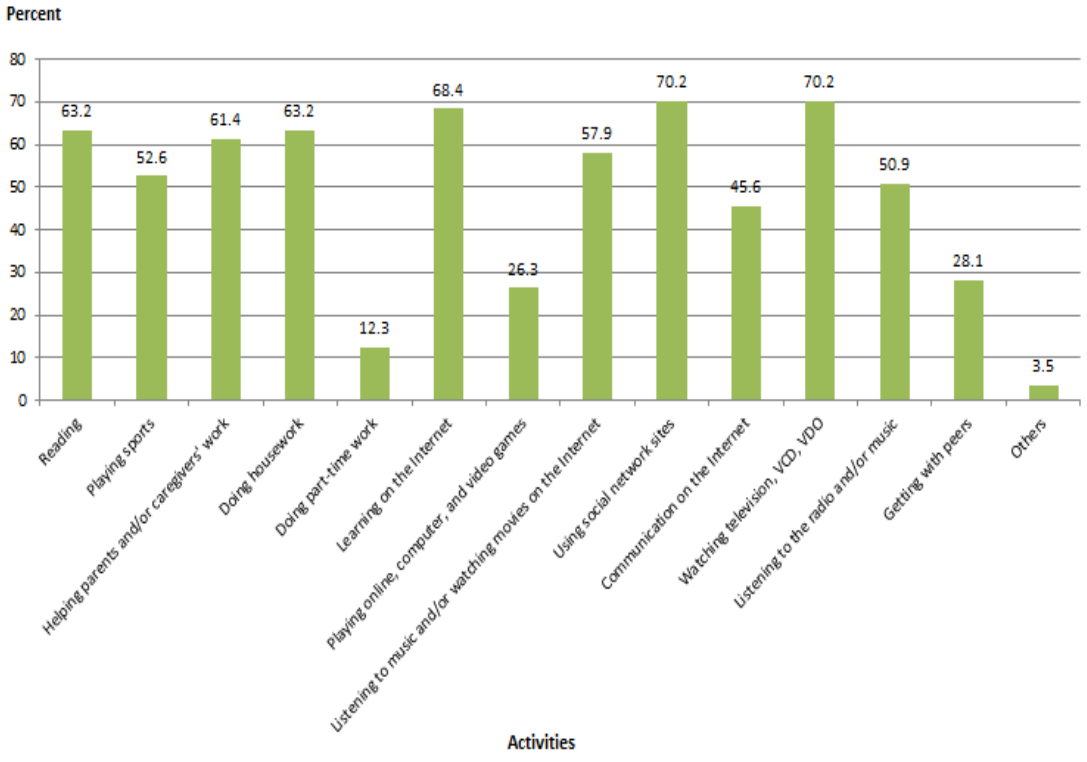

Figure 5.4 The percentage of post-test of students' leisure time

After finishing an activity, the students' SDL was rated by the teachers. The results are shown in Figure 5.5. Self directed students increased from 6.8 to 28.4 percent. Involved students increased from 33.8 to 44.6 percent. However, interested students decreased from 35.1 to 23 percent. Dependent students decreased from 24.3 to 4.1 percent.

