

The Development and Validation of Online Learning Modules for College English

Arlene Salve-Opina, Ph.D.

Centro Escolar University, Makati Campus
Philippines

Abstract

*This is an experimental study testing the effectiveness of the Proposed Online Modules to college students in Communication Skills I subject at Centro Escolar University, Philippines in an online format using the computer laboratory of the university. Guided by Alecia Bilton-Ward's (1997) concept of virtual teaching and videoconferencing strategy, the instructor-researcher came up with her modified concept of online instruction delivery for her experimental study using internet, computers, headsets, webcams. Based on the syllabus of communication I subject, the researcher developed online modules, games and other materials, which were uploaded to internet Learning Management System (LSM) and linked to virtual class web portals. The researcher used varied tools like Quia, Slideshare, Quizmoz, Webposter emails, ym chats, and Nicenet, most of which are free sites for online teaching. Ten English faculty members were requested to validate the modules in their actual classes before the experiment commenced. Thereafter, the modules were revised for the next stage of the experimental study. The questionnaire used for the study was tested to 15 students, from which the result yielded high reliability. Using ANOVA, All sections handled by the researcher were tested to identify the possible subjects and respondents of the study. Of the eight sections, only four with one hundred seventy-two (172) students were comparable in both pretest scores and preliminary grades and thus, became the subjects of the study. Based on the above mentioned-results, the subjects were grouped as slow and fast learners. The researcher also used linear correlation, Likert Scale, percentage, arithmetic mean and standard deviations, t-test for independent population. The data of this research were statistically processed by the CEU Evaluation and Data Processing Department. The study also tried to find out how comparable were the control and experimental groups with regard to their midterm, final grades and post tests after the introduction of the online modules. The results show that the students exposed to the online modules in online portals performed better than those receiving traditional instruction in a classroom with .000 probability interpreted as **very significant**. The modules were also given an overall rating of **very well done** by the students. The overall rating of the students' interaction with the instructor was **superior**. In an overall perspective, the students were to a **large extent** satisfied with online instruction..*

1. Introduction

With the spread of virtual technology, online instruction is gaining acceptance as an alternative to traditional classroom setting. As Paul West (1998) puts it, "The Internet is being attributed with the power to mesmerize and seduce the youth as were the television and film industries at an earlier time".

Advances in information and communication technologies have fueled rapid growth in the popularity of technology-supported learning. The internet has become impossible to ignore and even people who do not own a computer have seen or heard about its uses or "surf the net."

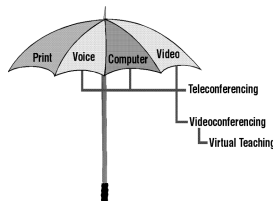


Figure 1: Bilton-Ward's (1997) Concept of Virtual Teaching

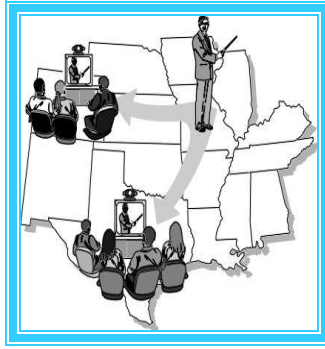


Figure 2: Ward’s Video conferencing Design in Connecting the Teacher to Students in Different Geographical Settings

Education becomes accessible even outside the formal schools. Anyone can acquire information, knowledge with the use of virtual technology anytime even at wee hours.

Centro Escolar University (CEU) English curriculum is composed of six 3-unit subjects. These are English 11 (Communication Skills 1), English 12 (Communication Skills 2), English 13a (Philippine Literature), English 14 (Effective Speech), English 15a (World Literature), and English 16 (Technical Writing).

