

# Department of Education Internet Connectivity Project Number 50, s.2009 in the Utilization of Edmodo in Social Studies Lesson in Secondary Schools of Gingoog City, Misamis Oriental and Cagayan de Oro City, Philippines

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## Abstract

The study aimed to assess and analyze the provisions stipulated in DepEd Order no.50, s.2009, or the Department of Education Internet Connectivity Project (DICP), to be implemented in secondary public and private schools of Gingoog City with regards to the application of the Edmodo platform.

This study was anchored on the theory of Rogers (1962) which is Diffusion of Innovation Theory in Modern Education, and expanded by Stukalenko (2016) in the field of education.

This study aimed to analyze the implementation of DICP in the secondary public and private schools of Gingoog City. Furthermore, the study targeted to evaluate the use of Edmodo platform in the teaching of Social Studies for Grades 8 and 9.

The researcher utilized a descriptive research design which aimed to assess the provisions of DICP, as stipulated in the DepED Order n.50, s.2009. It is used to evaluate how Grades 8 and 9 students of selected schools in Gingoog City, Misamis Oriental, and Cagayan de Oro City assessed the provisions of DICP on the use of Edmodo online networking application in daily classroom instruction.

Results revealed that the relationship between the school facilities, and the teachers' competencies in teaching Edmodo platform contributed to academic performance. All these were contributors to the effective implementation of DICP

The results implied that students when exposed to Edmodo have a higher achievement test scores in social studies. With this, the integration of Edmodo platform can improve the achievement level in social studies classes.

**Keywords:** internet connectivity, edmodo, dicp, social studies

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## Introduction

Educators believed that using technology can be an effective factor in education for the new generation making education goals easier to achieve. It becomes an integral part of people's lives and the common ground for many high school students and its use has the potential impact to learning. Using multimedia tools gives students the opportunity to participate and interact in the classroom.

The implementation of technology into the classroom is timely and has been increasingly integrated throughout both the K-12 and higher education experience and curriculum. In fact, the Department of Education launched the DepEd Internet Connectivity Project (DICP), pursuant to DepEd Order no.50, s.2009, in line with the Presidential Directives to provide Public Secondary Schools with internet access.

It has been observed and experienced that teachers are bombarded with many tasks in school aside from the preparation of instructional materials and the making of daily lesson plans, making work laborious. With these voluminous tasks and in the advent of computer technology, teachers have the discretion to use the fastest and easiest way in delivering the best pedagogy to in order to meet the demands of the 21<sup>st</sup> century learners.

**Problem 1.** What is the extent of DICP implementation in terms of:

1. Internet connectivity;
2. School facilities;
3. Computer Laboratories;
4. Computer Hardware;
5. Computer Software; and,
6. Computer student ratio.

Effective implementation of the DICP needs the availability of certain indicators to ensure its correlation to the usage of the Edmodo platform by select teachers teaching Social Studies. These six (6) indicators were then utilized by the researcher to identify the status of the DICP implementation in the targeted secondary schools. The table below showed the extent of the DICP implementation in the targeted schools.

**Table 1. Extent of the DICP implementation**

	Fully Implemented	Often Implemented	Moderately implemented	Sometimes Implemented	Never Implemented
<b>1. Facilitates the process of internet connectivity</b>	16(100%)	0	0	0	0
<b>2. Has ICT coordinator and computer literate teacher</b>	16(100%)	0	0	0	0
<b>3. Submits monthly report or quarterly reports to the central office for utilization</b>	16(100%)	0	0	0	0
<b>3. Assists the school in canvassing/shopping whether implementing/non implementing units</b>	10(62.5%)	6(37.5%)	0	0	0
<b>4. Facilitates the payment of internet subscription fee</b>	16(100%)	0	0	0	0
<b>5. Has an IT expert to</b>	14(87.5%)	2(12.5%)	0	0	0

<b>troubleshoot the computer</b>					
<b>6. Receives an installation fee and internet service fee</b>	16(100%)	0	0	0	0
<b>7. Computer laboratories are connected to a local Network (LAN)</b>	9(56.25%)	5(31.25%)	2(12.5%)	0	0
<b>8. Ensures one-on-one hands-on computer</b>	5(31.25%)	8(50%)	3(18.75%)	0	0
<b>9. Accommodates all the students for internet utilization</b>	14(87.5%)	2(12.5%)	0	0	0
<b>10. Subscribes the internet connectivity a year round</b>	14(87.5%)	2(12.5%)	0	0	0
<b>11. Assures computer laboratory rooms are ventilated and air-conditioned</b>	16(100%)	0	0	0	0
<b>12. Liquidates internet subscription promptly</b>	16(100%)	0	0	0	0
<b>13. Monitors the maximum 3.5 mbps. Signal</b>	9(56.25%)	5(31.25%)	2(12.5%)	0	0

The results indicated that all indicators of DICP implementation are significantly correlated to the usage of Edmodo Platform in teaching Social Studies. As shown, the computer laboratories indicator (0.411,  $p < 0.05$ ) has the highest correlation, followed by the computer ratio indicator (3.93,  $p < 0.05$ ).

Furthermore, the indicators are revealed to have a positive correlation to the use of Edmodo in teaching Social Studies. Starting from the computer hardware indicator (0.380,  $p < 0.05$ ), internet connectivity indicator (0.380,  $p < 0.05$ ), school facilities indicator (0.336,  $p < 0.05$ ), and computer software indicator (0.239,  $p < 0.05$ ). Therefore, the overall DICP implementation is positively and moderately correlated to the use of Edmodo platform in teaching Social Studies.