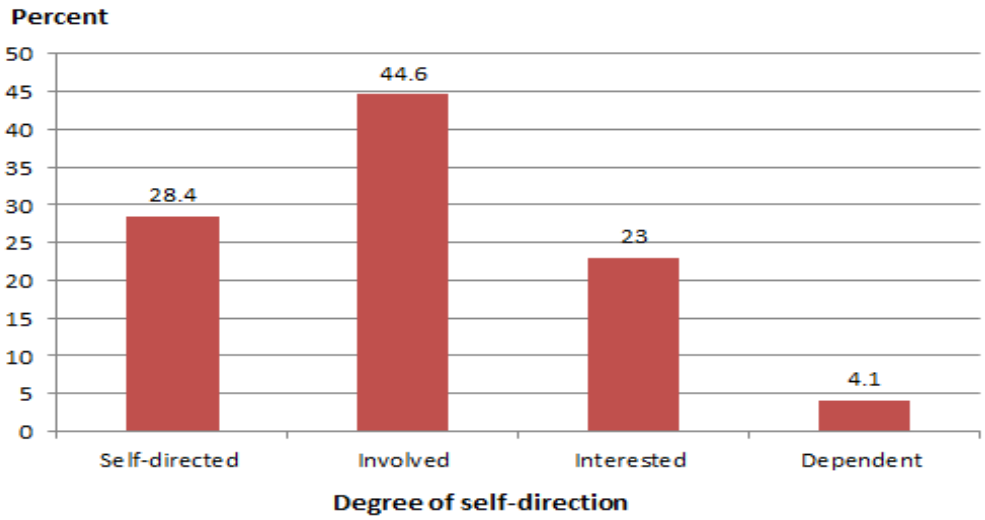

Figure 5.5 The percentage of post-test of students' degree of self-direction

5.2.4 Comparing pre-, ongoing-, and post-tests for leisure time activities

There were 57 students who completed the questionaire of students' leisure time for three times as pre-, ongoing-, and post-test. Figure 5.6 compares the percentage of students' leisure time for the three times. It can also refer that the short film production influence students' leisure time.

As shown in Figure 5.6, there were some activities that steadily increased and decreased from pre-, ongoing- and post-test. The activities that steadily increased comprised of helping parents and/or caregivers' work, learning on the Internet, listening to music and/or watching movies on the Internet, communicating on the Internet, and watching television, VCD, and VDO. The activities that steadily decreased including playing sports and playing online, computer, and video games.