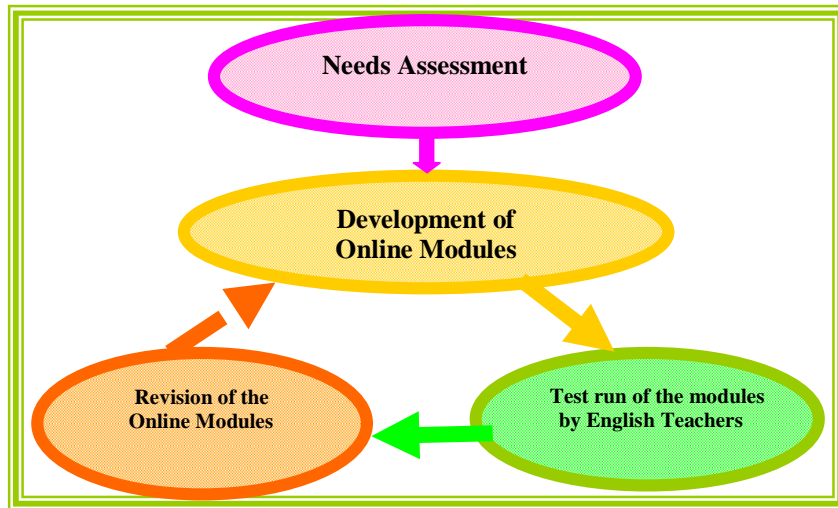


Figure 3: The Development Process of the Modules

In delivering these subjects, a textbook is provided by the department for each student. There are still no modules for online learning that have been developed. With this in mind, the researcher decided to develop online modules based from the syllabus and validated them in an online format to come up with some recommendations applicable to college students. This study aims to validate the proposed online modules in an online format and to compare the performance of students receiving online modular instruction and those receiving the face-to-face Instruction at Centro Escolar University using the textbook provided by the department.

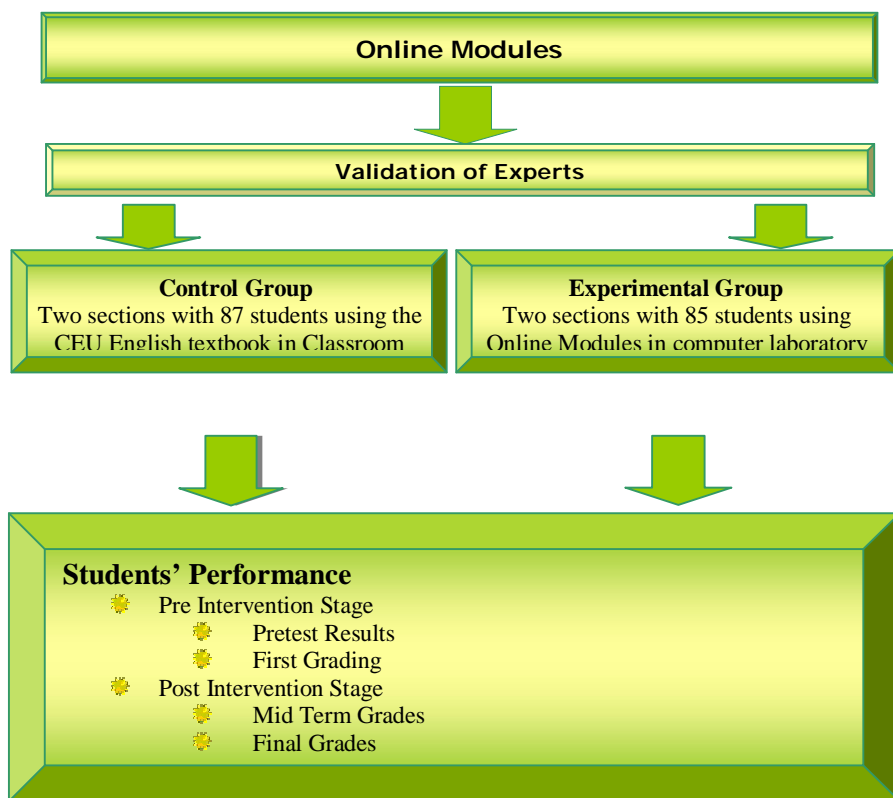


Figure 4: The Experimental Procedure in Validating the Online Modules

2. Literature Review

The most rapidly growing internet activity is the World Wide Web or “WWW” for short. Tim Berners-Lee (2014), a software engineer and programmer, invented the “WWW” or simply the web in 1989. Since then, its phenomenal growth has been astounding. Turoff (2000) is given credit for designing the first computer conferencing system in 1970. Today there are many conferencing systems available that support not only the discussion feature but also other more sophisticated features including personal messaging and audio and video capability. Computer conferencing systems, however, were applied to activity in higher education in 1980s and remain prominent feature of online education today.