#### **Problem 2.** What is the competency level of the teachers trained in Edmodo?

Another domain to be considered to have an effective DICP implementation is to assess the competency level of teachers trained in the usage of the Edmodo platform. Like all types of technological advances and innovation, the effectiveness relies on the user. The table below showed the competency level of teachers in using the Edmodo platform in teaching lessons in Social Studies.

**Table 2. Competency Level of Teachers in Edmodo**

	<b>Unsatisfactory</b>	<b>Satisfactory</b>	<b>Very Satisfactory</b>	<b>Outstanding</b>
<b>TASK (Focus on the Teacher's Actions)</b>				
<i>Teacher's Competence</i>	0	0	27 (90%)	3 (10%)
<i>Lesson Establishment/Development</i>	0	0	30 (100%)	0

<i>Interaction or Discussion</i>	0	0	27(90%)	3(10%)
<i>Instructional models and strategies</i>	0	0	21(70%)	9(30%)
<i>Enrichment (Application)</i>	0	0	21(70%)	9(30%)
<b>ACTION (Focus and observe closely to the learners actions)</b>				
<i>Student/Class Engagement</i>	0	0	21(70%)	9(30%)
<i>Response (Quality of Answer)</i>	0	0	27(90%)	3(10%)
<i>Outputs (Quality of Work)</i>	0	0	27(90%)	3(10%)
<b>RESULT (Focus on the end results or outcomes)</b>				
<i>Outcomes (Evaluation)</i>	0	0	26(86%)	4(14%)
<i>Assessment of Learning (Reflection)</i>	0	0	24(80%)	6(20%)

The results showed that in all three main indicators – Task, Action, and Result – the respondents are in the Very Satisfactory level of competency in the utilization of the Edmodo platform in teaching lessons in Social Studies.

With this level of competency, there is a positive result of the DICP implementation in the respective schools of the respondents.

**Problem 3.** What is the result of the achievement test of the students in Social Studies using the Edmodo platform?

Students' knowledge is mostly measured through various assessments. Common assessment is the administering of achievement tests to students in schools. With the advent of various technological tools, teachers have a wide array of delivering lessons suited to the students' need to meet academic assessments. The table shows the mean results of achievement tests of students in Social Studies before and after the usage of the Edmodo platform.

**Table 3.1. Mean Level of Respondents' Achievement Test in Social Studies 8 Using Edmodo Platform**

Grade 8	Control Without Edmodo				Experimental with Edmodo			
	Pre	Level	Post	Level	Pre	Level	Post	Level of Achievement
<b>Anakan NHS 8</b>	7.74	Fair	13.34	Good	7.914	Fair	18.67	Excellent
<b>GCCNHS 8</b>	7.34	Fair	14.27	Good	7.67	Fair	17.89	Excellent
<b>JMNHS 8</b>	6.89	Fair	13.8	Good	7.89	Fair	16.89	Excellent
<b>Lunao 8</b>	7.35	Fair	14.57	Good	7.34	Fair	18.56	Excellent
<b>Pundasan 8</b>	7.34	Fair	14.78	Good	7.35	Fair	18.26	Excellent
<b>San Luis 8</b>	7.16	Fair	15.34	Good	7.76	Fair	18.34	Excellent
<b>Talisayan 8</b>	7.12	Fair	14.78	Good	7.09	Fair	18.12	Excellent
<b>Medina 8</b>	7.15	Fair	13.16	Good	7.24	Fair	18.34	Excellent
<b>Sugbong Cogon 8</b>	6.45	Fair	12.67	Good	6.53	Fair	15.67	Excellent

<b>Baliwagan 8</b>	6.34	Fair	13.15	Good	6.37	Fair	16.01	Excellent
<b>Sta. Ana 8</b>	7.34	Fair	16.23	Good	7.13	Fair	17.6	Excellent
<b>Alubijid 8</b>	6.45	Fair	13.29	Good	6.56	Fair	17.89	Excellent
<b>Naawan 8</b>	6.89	Fair	14.67	Good	6.78	Fair	17.34	Excellent
<b>Bulua 8</b>	7.89	Fair	14.54	Good	7.96	Fair	16.78	Excellent
<b>Macabalan 8</b>	7.38	Fair	14.23	Good	7.23	Fair	15.67	Excellent
<b>Overall Mean</b>	<b>7.122</b>	<b>Fair</b>	<b>14.188</b>	<b>Good</b>	<b>7.254267</b>	<b>Fair</b>	<b>17.46867</b>	<b>Excellent</b>

Legend: 4.50-5.00, Outstanding (O); 3.50-4.49, Very Satisfactory (VS); 2.50-3.49, Satisfactory (S); 1.50-2.49, Fairly satisfactory (FS); 1.49 –below, Did not meet expectations

The results above showed that though both the overall mean level of the respondents' pre-achievement test scores were Fair, the Experimental with Edmodo indicator has a slightly higher value (7.254) compared to the Control without Edmodo indicator (7.122). Additionally, the overall mean level of the respondents' post-achievement test results in the Experimental with Edmodo indicator was higher (17.469 – Excellent) as to that of the Control without Edmodo indicator (14.188 – Good).