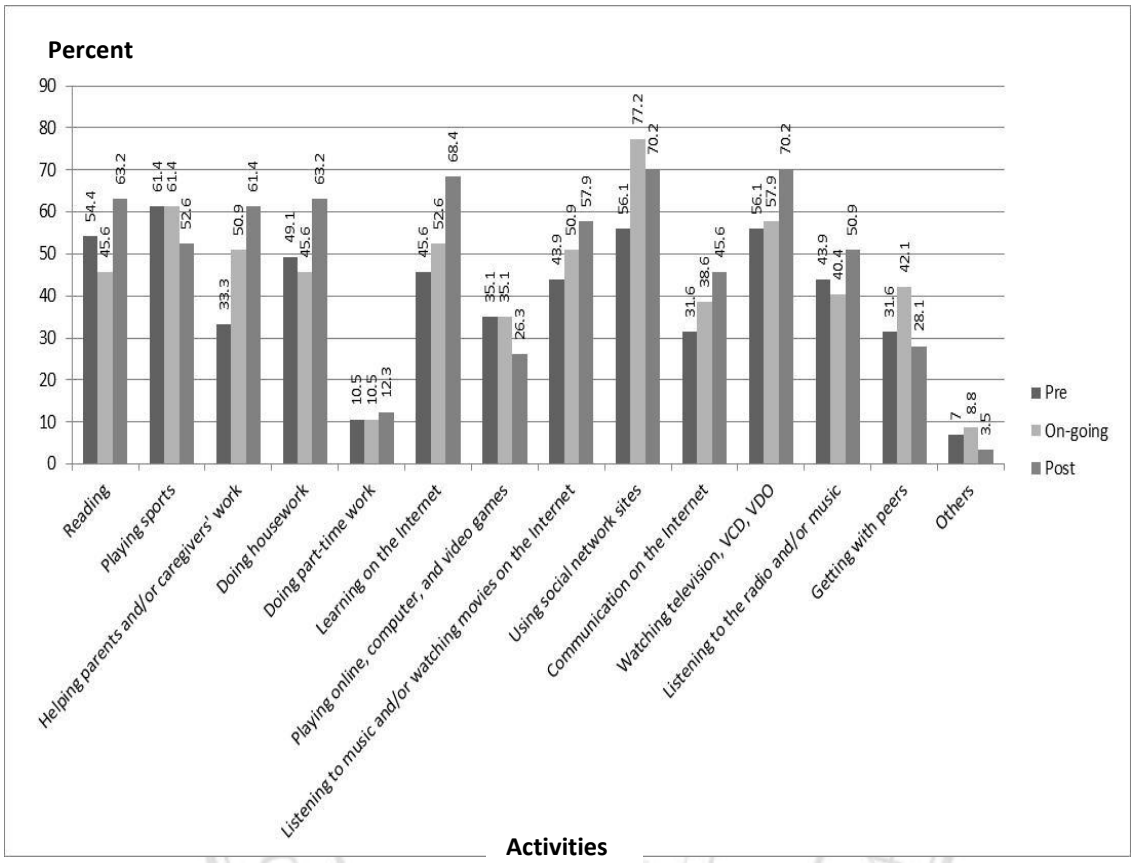

Figure 5.6 The percentage of students' leisure time for testing three times

There was an activity that increased in an ongoing-test, then it decreased in a post-test. On the other hand, some activities decreased in ongoing-test, then they increased in a post-test. For a case of increasing in ongoing-test and decreasing in post-test, a number of students who used social network sites increased a lot during the short film production. Whereas, reading, doing housework, listening to the radio and/or music reduced in an ongoing-test and increased in a post-test.

All activities that related to the Internet use were influenced by the short film activities. Especially, a number of students who learned on the Internet gradually increased as 45.6 percent of pre-test, 52.6 percent of ongoing-test, and 68.4 percent of post-test. Also, communication on the Internet continuous increased 31.6 percent, 38.6 percent, and 45.6 percent. Unexpectedly, listening to music and/or watching movies on the Internet gradually increased due to the short film production as 43.9 percent, 50.9 percent, and

57.9 percent. Remarkably, using social network sites as a popular application for communication sharply increased 21.1 percent from pre-test to ongoing-test and reduced seven percent from ongoing-test to post-test. However, playing online games as an entertainment activity reduced nine percent from ongoing-test to post-test.

Moreover, the data about the 57 students' leisure time were analyzed by using the Cochran's test. Table 5.10 shows each activity analyzed with the Cochran's test. There were two activities that steadily increased which have statistical significance including helping parents and/or caregivers' work, and learning on the Internet. Furthermore, using social network sites that increased in ongoing-test and decreased in the post-test shows statistical significance.

As expected, learning on the Internet was influenced by the short film production that was designed to suit for e-learning interaction. Students had to use the Internet for learning. For example, they searched information from the Internet to find out knowledge content to make a short film that related to a learning area. They also learned to make a short film from the Internet. This invovles teachnical methods for making a short film like editing a movie, and adding a special effect. Learning on the Internet can imply to watch a movie on the Internet as learning content and a sample of a short film. This led to gradually increasing of listening to music and/or watching movies on the Internet.

Unexpectedly, helping parents and/or caregivers' work steadily increased which has statistical significance. This can relate to an uncontrolable factor at the local area.With additional information, the main income of people in this area comes from farming corn. The season of corn farming is July to September when the short film production was operating in 2011. Moreover, children in this area help their parents or caregivers' work during farming corn. This may influence to students' reporting.

Using social network sites presents statistical significace. It highly increased in the ongoing-test and reduced a little bit in the post-test. This should refer to the short film production as an intervention. The short film production let students work as a group and a teacher as a facilitator. Students can use social network sites to contact their group

member, teachers, and students in other groups. This is supported by communication on the Internet that shows a steady increase.