Noonan’s article “Developing a Learning Community for Technology Infusion in Teacher Preparation” states, that “Borderless Society and a Global village” are now what the world is being referred to (Allen & Noonan,2003). The use of computers in education has enabled the students to experience the vast field of knowledge, which the older generation, perhaps, may no longer see. Schools have built on the gains of computer industry. This shows that computers are here to stay; and education will then shift to an inter-disciplinary, intercultural, and world-class approach.

According to Cheal (2009), any online course should contain the following information: a)Course objective(s); b) Course requirements, methods of evaluation and Contact information of instructor (instructor's name, office hours, office location, campus phone number, and email address); c) Schedules and directions on how long the instructor will take to answer email.

Embleton (1999), Director of Educational Technology, gave some tips on online teaching. She suggested some concerns as regards course delivery, management issues, and student preparation: a) Tight deadlines to be observed; b) Downloads included; c) Students’ expected behavior to be clear to them; d) Inductive and interactive online course as component to be contemporary and current; (i.e., include links to current research, news, references, multicultural and international dimensions to the subject matter). e) The course and grading methods to be developed such that students don’t feel pressured to “cheat.” f) Online material to be monitored to evaluate students having difficulty with a particular concept (i.e. large increase in “hits” on a particular topic). g) Using codes only instead of names when posting class scores, grades.

h) Images resized rather than scaled for display online. i) The teacher to train students on how to deal with common online problems. j) The teachers to create a small sample course which students can access to see whether they have the necessary software, connection speed, and computer skills to tackle an entire online course BEFORE signing up for one.

The above suggestions are just few of Embleton's tips that are applicable to the present study.

The article "Teaching and Learning on the Web", gave relevant suggestions on posting lessons online. It hinted that the use of PowerPoint slides by themselves is insufficient. The teacher needs to flesh out a slide with all the information that would normally accompany it in a lecture. This can be done with an audio recording as well as with text passages. "Learning goals" must be paired with a "self-study drill" on every lesson page. If necessary, a lesson must be broken into several separate pages, each having a key point. Graphics can help convey an idea. One or two carefully selected, clear images are generally sufficient. Visual diagrams must show the connections/relationships between ideas. This is easily done with PowerPoint or simple drawing packages. These images are a simple blend of shapes, lines, color and text. An accompanying text passage or audio clip can explain the concepts and relationships represented. Such images break-up text passages and provide useful frameworks for processing information. Lesson pages should be formatted for quick scanning as well as for easy reading. Bullets must be used instead; keywords, bolded.

Bilton-Ward (1997), Programs Development Specialist of Center for Occupational Research and Development, Virtual Teaching Center, Waco, Texas suggested eight basic guidelines to follow when modifying traditional instruction for virtual instruction as follows:

1. Develop and communicate clear performance objectives
2. Always build rapport
3. Carefully plan the entire lesson
4. Focus only on 3-4 main points
5. Change activities every 5-10 minutes
6. Actively involve the learners
7. Triple the amount of visuals
8. Remember to add four new sections to traditional lesson plans

Bilton-ward's suggestions were useful in the development of the modules and in the conferencing.

According to Wilhelm (2003) in his dissertation entitled "Virtual Learning from the Iowa High School Student Perspective," Most students indicated that the experience was a positive one, and 76% said that they would take the class again. Those who said they would not take the class again most frequently mentioned concerns about the teaching methods and the lack of face-to-face contact with the teacher. Perceived learning was a strong predictor of course satisfaction. Of those who felt they learned more in the virtual class than in their face-to-face classes, 97% said they would take the class again. Among those who perceived they learned less, only 38% indicated they would take the class again.