**Table 3.2. Mean Level of Respondents' Achievement Test in Social Studies 9 Using Edmodo Platform**

Grade 9	Control Without Edmodo				Experimental with Edmodo			
	Pre	Level	Post	Level	Pre	Level	Post	Level of Achievement
<b>Anakan NHS 9</b>	8.65	Fair	14.34	Good	7.57	Fair	19.23	Excellent
<b>GCCNHS 9</b>	7.89	Fair	15.28	Good	7.7	Fair	18.34	Excellent
<b>JMNHS 9</b>	7.56	Fair	16.56	Good	7.67	Fair	18.69	Excellent
<b>Lunao 9</b>	8.24	Fair	15.28	Good	8.87	Fair	17.78	Excellent
<b>Pundasa 9</b>	7.14	Fair	16.15	Good	7.54	Fair	18.32	Excellent
<b>San Luis 9</b>	7.25	Fair	16.78	Good	7.13	Fair	18.23	Excellent
<b>Talisayan 9</b>	7.78	Fair	16.31	Good	8.12	Fair	18.05	Excellent
<b>Medina 9</b>	7.89	Fair	14.56	Good	7.96	Fair	18.45	Excellent
<b>Sugbong Cogon 9</b>	7.8	Fair	15.23	Good	7.6	Fair	15.45	Excellent
<b>Baliwagan9</b>	7.6	Fair	15.23	Good	7.8	Fair	17.45	Excellent
<b>Sta. Ana 9</b>	6.78	Fair	14.24	Good	6.59	Fair	18.34	Excellent
<b>Alubijid 9</b>	6.89	Fair	15.34	Good	6.78	Fair	18.45	Excellent
<b>Naawan 9</b>	8.45	Fair	15.65	Good	7.45	Fair	16.13	Excellent
<b>Bulua 9</b>	6.45	Fair	16.65	Good	6.3	Fair	17.12	Excellent
<b>Macasandig 9</b>	8.43	Fair	16.76	Good	8.26	Fair	16.13	Excellent
<b>Overall Mean</b>	<b>7.653</b>	<b>Fair</b>	<b>15.624</b>	<b>Good</b>	<b>7.556</b>	<b>Fair</b>	<b>17.744</b>	<b>Excellent</b>

Legend: 4.50-5.00, Outstanding (O); 3.50-4.49, Very Satisfactory (VS); 2.50-3.49, Satisfactory (S); 1.50-2.49, Fairly satisfactory (FS); 1.49 –below, Did not meet expectations

The results above showed that even if both the overall mean level of the respondents' pre-achievement test scores were Fair, the Control without Edmodo indicator has a slightly higher value (7.653) compared to the Experimental with Edmodo indicator (7.556). Additionally, the overall mean level of the respondents' post-achievement test results in the Experimental with Edmodo indicator was higher (17.744 –

Excellent) as to that of the Control without Edmodo indicator (15.624 – Good).

The results imply that there were higher achievement test results in Social Studies when respondents were exposed to the Edmodo platform, as compared to when the respondents were unexposed yet of the Edmodo platform. With this, it is implied that the integration of Edmodo platform can improve the achievement level of students in their Social Studies classes.

**Problem 4.** What are the problems encountered in the implementation of the DICP?

Similar to any related action, the implementation of the DICP is bound to have its share of complications. However, these complications could provide enhancements to the DICP implementation to further its effectiveness. The tables below show the categories of concepts of the respondents' problems encountered in the DICP implementation, the concepts derived from the respondents' transcripts on their problems encountered in the DICP implementation, and the themes based on the concepts constructed from the respondents' problems encountered in the DICP implementation, consecutively.

**Table 4.1.** Categories of the Concepts of the Problems Encountered by the Respondents in the Implementation of DICP

REFERENCE NUMBERS	CONCEPTS	CATEGORIES
1A	The school experienced poor connectivity encounter issues.	Problems of Internet Connectivity
1B	Additional functional computer in the school.	Ratio on Functional Computer Availability for Students
1C	The school should have skilled IT.	Hired Skilled Computer Trouble Shooter
2A	We experienced problem on inconsistent connectivity.	Problems of Internet Connectivity
2B	The school need more functional computers.	Ratio on Functional Computer Availability for Students
2C	Expert IT for trouble shooting of computer.	Hired Skilled Computer Trouble Shooter
3A	The teachers and students experienced noticeable delays of usability.	Problems of Internet Connectivity
3B	The school should have safe computer laboratory.	Ratio on Functional Computer Availability for Students
3C	There should have IT in the school.	Hired Skilled Computer Trouble Shooter
4A	It happened to have limited connectivity.	Problems of Internet Connectivity
4B	The school need to consider the ratio of the computers.	Ratio on Functional Computer Availability for Students
4C	IT assistance for the program.	Hired Skilled Computer Trouble Shooter
5A	Limited quality service of server in the school.	Problems of Internet Connectivity
5B	We need to take good care the computer.	Ratio on Functional Computer Availability for Students
5C	IT in-charge in the computer laboratory.	Hired Skilled Computer Trouble Shooter
6A	We have weak internet connection.	Problems of Internet Connectivity.

<b>6B</b>	We need to assigned computer each students.	Ratio on Functional Computer Availability for Students
<b>6C</b>	Availability of computer laboratory.	Hired Skilled Computer Trouble Shooter
<b>7A</b>	We have experienced failing to receive internet data.	Problems of Internet Connectivity.
<b>7B</b>	We need to have proper tracking of computer.	Ratio on Functional Computer Availability for Students
<b>7C</b>	IT Assistance for the program implementation.	Hired Skilled Computer Trouble Shooter
<b>8A</b>	We need huge demand for high speed internet connection.	Problems of Internet Connectivity.
<b>8B</b>	We need to input the activities in the computer.	Ratio on Functional Computer Availability for Students
<b>8C</b>	School should have computer expert.	Hired Skilled Computer Trouble Shooter
<b>9A</b>	We need reliable internet service provider.	Problems of Internet Connectivity.
<b>9B</b>	The discussion should be available in the computer.	Ratio on Functional Computer Availability for Students
<b>9C</b>	Considered the availability of computer expert.	Hired Skilled Computer Trouble Shooter
<b>10A</b>	We experienced temporary congestion at times leading to connection problems.	Problems of Internet Connectivity
<b>10B</b>	Inputs of the platforms should be in the computer.	Ratio on Functional Computer Availability for Students
<b>10C</b>	The presence of the IT expert.	Hired Skilled Computer Trouble Shooter
<b>11A</b>	We have inconsistent internet connectivity.	Problems of Internet Connectivity
<b>11B</b>	The students should have no problem on computer availability.	Ratio on Functional Computer Availability for Students
<b>11C</b>	Hired IT expert.	Hired Skilled Computer Trouble Shooter
<b>12A</b>	Not reliable internet service provider in the school.	Problems of Internet Connectivity
<b>12B</b>	The teachers should have each computer for the platform.	Ratio on Functional Computer Availability for Students
<b>12C</b>	Availability of computer in-charge.	Hired Skilled Computer Trouble Shooter
<b>13A</b>	Failing internet connectivity in the school.	Problems of Internet Connectivity
<b>13B</b>	The availability of functional computer laboratory.	Ratio on Functional Computer Availability for Students
<b>13C</b>	Functional computer laboratory.	Hired Skilled Computer Trouble Shooter
<b>14A</b>	Inconsistent internet connectivity in the school.	Problems of Internet Connectivity
<b>14B</b>	The availability of functional computer for the students.	Ratio on Functional Computer Availability for Students
<b>14C</b>	The presence of computer expert.	Hired Skilled Computer Trouble Shooter