Table 5.10 The Cochran's test to compare doing activities for three times

Activities	Percentage			Cochran's test
	Pre-test	Ongoing-test	Post-test	
Reading	54.4	45.6	63.2	.123
Playing sports	61.4	61.4	52.6	.435
Helping parents and/or caregivers' work	33.3	50.9	61.4	.004 *
Doing housework	49.1	45.6	63.2	.085
Doing part-time work	10.5	10.5	12.3	.936
Learning on the Internet	45.6	52.6	68.4	.027 *
Playing online, computer, and video games	35.1	35.1	26.3	.268
Listening music and/or watching movie on the Internet	43.9	50.9	57.9	.301
Using social network sites	56.1	77.2	70.2	.018 *
Comunication on the Internet	31.6	38.6	45.6	.234
Watching television, VCD, VDO	56.1	57.9	70.2	.159
Listening to the radio and/or music	43.9	40.4	50.9	.428
Getting with peers	31.6	42.1	28.1	.156
Others	7.0	8.8	3.5	.368

* $p < .05$

5.2.5 Comparing pre- and post-tests for students' degree of self-direction

The 75 students were compared about degree of self-direction. Figure 5.7 identified that the percentage of self-directed students and involved students increased, but the percentage of interested students and dependent students decreased. Self-directed students who have ability and willingness of learning increased 21.6 percent from pre-test to post-test. Additionally, involved students who have skills to learn but need more confidence increased 10.8 percent from pre-test to post-test. Whereas, interested students who respond to teachers' motivational techniques but do not have skills to learn decreased 12.1 percent from pre-test to post-test. Dependent students who lack skills and confidence for learning decreased 20.2 percent from pre-test to post-test.

The participating students who joined the short film production had an opportunity to conduct learning by themselves. As well, the participating teachers as facilitators saw students conduct learning by themselves. Therefore, teachers can rate most of students as improving. This relate to students' ability and willingness of learning.

Unexpectedly, there were some students who could not improve themselves. They were 4.1 percent in dependent students (students who do not have skills and willingness to learn). For additional information, the students who cannot improve themselves because some of them did not attend orientation of this project, so they missed informing rationale and purpose. This led to the students rarely joining the short film production.

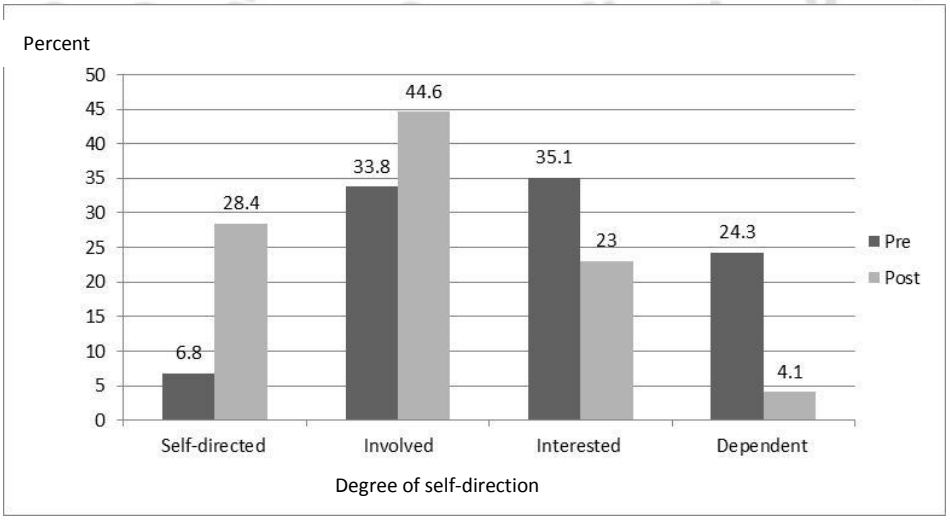

Figure 5.7 Comparing percentage of students' degree of self-direction

5.2.6 Results about advantages and disadvantages to students

Advantages in a conventional setting

- Students had an opportunity to learn in a learning area by themselves with setting a plan, implementing and adjusting the plan, and getting a result as a short film with a planned time frame.
- They learned with their peers by showing opinions and information from the Internet.
- The students as group member had an opportunity to operate a task that they liked.
- Students shared information about their task to the peers.
- Teachers acted as facilitators by guiding them, and seeking cooperative from a community.
- Students contacted with a community to learn following a learning area of the school.
- Students contacted with some teachers in school that they had not known before, to get information about content of a short film and using a computer program.
- Teachers had an opportunity to create a relationship with risk students.
- Risk students liked to do an activity for learning because they didn't like to study in a classroom.