His study proved that most students, because of the satisfaction they received from the learning experience, took virtual learning positively. Although, the study focused more on the high school students, it can also generate similar reactions from the college level.

Jancek (2004) found out in his study that most (66.4%) Illinois public high schools were participating in virtual learning or were planning to implement it within the next five years. Schools with large student enrollments were more likely to be participating in virtual learning than schools with small enrollments. Likewise, schools of urban areas were more likely to be participating in virtual learning than schools located in small rural areas of the state. Schools with districts that pose no financial constraints were more likely to be participating in virtual learning than schools with districts that posed many financial constraints.

This study also noted that the more knowledgeable principals were about technology and virtual learning, the more apt their schools were participating in virtual learning.

The study of Bowman (2004) was intended to assess student satisfaction with online courses, assess student preference for online or traditional courses and assist in understanding student perceptions regarding the presence of brain-based learning instructional strategies in the online courses. This study revealed a positive relationship ($R = .626$) between the presence of social learning system instructional strategies and student satisfaction with online graduate courses.

There was a positive relationship ($R = .676$) between the presence of social learning system instructional strategies and student preference for online graduate courses. There was a positive relationship ($R = .763$) between the presence of emotional learning system instructional strategies and student preference for online graduate courses (Bowman, 2004).

Based on the results of this study, further research was recommended to further expand the literature on satisfaction and preference for online learning and the impact it has on the social and emotional learning strategies.

The study of Arbaugh (2000) reported the results of comparing a classroom-based and an internet-based MBA class section at a Midwestern U.S. university. The results showed significantly higher discussion participation patterns for the internet-based courses both by class section and gender and no significant differences in learning in either class section.

This article concluded by discussing possible reasons for these findings and suggested implications for internet-based education. As more business schools develop courses and programs for delivery via the internet, assessing the quality of student learning and reactions to the medium will become increasingly important and necessary.

Wang (2003) revealed that the web-based learning and associated student-centered learning activity improved students' motivation and enabled the students to visualize the various conditions of fossilization at a level not attained before.

This study suggested that teachers should maintain strongly collaborative working relationships with students to successfully solve motivational problems and increase the likelihood that instructional technology research will improve teaching and learning in practical ways.

There are Filipino researchers who conducted studies on the use of computers in their teaching but no studies have been done yet on the effectiveness of Web-based or online instruction in English subjects.

Ramos developed an interactive multimedia courseware and tested it among her computer students. She concluded that the web-based courseware was an effective learning aid. Online teaching and testing when taken together can be expected to have significant effect on the students' achievement (Ramos, 2003).

The use of experimental approach in her study was also quite similar to this research. However, she dealt mostly on the validation of the electronic material that she developed, while this study concerns more on the validation of the online modules in an online delivery method.

Mangilit (2001) in his book "Secrets of Designing Web Sites," suggested the following considerations:[15] a) It must have a small file size for fast downloading; b) It must be designed to display and function correctly on a wide range of browsers; c) The use of frames should be avoided because search engines have difficulty indexing frames web sites; d) The content must consider the global audience.

This article is helpful in her pursuit to make her class page very functional and accessible for her students.

Although the studies reviewed concentrated on web-based teaching or online, this research still differs in subject matter, approach and statistical treatment of the whole process, and presentation of the concept.

3. Research Rational

The Philippine government has been very responsive to the information revolution, taking place worldwide. In a nutshell, the overall goal of the Philippine government is to "transform the Philippines into a Knowledge Center in Asia (Villafuerte, 2001)."

This study hopes to offer insights into current developments in the field of high technology, centering on those related to internet instruction. Admittedly, internet-based teaching is faced with so many constraints not only because of the high cost of facilities, but more so of the question of readiness on the part of teachers and students alike.

The results of this study can bring forth conceptual understanding upon the teachers concerned, students, and administration. This can dispel some of their misconceptions and encourage them to further investigate the possibility of using the internet as a competitive strategy in the delivery of education.