<b>15A</b>	Weak quality of service connectivity in the school.	Problems of Internet Connectivity
<b>15B</b>	The teacher should have functional computer anytime needed.	Ratio on Functional Computer Availability for Students
<b>15C</b>	The presence of IT expert in computer laboratory.	Hired Skilled Computer Trouble Shooter
<b>16A</b>	Poor connectivity of internet service in the school.	Problems of Internet Connectivity
<b>16B</b>	The students' ratio on computer availability should be considered.	Ratio on Functional Computer Availability for Students
<b>16C</b>	The presence of IT expert for the platform.	Hired Skilled Computer Trouble Shooter

**Table 4.2.** Concepts Derived from the Transcripts of Problems Encountered by the Respondents in the Implementation of DICP

<b>REFERENCE NUMBERS</b>	<b>TRANSFORMED MEANING UNITS</b>	<b>CONCEPTS</b>
<b>1A</b>	<b>1</b> Experience problems on internet connectivity.	The school experienced poor connectivity encounter issues.
<b>2A</b>	<b>2</b> Issues on inconsistent connectivity of internet.	We experienced problem on inconsistent connectivity.
<b>3A</b>	<b>3</b> Encounter issues on delays of internet usability.	The teachers and students experienced noticeable delays of usability.
<b>4A</b>	<b>4</b> Experienced limited connectivity.	It happened to have limited connectivity.
<b>5A</b>	Observed limited quality service of internet server.	Limited quality service of server in the school.
<b>6A</b>	<b>6</b> Experienced weak internet connection.	We have weak internet connection.
<b>7A</b>	<b>7</b> Failed to receive fast internet connectivity.	We have experienced failing to receive internet data.
<b>8A</b>	<b>8</b> Needed huge demand of internet connectivity.	We need huge demand for high speed internet connection.
<b>9A</b>	<b>9</b> Need reliable service provider.	We need reliable internet service provider.
<b>10A</b>	<b>10</b> Experienced temporary congestion that leads to internet connection problems.	We experienced temporary congestion at times leading to connection problems.
<b>11A</b>	<b>11</b> Experienced inconsistent internet connectivity.	We have inconsistent internet connectivity.
<b>12A</b>	<b>12</b> Not reliable internet service provider in the school	Not reliable internet service provider in the school.
<b>13A</b>	<b>13</b> Experienced failing internet connection.	Failing internet connectivity in the school.
<b>14A</b>	<b>14</b> Experienced inconsistent internet connectivity in the school.	Inconsistent internet connectivity in the school.
<b>15A</b>	<b>15</b> It has a weak quality of service connectivity in the school.	Weak quality of service connectivity in the school.
<b>16A</b>	<b>16</b> It has poor connectivity of internet service provider.	Poor connectivity of internet service in the school.



<b>1B</b>	<b>1</b> The school needs additional functional computer.	Additional functional computer in the school.
<b>2B</b>	<b>2</b> Needs more functional computers.	The school need more functional computers.
<b>3B</b>	<b>3</b> The school should maintain a safe and functional computer laboratory.	The school should have safe computer laboratory.
<b>4B</b>	<b>4</b> Consider the student-computer ratio.	The school need to consider the ratio of the computers.
<b>5B</b>	<b>5</b> Takes care of the computer in the school.	We need to take good care of the computer.
<b>6B</b>	<b>6</b> Assigned each student to take care of each computer.	We need to assigned computers to each student.
<b>7B</b>	<b>7</b> There should be proper tracking of computers.	We need to have proper tracking of computer.
<b>8B</b>	<b>8</b> The activities of the platform should be already in the functional computer.	We need to input the activities in the computer.
<b>9B</b>	<b>9</b> Availability of the discussions in the computer.	The discussion should be available in the computer.
<b>10B</b>	<b>10</b> All activities in the platforms should be in the computer.	Inputs of the platforms should be in the computer.
<b>11B</b>	<b>11</b> Problems of the availability of the computer should be considered.	The students should have no problem on computer availability.
<b>12B</b>	<b>12</b> Distribution of computer to the teachers for the platforms.	The teachers should have each computer for the platform.
<b>13B</b>	<b>13</b> Computer laboratory should be considered.	The availability of functional computer laboratory.
<b>14B</b>	<b>14</b> Functional computer should be available to the students.	The availability of functional computer for the students.
<b>15B</b>	<b>15</b> Issue functional computer to the teachers for the platforms.	The teacher should have functional computer anytime needed.
<b>16B</b>	<b>16</b> Consider the computer availability and students' ratio.	The students' ratio on computer availability should be considered.
<b>1C</b>	<b>1</b> Hired IT in-charge.	The school should have skilled IT.
<b>2C</b>	<b>2</b> Skilled IT for platform trouble shooting of computers.	Expert IT for trouble shooting of computer.
<b>3C</b>	<b>3</b> The school should have IT in the computer laboratory.	There should have IT in the school.
<b>4C</b>	<b>4</b> Availability of IT in the school for the academic platforms.	IT assistance for the program.
<b>5C</b>	<b>5</b> School should have IT in-charge in the school.	IT in-charge in the computer laboratory.
<b>6C</b>	<b>6</b> Computer laboratory availability in the school.	Availability of computer laboratory.
<b>7C</b>	<b>7</b> There should be IT assistance in the program implementation.	IT Assistance for the program implementation.
<b>8C</b>	<b>8</b> Availability of computer experts.	School should have computer expert.
<b>9C</b>	<b>9</b> Computer expert in the school should be considered.	Considered the availability of computer expert.