Advantages in an online setting

- Students used the Internet to find information about an example of a short film, methods for making a short film, and using a program for editing a short film because in the school library, there were not books about making a short film. On the Internet, students found a workshop to use an editing program.
- Students used the Internet for contacting group members to make an appointment for meeting and planning. Moreover, they communicated with peers in other groups to ask for a learning source on the Internet and a knowledge person. They also exchanged ideas for making a short film. Some students contacted teachers via online to ask information about time frame and content of a learning area. They mainly used a social networking site.

- Students had an experience to use the Internet for learning.
- Teachers learned that students used the Internet for learning because they had set goals and planning.

Disadvantages in a conventional setting

- Leading students or non-risk students may not like to do an activity, because they saw an activity interrupting their studying.
- Students felt that they didn't have much time for their entertainment.

5.2.7 Results of the eight tracked risk students

There were eight students who were tracked to see improvement. The degree of self-direction was compared by using the sign test. As shown in Table 5.11, all differences were positive. The sign test presented statistical sinigficance of 0.008.

Table 5.11 Differences of self-direction's degree of the eight risk students

Students	**Degree of self-direction**		**Differences**
	Post-test	**Pre-test**	
1	3	1	2
2	3	1	2
3	3	1	2
4	3	1	2
5	3	1	2
6	4	2	2
7	2	1	1
8	3	1	2

5.2.8 Interactions of the eight risk students

With this project, the eight risk students were tracked. Triangulation interviews with the teachers, leading students, and the risk student were conducted to see the risk students' interactions. The result is presented in Table 5.12.

Table 5.12 Interactions of the eight risk students

Students	**Interactions**	
	Conventional setting	Online setting
1	- Attending the meeting every time (They spent leisure time in and after school.) - Collaborating as a leader by coordinating and motivating group members to work - Showing opinions about location and contents of the film	- Finding information about content of the film and sharing in the group - Using FB to communicate in the group and making an appointment
2	- Attending the meeting every time (They spent leisure time in school, after school and on weekends.) - Collaborating as a follower - Responding to edit the short film	- Finding and showing examples of using a program for editing to the group - Learn to use a program for editing - Reducing to play online games
3	- Attending the meeting every time (They spent leisure time in school and on weekends) - Collaborating as a short film editor	- Finding the content of the short film

Table 5.12 Interactions of the eight risk students (Continued)

Students	**Interations**	
	Conventional setting	Online setting
4	- Mostly attending the meeting (They spend leisure time in school) - Collaborating as a follower - Acting as a narrator in the short film - Helping to edit the short film	- Using FB for contacting in the group - Learning a program to edit the short film
5	- Mostly attending the meeting (They spend leisure time in school and on weekends) - Collaborating as a leader like planning, coordinating, and motivating group members to implement the plan - Showing opinions in the group	- Finding information about making a short film and sharing in the group
6	- Attending the meeting every time (They spent leisure time after school and on weekends.) - Collaborating as a leader for planning and implementation - Showing opinions in the group - Frequently contacting the teacher	- Using a social network site for expressing opinion - Finding an example and methods about making short films

Table 5.12 Interactions of the eight risk students (Continued)

Students	**Interations**	
	Conventional setting	Online setting
6	- Attending the meeting every time (They spent leisure time after school and on weekends.) - Collaborating as a leader for planning and implementation - Showing opinions in the group - Frequently contacting the teacher	- Using a social network site for expressing opinion - Finding an example and methods about making short films
7	- Attending the meeting every time (They spent leisure time on weekends.) - Collaborating as a follower - Helping to record the short film - Having opportunities to frequently meet the teacher	- Using a social network site to contact the group - Reducing to play online games
8	- Attending the meeting every time (They spent leisure time in school and on weekends.) - Collaborating as a narrator and coordinating with a community to make a short film - Having opportunities to frequently meet the teacher	- Finding content for the short film - Reducing to play online games