The students can benefit from this study. If this method will be enforced, educational support may be offered to individuals, schools or institutions of higher learning. Community colleges and schools are likely to gain access to the Internet sources via either an individual computer or telephone line or via small LAN's.

The availability of online education can no longer be disputed. Those students who have study difficulties have the ability to associate themselves with other students in a community college or private structure and conduct their own contact facilitated sessions. Private companies who already provide lecture facilities are equally able to support students registered for programs at selected universities and colleges from other parts of the world.

The result of this study may help the administrators determine the needs of the online teachers and students in terms of skills and facilities. This will initiate innovations in the delivery of instruction of not only English subjects but other subjects as well. This can also help the curriculum planners design a curriculum for distance learning.

Teachers may realize the need to be computer literate for their development and for educational advancement to be globally competitive.

In the Philippines, most computers are placed in computer laboratories where students are sent for self-paced tutorials. Some schools have now created a fully distributed computing environment to support the learners though the provision of electronic mail, access to software, personal file storage and other communications utilities. In this way computers are used to aid students in the learning process.

4. Findings

The following findings were gathered from the study:

1. **Profile of the experimental group.** Majority of the subjects/respondents spoke in Filipino and came from private sectarian high school. Most of them showed awareness of computer instruction before exposure to this experiment.

In the Pretest result, Group C performed best among all groups, while Group B, least. In their Preliminary grades, Group C of the control group was consistent in obtaining the highest mean; Among the groups, Group A was the most homogeneous and Group C was the most disparate.

2. **Comparability of the control and experimental groups in their preliminary grades and in their pretest results.**

Groups B and D were comparable in the said two variables; hence, they were paired as Group1(slow learners).

Table 1: Comparison of Prelim Grades and Pretest Scores of Group 1

	Experimental B		Control D		t-value	Significance
	\bar{X}	Sd	\bar{X}	Sd		
Prelim Grades	2.56	.43	2.67	.51	-1.121	P=.27>.05 NS
Pretest Scores	25.23	4.19	25.84	3.9	-.71	P=.48>.05 NS

On the other hand, Groups A and Group C were also comparable in two variables; hence they matched as Group 2(fast learners).

Table 2: Comparison of Prelim Grades and Pretest Scores of Group 2

	Experimental A		Control C		t-value	Significance
	\bar{X}	Sd	\bar{X}	Sd		
Prelim Grades	2.41	.32	2.25	.93	-1.121	P=.27>.05 NS
Pretest Scores	26.98	3.59	27.51	4.56	-.71	P=.48>.05 NS

3. **Comparison of the control and experimental groups as regards their Midterm grades, Final grades, and Posttests.**

With the use of the proposed modules, the experimental group performed better than the control group in their midterm, final grades, as well as in their post test scores. As shown in Table 3, their difference was significant favoring the former with .000 probability.

Table 3: Summary of the Midterm, Final Grades and Posttest Scores of Subjects

	Experimental Total = 83		Control Total = 87		t-value	Significance
	\bar{X}	Sd	\bar{X}	Sd		
Midterm Grades	2.39	.411	2.75	.70	-4.150	P=.000 < .05 S
Final Grades	2.03	.38	2.41	.43	-6.09	P=.000<.05 S
Posttests Scores	77.05	8.8	63.70	1.02	9.52	P=.000<.05 S

4. Evaluation of online students on their virtual experience with the instructional modules in terms of:

4.1 Presentation and discussion of the online materials. The overall rating for the presentation and discussion of the online materials was **very well done**.