<b>10C</b>	<b>10</b> The school should have IT expert for the academic platforms.	The presence of the IT expert.
<b>11C</b>	<b>11</b> School should have IT expert.	Hired IT expert.
<b>12C</b>	<b>12</b> Computer In-charge in the school.	Availability of computer in-charge.
<b>13C</b>	<b>13</b> The school should have functional laboratory.	Functional computer laboratory.
<b>14C</b>	<b>14</b> Availability of computer expert in the school computer laboratory.	The presence of computer expert.
<b>15C</b>	<b>15</b> Computer laboratory should have IT expert for the academic platforms.	The presence of IT expert in computer laboratory.
<b>16C</b>	<b>16</b> The school should have IT expert for the academic platforms.	The presence of IT expert for the platform.

**Table 4.3.** Themes Based on the Concepts Constructed from Problems Encountered by the Respondents in the Implementation of DICP

REFERENCE NUMBERS	CONCEPTS	THEMES
<b>1A</b>	The school experienced poor connectivity encounter issues.	<b>Challenging Experiences of the Respondents</b>
<b>2A</b>	We experienced problem on inconsistent connectivity.	
<b>3A</b>	The teachers and students experienced noticeable delays of usability.	
<b>4A</b>	It happened to have limited connectivity.	
<b>5A</b>	Limited quality service of server in the school.	
<b>6A</b>	We have weak internet connection.	
<b>7A</b>	We have experienced failing to receive internet data.	
<b>8A</b>	We need huge demand for high speed internet connection.	
<b>9A</b>	We need reliable internet service provider.	
<b>10A</b>	We experienced temporary congestion at times leading to connection problems.	
<b>11A</b>	We have inconsistent internet connectivity.	
<b>12A</b>	Not reliable internet service provider in the school.	
<b>13A</b>	Failing internet connectivity in the school.	
<b>14A</b>	Inconsistent internet connectivity in the school.	

<b>15A</b>	Weak quality of service connectivity in the school.	<b>Difficulties Encountered of the Respondents</b>
<b>16A</b>	Poor connectivity of internet service in the school.	
<b>1B</b>	Additional functional computer in the school.	
<b>2B</b>	The school need more functional computers.	
<b>3B</b>	The school should have safe computer laboratory.	
<b>4B</b>	The school need to consider the ratio of the computers.	
<b>5B</b>	We need to take good care the computer.	
<b>6B</b>	We need to assigned computer each student.	
<b>7B</b>	We need to have proper tracking of computer.	
<b>8B</b>	We need to input the activities in the computer.	
<b>9B</b>	The discussion should be available in the computer.	
<b>10B</b>	Inputs of the platforms should be in the computer.	
<b>11B</b>	The students should have no problem on computer availability.	
<b>12B</b>	The teachers should have each computer for the platform.	
<b>13B</b>	The availability of functional computer laboratory.	
<b>14B</b>	The availability of functional computer for the students.	
<b>15B</b>	The teacher should have functional computer anytime needed.	
<b>16B</b>	The students' ratio on computer availability should be considered.	
<b>1C</b>	The school should have skilled IT.	<b>Asking Personal and Professional Help on Technical Assistance</b>
<b>2C</b>	Expert IT for troubleshooting of computer.	
<b>3C</b>	There should have IT in the school.	
<b>4C</b>	IT assistance for the program.	
<b>5C</b>	IT in-charge in the computer laboratory.	
<b>6C</b>	Availability of computer laboratory.	

<b>7C</b>	IT Assistance for the program implementation.
<b>8C</b>	School should have computer expert.
<b>9C</b>	Considered the availability of computer expert.
<b>10C</b>	The presence of the IT expert.
<b>11C</b>	Hired IT expert.
<b>12C</b>	Availability of computer in-charge.
<b>13C</b>	Functional computer laboratory.
<b>14C</b>	The presence of computer expert.
<b>15C</b>	The presence of IT expert in computer laboratory.
<b>16C</b>	The presence of IT expert for the platform.

These results revealed that there were challenges and difficulties experienced by the respondents particularly in terms of speed of internet connectivity and availability of functional computers for the DICP implementation and the Edmodo platform. Additionally, the respondents requested for professional or technical assistance from IT experts.

Moreover, the results revealed that even if the DICP implementation was effective, there still were challenges and complications encountered along the process. And, if unresolved, it will provide a challenge to fully utilize the Edmodo platform in teaching lessons in Social Studies.

**Problem 5.** What are the problems encountered in the Edmodo utilization?

Previous results showed that the utilization of the Edmodo platform proved its effectiveness in teaching lessons in Social Studies. However, complications could still be expected in its usage. The corresponding tables below show the categories of concepts of the respondents' problems encountered in the Edmodo utilization, the concepts derived from the respondents' transcripts on their problems encountered in the Edmodo utilization, and the themes based on the concepts constructed from the respondents' problems encountered in the Edmodo utilization.