Table 4: Students' Evaluation of the Online Materials

	\bar{X}	Verbal Interpretation	Sd
1. Design of the class page and modules	4.2	Very Well Done	.73
2. User-friendliness of the site	4.3	Very Well Done	.72
3. Down time of the site	4.1	Very Well Done	.73
4. Reflection of CEU's philosophy of Science and Virtue	4.3	Very Well Done	.71
5. Explanation of purpose, objectives, and grading procedures	4.2	Very Well Done	.82
6. Class notes and study guides on the page	4.4	Very Well Done	.73
7. Clarity of explanation and discussion of the module lessons.	4.1	Very Well Done	.86
8. Evidence of mastery of subject matter	4.3	Very Well Done	.78
9. Consistency of content with subject objectives and syllabus	4.3	Very Well Done	.82
10. Comprehensive coverage of subject matter	4.3	Very Well Done	.82
11. Relevance of hyperlinks	4.3	Very Well Done	.77
12. Availability of online materials	4.2	Very Well Done	.79
13. Ease of access to view own quiz results	4.3	Very Well Done	.90
14. Ease of access to e-mail	4.3	Very Well Done	.85
15. Graded online quizzes	4.2	Very Well Done	.90
16. Games and other practice exercises	4.5	Very Well Done	.83
Total	4.3	Very Well Done	.57

4.2 **Interaction with the instructor.** The overall rating of the students' interaction with the instructor was **Superior**.

Table 5: Students' Evaluation on their Interaction with the Teacher

	\bar{X}	Verbal Interpretation	Sd
1. Ease of communication and of asking questions with teacher	4.1	Superior	.85
2. teacher's responsiveness or assistance with questions about assignments, online materials, etc.	4.4	Superior	.68
3. Teacher led reviews for tests	4.3	Superior	.78
4. Scheduling of tests and other assignments	4.3	Superior	.73
5. Resolution of conflicts with other class tests or assignments	4.2	Superior	.77
6. Assistance with computer-related problems	4.3	Superior	.77
Total	4.3	Superior	.62

4.3 Overall satisfaction with online instruction. In an overall perspective, the students were to a **large extent** satisfied with online instruction.

Table 6: Students' Evaluation on their Overall Satisfaction with Online Instruction

	\bar{X}	Verbal Interpretation	Sd
1. Attainment of subject objectives,	4.1	To a large extent	.67
2. Meeting their individual learning needs,	4.1	To a large extent	.74
3. Accomplishing varied learning activities,	4.2	To a large extent	.79
4. Interacting with the teacher,	4.2	To a large extent	.78
5. Responding to the challenge of using an alternative mode of learning	4.3	To a large extent	.78
Total	4.2	To a large extent	.65

Because virtual learning environment has countless benefits for teaching and learning, 48.2 % of the 83 respondents preferred online than on-campus education; 46.8 % favored on-campus over online, while the 6% were undecided. Possibly, they are not ready yet with the new paradigm, as a student remarked that online learning is more preferred by those who have internet access at home.

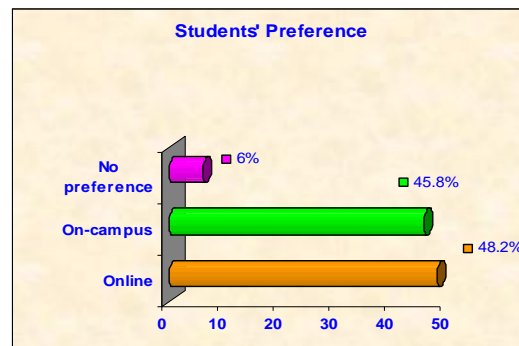


Figure 4: The Students' Preference

5. Conclusions

Based on the findings of the experimental study, the researcher drew the following conclusions:

Online materials containing all the required sources for learning are effective tools in enhancing and improving students' knowledge and skills in the subject.

Modules with graphic presentations are attractive designs in enhancing students' attention.

Online learning is a competitive alternative in teaching English 11 for college level.

The use of online games and exercises is an innovation to teaching language skills.

Success in online learning depends on strict compliance of time table and schedule and regular interaction with teacher.

In addition, students with convenient access to a computer and modem, sound reading and writing skills, and at the same time with motivation, and self-discipline to participate regularly, are most likely to succeed.

Although learning is achievable using the most available resources in the module and internet, the teacher is still the most important component in online learning upon whom the students rely.

5. Recommendations

Based on the conclusions, the following are recommended:

The development of online materials for other subjects (professional or basic) may upgrade the university's delivery of education.

The reinforcement of lesson discussed, through games whether online or traditional can be integrated to heighten students' interest in learning any subject.

The conduct of similar study will validate other modules of various subjects.

The various freesites available in the internet can be combined for the development of online modules and quizzes in all courses.

Another study involving CEU's facilities and teachers' preparedness for online education can give insight to the administration for future undertaking.

The following guidelines are proposed for the success in conferencing with students:

- a. Design a rubric for grading students' performance in conferencing.
- b. Require students to use family name combined with numbers as user ID in **signing up** for quick identification and checking of attendance. They must **sign in** before the scheduled time of chat.
- c. Confer with only 10 to 15 participants at a time for manageable movement of the conversation. For more than 15 participants, get another moderator as assistant.
- d. Train students to act as moderators per topic.
- e. Ask students to read the modules before entering the chat room.
- f. Set clearly students' expected behavior and enforce chat rules with them e.g. posting of any licentious icons on the screen, chatting with anyone separately, typing on the screen personal greetings, e-mailing or surfing other topics as these may disrupt the flow of discussion. Like in a classroom, only the teacher takes control of the whole session.
- g. Assign also another student to summarize the proceedings of the discussion.
- h. Observe strictly due dates and schedule.

6. References

- West, P. (1998). *Technology enhanced learning initiative in Southern Africa*. Presented at the 1998 Annual Conference of the Society for Information Technology and Teacher Education (SITE), Washington DC, USA, <http://pgw.org/pw>
- Lee, T.B. (2014). Biography, <http://www.w3.org/People/Berners-Lee/>
- Turoff, M. *The network nation: Human communication via computer*, 2nd Ed., MA: Addison-Wesley, (2000), 5. Executive summary: Computer conferencing and instant messaging. <http://www.nndb.com/people/963/000174441/>
- Allen, N. J & Noonan, C.M. (2003). "Developing a Learning Community for Technology Infusion in Teacher Preparation" *TechTrends*: 30.
- Cheal, C. (2009) "Syllabus Design for an online course," <http://www.sun.edu/~newfac/syllabus.html>
- Embleton, K. (1999) "Online Teaching Tips" Educational Technology Brown Bag Lunch Series (Iowa:Iowa State University, 2-3.
- Teaching and learning on the web, http://www.cudenver.edu/~mryder/itc_data/net_teach.html
- Bilton-Ward, A. (1997). *An educator's guide*, <http://www.nwresd.k12.or.us/pdfs/virtual-tch.pdf>
- Wilhelm, L. (2003) "Virtual learning from the Iowa high school student perspective" *Dissertation Abstracts International*, Vol. 63, No. 12:4285.
- Jancek, R. (2004). "Principals' perceptions of virtual learning as part of the overall curricula in Illinois public high schools" *Dissertation Abstracts International*, Vol. 64, No. 8:2764.
- Bowman, J. (2004). "Satisfaction with and preference for online learning: An investigation of the impact of social and emotional learning strategies" *Dissertation Abstracts International -A* Vol. 64, No. 12: 433.
- Arbaugh, J. (2000). "Virtual classroom versus physical classroom: An exploratory study of class discussion patterns and student learning in an asynchronous Internet-based MBA course" *Dissertation Abstracts International*, Vol.24: 213-233.
- Wang, S. (2003). "An investigation of the effects of a Web-based learning environment on student motivation and achievement in high school earth science". *Dissertation Abstracts International*, Vol.54: 476.
- Ramos, E. (2003). "The development and validation of a web-based interactive multimedia courseware for introduction to computer science" (Ph. D. Dissertation, Centro Escolar University), 107.
- Mangilit, J. (2001) "How do I design web sites for the internet?" *Secrets of Designing Web Sites*, 1st ed., Quezon City: Rex Book Store, Inc., 7.
- Villafuerte, N. (2001) *Understanding Cyber Space*, (Makati City: Apples of Gold, 2001), 5.