**Table 5.1.** Categories of the Concepts of the Problems Encountered by the Respondents in the EDMODO Utilization.

<b>REFERENCE NUMBERS</b>	<b>CONCEPTS</b>	<b>CATEGORIES</b>
<b>1A</b>	Teachers should be trained on the EDMODO Platform.	Teachers Competencies, Expertise and Skills
<b>1B</b>	Trained monitoring in-charge.	Means of Monitoring and Evaluation
<b>1C</b>	Giving unlimited time.	Reflection on assessment of Implementation

<b>2A</b>	Teachers should be familiar on the feature of the platform.	Teachers Competencies, Expertise and Skills
<b>2B</b>	Online monitoring should be implemented.	Means of Monitoring and Evaluation
<b>2C</b>	Uncontrolled time for the activities.	Reflection on assessment of Implementation
<b>3A</b>	Teachers' expertise on the formal assessment of the platform.	Teachers Competencies, Expertise and Skills
<b>3B</b>	Target time activities should be followed.	Means of Monitoring and Evaluation
<b>3C</b>	They can also have leisure time while learning.	Reflection on assessment of Implementation
<b>4A</b>	Teachers' expertise on calendar of activities posting.	Teachers Competencies, Expertise and Skills
<b>4B</b>	Online monitoring should be considered.	Means of Monitoring and Evaluation
<b>4C</b>	Claim to have learning with pleasure reason.	Reflection on assessment of Implementation
<b>5A</b>	Trained on the integration of the Google features.	Teachers Competencies, Expertise and Skills
<b>5B</b>	Schedule of monitoring should be considered.	Means of Monitoring and Evaluation
<b>5C</b>	Learning simply as well as being motivated.	Reflection on assessment of Implementation
<b>6A</b>	Familiarity of community forums.	Teachers Competencies, Expertise and Skills
<b>6B</b>	Daily monitoring of the output.	Means of Monitoring and Evaluation
<b>6C</b>	Availability of computer gadgets.	Reflection on assessment of Implementation
<b>7A</b>	Skills on online assessment features.	Teachers Competencies, Expertise and Skills
<b>7B</b>	Checklist recording of the tasks.	Means of Monitoring and Evaluation
<b>7C</b>	Difficulties on low computer user of computer.	Reflection on assessment of Implementation
<b>8A</b>	Awareness on online assessment.	Teachers Competencies, Expertise and Skills
<b>8B</b>	Teachers posted activities are important.	Means of Monitoring and Evaluation
<b>8C</b>	Computer connections should be considered.	Reflection on assessment of Implementation
<b>9A</b>	Trained on the platform features.	Teachers Competencies, Expertise and Skills
<b>9B</b>	Advance posting of tasks should be considered.	Means of Monitoring and Evaluation
<b>9C</b>	Feedbacking of the teachers are important feature.	Reflection on assessment of Implementation

<b>10A</b>	Quality personalized learning.	Teachers Competencies, Expertise and Skills
<b>10B</b>	Technological evaluation is important.	Means of Monitoring and Evaluation
<b>10C</b>	Limited knowledge of the platform could be a problem.	Reflection on assessment of Implementation
<b>11A</b>	Expertise on the online sessions.	Teachers Competencies, Expertise and Skills
<b>11B</b>	Adequate training of the monitoring person.	Means of Monitoring and Evaluation
<b>11C</b>	Choice of technology should be considered.	Reflection on assessment of Implementation
<b>12A</b>	Trained on offline activities.	Teachers Competencies, Expertise and Skills
<b>12B</b>	Infused technology step by step.	Means of Monitoring and Evaluation
<b>12C</b>	Technology chosen highlights the crucial issues of the platform.	Reflection on assessment of Implementation
<b>13A</b>	Provided competencies of teachers on learning preferences.	Teachers Competencies, Expertise and Skills
<b>13B</b>	Features of the platform should be well informed to the monitoring person.	Means of Monitoring and Evaluation
<b>13C</b>	Confusion of the platform features.	Reflection on assessment of Implementation
<b>14A</b>	Observed skills on cognitive engagement.	Teachers Competencies, Expertise and Skills
<b>14B</b>	Introduce various media access for monitoring.	Means of Monitoring and Evaluation
<b>14C</b>	Adequate training should be considered.	Reflection on assessment of Implementation
<b>15A</b>	Utilized platform on academic matters.	Teachers Competencies, Expertise and Skills
<b>15B</b>	Various accesses for assessment.	Means of Monitoring and Evaluation
<b>15C</b>	Technology familiarity should be prioritized.	Reflection on assessment of Implementation
<b>16A</b>	Skills on learner-content interaction.	Teachers Competencies, Expertise and Skills
<b>16B</b>	Availability of trained person to in-charge the monitoring and evaluation of the platform.	Means of Monitoring and Evaluation
<b>16C</b>	Training of the technology especially the platform features.	Reflection on assessment of Implementation

**Table 5.2.** Concepts Derived from the Transcripts on the Problems Encountered by the Respondents in the EDMODO Utilization.

REFERENCE NUMBERS	TRANSFORMED MEANING UNITS	CONCEPTS
1A	Need of technical training for the EDMODO platforms.	Teachers should be trained on the EDMODO Platform.
2A	Familiarity of the features of the platforms should be considered.	Teachers should be familiar on the feature of the platform.
3A	Trained experts on the assessment of the EDMODO platforms.	Teachers expertise on the formal assessment of the platform.
4A	Posting of the calendar of the activities of the students should be posted.	Teachers expertise on calendar of activities posting.
5A	Trained teachers for the technological features of the EDMODO platforms.	Trained on the integration of the Google features.
6A	Familiarity of the platforms for the community forums.	Familiarity of community forums.
7A	Trained skills on the features for online assessment.	Skills on online assessment features.
8A	Steps on Online assessment should be discussed properly.	Awareness on online assessment.
9A	Trained the teachers on the features of EDMODO platforms.	Trained on the platform features.
10A	Consider quality personalized learning.	Quality personalized learning.
11A	Trained to be expert on the online sessions.	Expertise on the online sessions.
12A	Trained also on offline activities of the EDMODO platforms.	Trained on offline activities.
13A	Provide trainings on teachers learning preferences.	Provided competencies of teachers on learning preferences.
14A	Observance on the cognitive engagement skills.	Observed skills on cognitive engagement.
15A	There should be utilization of platforms academic matters.	Utilized platform on academic matters.
16A	Trained teachers on skills of learner - content interactions.	Skills on learner-content interaction.
1B	Training of EDMODO in-charge is important.	Trained monitoring incharge.
2B	Monitoring on online class should be implemented.	Online monitoring should be implemented.
3B	Activities of the EDMODO platforms should be followed.	Target time activities should be followed.
4B	Monitoring the platform is advisable.	Online monitoring should be considered.
5B	Time schedule for monitoring should be considered.	Schedule of monitoring should be considered.

<b>6B</b>	Output monitoring is important.	Daily monitoring of the output.
<b>7B</b>	Monitoring checklist of the task is advisable.	Checklist recording of the tasks.
<b>8B</b>	Posting of activities for the platforms is a great help.	Teachers posted activities are important.
<b>9B</b>	Tasks should be posted ahead.	Advance posting of tasks should be considered.
<b>10B</b>	The platform should be evaluated especially the facilities.	Technological evaluation is important.
<b>11B</b>	Trained person to monitor the EDMODO platform.	Adequate training of the monitoring person.
<b>12B</b>	Introduced and infused the process of the platform step by step.	Infused technology step by step.
<b>13B</b>	The monitoring person should be informed on the features of the platform.	Features of the platform should be well informed to the monitoring person.
<b>14B</b>	Access on monitoring should be introduced to the trained monitor.	Introduce various media access for monitoring.
<b>15B</b>	Access on monitoring of assessment should be given to the trained monitor.	Various accesses for assessment.
<b>16B</b>	There should be trained person to monitor and evaluate the platform.	Availability of trained person to in-charge the monitoring and evaluation of the platform.
<b>1C</b>	Time schedule and time frame should be given to the learners.	Giving unlimited time.
<b>2C</b>	The activities should be given time frame.	Uncontrolled time for the activities.
<b>3C</b>	Separate the leisure time to academic learning.	They can also have leisure time while learning.
<b>4C</b>	Academic learning online is also pleasurable.	Claim to have learning with pleasure reason.
<b>5C</b>	Be motivated in online learning.	Learning simply as well as being motivated.
<b>6C</b>	Consider the availability of online computer gadgets.	Availability of computer gadgets.
<b>7C</b>	Low computer user expertise which made it difficult to the user.	Difficulties on low computer user of computer.
<b>8C</b>	The internet connectivity is important.	Computer connections should be considered.
<b>9C</b>	It is important that the teacher will give feedbacks on the platform features.	Feedbacking of the teachers are important feature.
<b>10C</b>	There will be problem if user has limited knowledge of the platform.	Limited knowledge of the platform could be a problem.
<b>11C</b>	Technological gadgets and its choice should be considered.	Choice of technology should be considered.
<b>12C</b>	Choice of technology is a crucial issue of the platform.	Technology chosen highlights the crucial issues of the platform.



13C	The features of the platform should be discussed well for no confusions.	Confusion of the platform features.
14C	Training should be considered adequately.	Adequate training should be considered.
15C	Being familiar of technology for the platforms should be given priority.	Technology familiarity should be prioritized.
16C	Trained the users on the features of the platforms.	Training of the technology especially the platform features.

**Table 5.3.** Themes Based on the Concepts Constructed from the Problems Encountered of the Respondents in the EDMODO Utilization

REFERENCE NUMBERS	CONCEPTS	THEMES
1A	Teachers should be trained on the EDMODO Platform.	<b>Challenging Experiences of the Respondents</b>
2A	Teachers should be familiar on the feature of the platform.	
3A	Teachers' expertise on the formal assessment of the platform.	
4A	Teachers' expertise on calendar of activities posting.	
5A	Trained on the integration of the Google features.	
6A	Familiarity of community forums.	
7A	Skills on online assessment features.	
8A	Awareness on online assessment.	
9A	Trained on the platform features.	
10A	Quality personalized learning.	
11A	Expertise on the online sessions.	
12A	Trained on offline activities.	
13A	Provided competencies of teachers on learning preferences.	
14A	Observed skills on cognitive engagement.	
15A	Utilized platform on academic matters.	<b>Difficulties Encountered of the Respondents</b>
16A	Skills on learner-content interaction.	
1B	Trained monitoring in-charge.	
2B	Online monitoring should be implemented.	
3B	Target time activities should be followed.	
4B	Online monitoring should be considered.	
5B	Schedule of monitoring should be considered.	
6B	Daily monitoring of the output.	
7B	Checklist recording of the tasks.	

<b>8B</b>	Teachers posted activities are important.	<b>Personal Reflection for Technical Assistance</b>
<b>9B</b>	Advance posting of tasks should be considered.	
<b>10B</b>	Technological evaluation is important.	
<b>11B</b>	Adequate training of the monitoring person.	
<b>12B</b>	Infused technology step by step.	
<b>13B</b>	Features of the platform should be well informed to the monitoring person.	
<b>14B</b>	Introduce various media access for monitoring.	
<b>15B</b>	Various accesses for assessment.	
<b>16B</b>	Availability of trained person to in-charge the monitoring and evaluation of the platform.	
<b>1C</b>	Giving unlimited time.	
<b>2C</b>	Uncontrolled time for the activities.	
<b>3C</b>	They can also have leisure time while learning.	
<b>4C</b>	Claim to have learning with pleasure reason.	
<b>5C</b>	Learning simply as well as being motivated.	
<b>6C</b>	Availability of computer gadgets.	
<b>7C</b>	Difficulties on low computer user of computer.	
<b>8C</b>	Computer connections should be considered.	
<b>9C</b>	Feedbacking of the teachers are important feature.	
<b>10C</b>	Limited knowledge of the platform could be a problem.	
<b>11C</b>	Choice of technology should be considered.	
<b>12C</b>	Technology chosen highlights the crucial issues of the platform.	
<b>13C</b>	Confusion of the platform features.	
<b>14C</b>	Adequate training should be considered.	
<b>15C</b>	Technology familiarity should be prioritized.	
<b>16C</b>	Training of the technology especially the platform features.	

These results revealed that there were challenges and difficulties experienced by the respondents in terms of competencies, expertise and skills for the utilization of the Edmodo platform. Consequently, the respondents mainly requested for technical assistance as reflected on the assessment of the implementation for the proper monitoring and evaluation of the Edmodo platform.

Though the respondents were given training on the Edmodo platform and its utilization, with the results, they are still in need of technical assistance from the IT experts and the like to avoid or minimize complications in teaching lessons in Social Studies.

**Problem 6.** What is the correlation between the use of the Edmodo platform in Social Studies classes and the implementation of the DICI n.50, s.2009?

The DICI is an avenue for the arrival of 21<sup>st</sup> century educational tools to help deliver lessons to the new generation of learners. Also, it provides enhancement and new knowledge with regards to the various accessible platforms to help in the teaching-learning process, like Edmodo. The table below shows correlation coefficient and the significance level of relationship between the DICI n.50, s.2009, and the Edmodo platform.

**Table 6.** Correlation Coefficient and Significance of Relationship between the Use of Edmodo in the Social Studies Classes and the Implementation of DICI # 50, 2009

DICI Indicators	Use of Edmodo in the Social Studies Classes			
	Correlation Coefficient	p-value	Decision	Interpretation
Internet Connectivity	0.342*	0.000	Reject	Significant
School Facilities	0.336*	0.000	Reject	Significant
Computer Laboratories	0.411*	0.000	Reject	Significant
Computer Hardware	0.380*	0.000	Reject	Significant
Computer Software	0.239*	0.000	Reject	Significant
Computer Student Ratio	0.393*	0.003	Reject	Significant
Overall DICI Implementation	0.498	0.000	Reject	Significant

Legend: .81-1.00- Very High; 0.61-.080- High; 0.41-.60-Moderate; 0.21-.40 Low; 0.0-0.20 Very Low

\*Significant at 0.05 level

As shown by the results, the computer laboratories indicator (0.411,  $p < 0.05$ ) has the highest correlation, and the computer software indicator with the lowest correlation (0.239,  $p < 0.05$ ). In addition, the rest of the indicators have positive correlation to the use of Edmodo in teaching Social Studies: first, the computer hardware indicator (0.380,  $p < 0.05$ ); second, the internet connectivity indicator (0.380,  $p < 0.05$ ); third, the school facilities indicator (0.336,  $p < 0.05$ ); and, the computer software indicator (0.239,  $p < 0.05$ ).

The overall DICI implementation result was positively and moderately correlated to the use of Edmodo in teaching lessons in Social Studies. Moreover, the results indicated that all the indicators of the DICI implementation are significantly correlated to the usage of EDMODO platform. This means that the use of Edmodo in teaching lessons in Social Studies classes positively affect the implementation of DICI n.50, s.2009.

## Conclusions

Based on the findings of the study, these conclusions were drawn:

1. It was indicated that all domains of the DICP implementation are significantly correlated to the usage of the Edmodo platform in teaching lessons in Social Studies.
2. The respondents have a competency level of very satisfactory on the implementation of the Edmodo platform in their respective Social Studies classes.
3. The students, after being exposed to the Edmodo platform, have a higher achievement test in Social Studies as compared to not being exposed to the platform.
4. There were challenges and difficulties experienced by the respondents in terms of the speed of internet connectivity and availability of functional computers for the DICP implementation. The availability of IT experts, and the like, in their respective schools was requested.
5. There were challenges and difficulties experience by the respondents in terms of competencies, expertise and skills for the utilization of the Edmodo platform. The availability of IT experts, and the like, in their respective schools was requested.
6. All indicators of the DICP implementation were significantly correlated to the usage of the Edmodo platform in teaching lessons in Social Studies.

## Recommendations

In the light of the conclusions in this study, the following recommendations are presented:

**Department of Education.** Envision and prioritize budget on the School Computer Laboratory and Facilities to fully realize the effectiveness of the DICP implementation.

**Gingog City Division.** For guidance of teachers and administrators, the Division Office may initiate activities that will refresh and enhance them of the technological skills needed in the new normal under the 21<sup>st</sup> century.

**School Administrators.** To improve and to develop appropriate technological skills in the new normal, school administrators may invite experts to conduct activities that will enhance and will introduce teachers' to new and improved technological skills.

**Teachers.** For professional development, school heads may encourage its teachers to invest in education by taking up degree programs in graduate studies.

**Future Researchers.** Continue the study of the DICP implementation and Edmodo platform in teaching lessons in other subject areas or grade levels.

**Parents.** Be observant and aware of the DICP implementation and the Edmodo platform utilization.

**Students.** Attend enhancement programs on technological skills in preparation for online learning.

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